

# tharisa

## Tharisa plc

*(incorporated as a public limited company under the laws of Cyprus,  
and registered with Department of the Registrar of Companies and Official Receiver in Cyprus under number HE 223412)*

**This document (the “Prospectus”) has been prepared for the purpose of applying for the admission of 255 891 886 ordinary shares of nominal value US\$0.001 each (the “Ordinary Shares”) of Tharisa plc (“Tharisa”, the “Company”, the “Issuer”) and together with its consolidated subsidiaries (the “Group”), a company incorporated with limited liability in Cyprus, to the Official List (by way of a Standard Listing under Chapter 14 of the Listing Rules) and to trading on the London Stock Exchange’s Main Market for listed securities (the “Admission”).**

The Ordinary Shares are currently listed on the Johannesburg Stock Exchange, where the Company will continue to be listed. The Company is seeking a secondary listing for the Ordinary Shares on the standard segment of the Official List and to trading on the London Stock Exchange.

This document comprises a Prospectus in the form of a single document and is prepared in accordance with Part IV of The Public Offer and Prospectus Law of the Republic of Cyprus of 2005, as amended (the “Cyprus Prospectus Law”), incorporating the provisions of European Commission Regulation 809/2004, as amended (the “Prospectus Regulation”). This document has been approved by the Cyprus Securities and Exchange Commission (“CySEC”) in its capacity as the competent authority in Cyprus as the Company’s home member state within the meaning of Directive 2003/71/EC of the European Parliament, as amended (the “Prospectus Directive”) and made available to the public in accordance with Part V of the Cyprus Prospectus Law.

The approval of this Prospectus by CySEC will be notified to the Financial Conduct Authority (the “FCA”) with a certificate of approval of this Prospectus. Application will be made to the UK Listing Authority and the London Stock Exchange for all of the Ordinary Shares to be admitted to the standard segment of the Official List and to trading on the London Stock Exchange’s Main Market for listed securities, respectively. Admission to trading on the Main Market constitutes admission to trading on a UK regulated market. It is expected that Admission will become effective and that unconditional dealings in the Ordinary Shares will commence on 8 June 2016 after this Prospectus has been notified to the FCA. Dealings on the London Stock Exchange before Admission will only be settled if Admission takes place.

The Company has established arrangements to enable investors to settle interests in the Ordinary Shares through the CREST system. Securities issued by non-UK companies, such as the Company, cannot be held or transferred electronically in the CREST system. However, depositary interests allow such securities to be dematerialised and settled electronically through CREST. The Depositary Interests will be independent securities constituted under English law which may be held and transferred through the CREST system. Investors should note that it is the Depositary Interests which will be settled through CREST and not the Ordinary Shares.

The Company and the Directors signing the Prospectus by virtue of section 20 of the Cyprus Prospectus Law, assume full responsibility, both jointly and severally, for the contents and information set out in this Prospectus and responsibly declare that, having taken all reasonable care to ensure that such is the case, the information contained in this Prospectus is, to the best of their knowledge, in complete accordance with the facts and contains no omissions likely to affect its import.

Sharelink Securities and Financial Services Ltd, in its capacity as Underwriter is responsible for the drawing up of this Prospectus, by virtue of section 23 of the Cyprus Prospectus Law, responsibly declares that, having taken all reasonable care to ensure that such is the case, the information contained in the Prospectus is, to the best of its knowledge, in complete accordance with the facts and contains no omissions likely to affect its import.

***This Prospectus does not constitute or form an offer to sell, or the solicitation of an offer to buy, Ordinary Shares to any person in any jurisdiction to whom or in which such offer or solicitation is unlawful.*** Prospective investors should read this document in its entirety. In particular, your attention is drawn to section “RISK FACTORS” of this Prospectus for a discussion of the risks that might affect the value of your shareholding in the Company. Investors should be aware that an investment in the Company involves a degree of risk and that, if certain of the risks described in this document occur, investors may find their investment materially adversely affected. Accordingly, an investment in the Ordinary Shares is only suitable for investors who are particularly knowledgeable in investment matters and who are able to bear the loss of the whole or part of their investment.

**Sharelink Securities and Financial Services Ltd**  
Underwriter responsible for the drawing up of the Prospectus

**Arlington Group Asset Management Limited**  
Financial Adviser

**The date of this Prospectus is 2 June 2016**

## IMPORTANT INFORMATION

### General

This document comprises a Prospectus for the purpose of Article 5 of the Prospectus Directive and is issued in compliance with the Cyprus Prospectus Law. Investors should only rely on the information in this Prospectus. No person has been authorised to give any information or to make any representations in connection with the Admission, other than those contained in this Prospectus and, if given or made, such information or representations must not be relied upon as having been authorised by or on behalf of the Company, the Directors, the Financial Adviser, or the Underwriter. No representation or warranty, express or implied, is made by the Financial Adviser or the Underwriter or any of its respective affiliates or any selling agent as to the accuracy or completeness of such information, and nothing contained in this Prospectus is, or shall be relied upon, as a promise or representation by the Financial Adviser or any selling agent as to the past, present or future. Further, the Company does not accept any responsibility for the accuracy or completeness of any information reported by the press or other media, nor the fairness or appropriateness of any forecasts, views or opinions expressed by the press or other media regarding the Company. The Company makes no representation as to the appropriateness, accuracy, completeness or reliability of any such information or publication other than this Prospectus.

The contents of this Prospectus are not to be construed as legal, business or tax advice. Each prospective investor should consult its, his or her own lawyer, financial intermediary or tax advisor for legal, financial or tax advice. In making an investment decision, each investor must rely on its, his or her own examination, analysis and enquiry of the Company, including the merits and risks involved.

This Prospectus is not intended to provide the basis of any credit or other evaluation and should not be considered as a recommendation by any of the Company, the Directors, or the Financial Adviser or any of their representatives that any recipient of this document should subscribe for or purchase Ordinary Shares. Prior to making any decision as to whether to subscribe for or purchase Ordinary Shares, prospective investors should read this Prospectus. Investors should ensure that they read the whole of this Prospectus carefully and not just rely on key information or information summarised within it. In making an investment decision, prospective investors must rely upon their own examination of the Company and the terms of this Prospectus, including the risks involved.

Application will be made for the Ordinary Shares to be admitted to the standard segment of the Official List. A Standard Listing affords Shareholders and investors in the Company a lower level of regulatory protection than that afforded to investors in companies whose securities are admitted to the premium segment of the Official List, where companies are subject to additional obligations under the Listing Rules.

It should be noted that, following Admission, the UK Listing Authority will monitor the Company's compliance with the applicable Listing Rules and/or the Disclosure and Transparency Rules (see section *"COMPLIANCE WITH THE LISTING RULES", "Listing Rules and Disclosure and Transparency Rules with which the Company must comply under a Standard Listing"*).

**No action to be taken by shareholders**

Shareholders are not required to take any action upon receipt of this Prospectus, which is being made available publicly to enable the Company to obtain admission of the Ordinary Shares to the standard segment of the Official List and to trading on the London Stock Exchange.

**Distribution**

The Ordinary Shares have not been, and will not be, registered under the US Securities Act, or under the securities laws or with any securities regulatory authority of any state or other jurisdiction of the United States or of any province or territory of Australia, Canada or Japan. Securities may not be offered or sold in the United States absent: (i) registration under the US Securities Act; or (ii) an available exemption from registration under the US Securities Act. The Ordinary Shares have not been and will not be offered or sold in the United States, Australia, Canada or Japan or to or for the account or benefit of any person resident in the United States, Australia, Canada or Japan and this document does not constitute an offer to sell or a solicitation of an offer to purchase or subscribe for Ordinary Shares in such jurisdictions or in any jurisdiction in which such offer or solicitation is unlawful or would impose any unfulfilled registration, publication or approval requirements on the Company.

The distribution of this Prospectus in certain jurisdictions may be restricted by law. No action has been or will be taken by the Company, the Directors, the Underwriter or the Financial Adviser to permit a public offer or sale of Ordinary Shares or possession or distribution of this Prospectus (or any other offering or publicity material or application form relating to the Ordinary Shares) in any jurisdiction, other than in the UK and South Africa. Persons into whose possession this Prospectus comes are required by the Company, the Directors and the Financial Adviser to inform themselves about and to observe any such restrictions. This document does not constitute or form part of an offer to sell, or the solicitation of an offer to buy, Ordinary Shares to any person in any jurisdiction to whom or in which such offer or solicitation is unlawful.

**Parties involved**

Arlington Group Asset Management Limited is acting as the financial adviser of the Company for the Admission. The Financial Adviser is authorised and regulated in the UK by the FCA. The Financial Adviser is acting exclusively for the Company and for no other person in connection with the Admission and will not regard any other person (whether or not a recipient of this Prospectus) as its client in relation to the Admission. Further, the Financial Adviser will not be responsible to anyone other than the Company for providing the protections afforded to its clients or for providing advice in relation to the Admission or any transaction or arrangement referred to in this Prospectus.

Apart from the responsibilities and liabilities, if any, which may be imposed on the Financial Adviser by FSMA, or the regulatory regime established thereunder, or under the regulatory regime of any other jurisdiction where exclusion of liability under the relevant regulatory regime would be illegal, void or unenforceable, the Financial Adviser does not accept any responsibility whatsoever, and makes no representation or warranty, express or implied, for the contents of this Prospectus, including its accuracy or completeness, or for any other statement made or purported to be made by it, or on behalf of it, the Company or any other person in connection with the Company or the Ordinary Shares and nothing contained in this Prospectus is or shall be relied upon as a promise or representation in this respect, whether as to the past or future. The Financial Adviser accordingly disclaims all and any responsibility or liability whether arising in tort, contract or otherwise (save as referred to above) which it may otherwise have in respect of this Prospectus or any such statement.

Sharelink Securities and Financial Services Limited is acting as the underwriter responsible for the drawing up of the Prospectus. Sharelink declares that, having taken all reasonable care to ensure that such is the case, the information contained in this Prospectus, to the best of its knowledge, is in accordance with the facts and contains no omission likely to affect its import.

The Issuer and the Issuer's directors accept responsibility for the information contained in this Prospectus as well as for any notice to be published by the Issuer in connection with this Prospectus. The Issuer and the Issuer's directors, declare that having taken all reasonable care to ensure that as at the date of this Prospectus, the information contained in this Prospectus is true and accurate and not misleading and contains no omission likely to affect its import.

The statements included in this Prospectus are based on the Issuer's best knowledge and belief, as well as on market, economic and industry data, statistics and forecasts prepared by professionals and specialized analysts. Such industry publications generally provide information based on reliable sources, as well as forecasts based on certain assumptions. The Issuer, however, cannot and does not guarantee the accuracy and completeness of such information.

### **Prospectus Updates**

Pursuant to section 14 of the Cyprus Prospectus Law, should there arise any material new fact, material error or material inaccuracy as to the contents of the Prospectus subsequent to its approval by CySEC and before Admission, the Company shall have an obligation to prepare and publish a supplementary prospectus detailing such changes, which shall be subject to prior approval by CySEC in line with the procedures followed for approval of the current prospectus.

Without prejudice to any obligation of the Company to publish a supplementary prospectus pursuant to section 14 of the Cyprus Prospectus Law, the delivery of this Prospectus shall not under any circumstances, imply that there has been no change in the business or affairs of the Group since the date of this document or that the information contained herein is correct as of any time subsequent to its date.

### **Competitive Position Statement**

In this Prospectus, the Issuer makes certain statements regarding its competitive position, its growth and its market position. The Issuer considers these statements to be true based on market data and industry statistics regarding the competitive position of certain of its competitors. In presenting the overview of its competitive position in the relevant markets, the Issuer has also relied on its Management's assessments and analysis of such competitive position. In making such assessments and analysis the Management has used market information collected by its own employees and advisers for such purpose, either available on the basis of public information or derived from the same.

### **Forward-looking statements**

Certain statements contained in this Prospectus constitute forward-looking statements. These statements relate to future events or the future performance of the Group. All statements other than statements of historical fact may be forward-looking statements. Forward-looking statements are often, but not always, identified by the use of words such as "seek", "anticipate", "plan", "continue", "estimate", "expect", "forecast", "may", "will", "project", "predict", "potential", "targeting", "intend", "could", "might", "should", "believe" or similar expressions. These statements involve numerous assumptions, known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those expressed, anticipated or implied in such forward-looking

statements. The Company believes that the expectations reflected in forward-looking statements contained herein are reasonable but no assurance can be given that such expectations will prove to be correct or accurate and accordingly, such forward-looking statements included in this Prospectus should not be unduly relied upon. These statements speak only as of the date of this Prospectus. Actual operational and financial results or events may differ materially from the Company's expectations contained in the forward-looking statements as a result of various factors, many of which are beyond the control of the Company.

In this Prospectus, forward-looking statements include statements relating but not limited to:

- the Group's implementation of its strategic initiatives and its pipeline of projects;
- the development of aspects of the Group's results of operations;
- certain financial targets the Group has set for itself;
- the Group's expectations of the impact of risks that affect its business, including those set forth below under section "RISK FACTORS"; and
- other statements relating to the Group's future business development and economic performance and general economic trends and developments.

These factors should not be considered exhaustive. Statements relating to "resources" and "reserves" are by their nature forward-looking statements, as they involve the implied assessment, based on certain estimates and assumptions that the resources and reserves described can be profitably exploited in the future. The forward-looking statements contained in this Prospectus are expressly qualified by this cautionary statement. The Company does not undertake any obligation to publicly update or revise any forward-looking statements except as required by applicable securities laws.

The Issuer bases these forward-looking statements on its current plans, estimates, projections and expectations. These statements are based on certain assumptions that, although reasonable at the time of writing, may prove to be erroneous. Investors should not place undue reliance on these forward-looking statements. Many factors could cause the Issuer's actual results, performance or achievements to be materially different from any future results, performance or achievements that may be expressed or implied by such forward-looking statements.

Without prejudice to any obligation of the Company under section 14 of the Cyprus Prospectus Law, which stipulates that any material new fact, material error or material inaccuracy as to the contents of the Prospectus and arising subsequently to its approval by CySEC and before Admission, would warrant the preparation and publishing of a supplementary prospectus approved by CySEC, following Admission and subject to any further requirements of the Disclosure and Transparency Rules and/or the Listing Rules, or other applicable law or regulation, the Company explicitly disclaims any intention or obligation or undertaking publicly to release the result of any revisions to any forward-looking statements in this Prospectus that may occur due to any change in the Group's expectations or to reflect events or circumstances after the date of it.

### **Currencies**

In this Prospectus, references to "ZAR", "South African Rand", "Rand", "R", "Rand and Cents" or "SA Cents" are to the lawful currency of South Africa; references to "Euro" "€" or "EUR" are to the lawful currency of the Eurozone; references to "Great British Pounds", "pounds sterling", "£", "pence" or "p"

are to the lawful currency of the UK; and references to “US Dollars”, “U.S. Dollars”, “USD” or “US\$” are to the lawful currency of the United States.

The basis of translation of any foreign currency transactions and amounts in the financial information are set out in section “*OPERATING AND FINANCIAL REVIEW*”, “*Significant factors affecting results of operations*”.

In addition, as at the Last Practical Date, for the purposes of the Admission and the domicile of the Issuer the following exchange rates 1 US\$=0.68 GBP, 1 US\$= 0.90 EUR, 1 GBP = 23.16 ZAR and 1 EUR = 17.64 ZAR apply.

### **Rounding**

Percentages and certain amounts in this Prospectus, including financial, statistical and operating information, have been rounded to the nearest thousand whole number or single decimal place for ease of presentation. As a result, the figures presented as totals may not be the precise sum of the figures that precede them. In addition, certain percentages and amounts contained in this Prospectus reflect calculations based on the underlying information prior to rounding, and, accordingly, may not conform exactly to the percentages or amounts that would be derived if the relevant calculations were based upon the rounded numbers.

### **Third party information**

The Company confirms that all third party information contained in this Prospectus has been accurately reproduced and, so far as the Company is aware and is able to ascertain from information published by that third party, no facts have been omitted that would render the reproduced information inaccurate or misleading. Where third party information has been used in this Prospectus, the source of such information has also been identified.

### **Interpretation**

Certain terms used in this Prospectus are defined in sections “*DEFINITIONS*” and “*GLOSSARY OF TECHNICAL TERMS*” of this Prospectus.

References to the singular in this Prospectus shall include the plural and vice versa, where the context so requires. All references to time in this Prospectus are to United Kingdom time unless otherwise stated.

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## SUMMARY

*Summaries are made up of disclosure requirements known as “Elements”. These Elements are numbered in Sections A – E (A.1 – E.7).*

*This summary contains all the Elements required to be included in a summary for this type of security and issuer. Because some Elements are not required to be addressed, there may be gaps in the numbering sequence of the Elements.*

*Even though an Element may be required to be inserted in the summary because of the type of security and issuer, it is possible that no relevant information can be given regarding the Element. In this case, a short description of the Element is included in the summary with the mention of “not applicable”.*

<b>Section A - Introduction and warnings</b>	
<b>A.1</b>	<p><b>Introduction</b></p> <p>This summary (the “Summary”) must be read as an introduction to the Prospectus.</p> <p>Any decision to invest in Ordinary Shares should be based on consideration of the Prospectus as a whole by the investor.</p> <p>Where a claim relating to the information contained in the Prospectus is brought before a court, the plaintiff investor might, under the national legislation of the Member States, have to bear the costs of translating the Prospectus before the legal proceedings are initiated.</p> <p>Civil liability attaches only to those persons who have tabled the summary, including any translation thereof, but only if the summary is misleading, inaccurate or inconsistent when read together with other parts of the Prospectus or it does not provide, when read together with the other parts of the Prospectus, key information in order to aid investors when considering whether to invest in such securities.</p>
<b>A.2</b>	<p><b>Consent for intermediaries</b></p> <p>Not applicable.</p>

<b>Section B – Issuer and any guarantor</b>	
<b>B.1</b>	<p><b>Legal and commercial name</b></p> <p>Tharisa plc</p>
<b>B.2</b>	<p><b>Domicile/legal form/ legislation/ country of incorporation</b></p> <p>The registered office of the Issuer is located at Office 108-110, S. Pittokopitis Business Centre, 17 Neophytou Nicolaidis and Kilkis Streets, 8011, Paphos, Cyprus. The Company was incorporated on 20 February 2008 as a private company limited by shares under the Companies Law, Chapter 113 of the laws of Cyprus, as amended, supplemented or otherwise modified from time to time.</p>
<b>B.3</b>	<p><b>Current operations/ principal activities and markets</b></p> <p>Tharisa is an integrated resources group incorporating mining, processing, beneficiation, marketing, sales and logistics of PGM and chrome concentrates through its 74% interest in</p>

Tharisa Minerals (mining and processing) and its wholly-owned subsidiaries including Arxo Metals (processing and beneficiation), Arxo Logistics (logistics) and Arxo Resources (sales and distribution).

Tharisa Minerals owns and operates the Tharisa Mine which is located on the south-western limb of South Africa's Bushveld Complex. The Tharisa Mine has an estimated open pit life-of-mine of approximately 20 years, and a further estimated underground life of mine of approximately 40 years. The Tharisa Mine's processing facilities comprise the Genesis Plant and the Voyager Plant, both PGM and chrome concentrators, with a design capacity for processing 400 ktpm of ROM ore.

Through Arxo Metals, the Group is developing its beneficiation capabilities in order to optimise its operations and capture a greater share of the value chain. Arxo Metals owns the Challenger Plant that produces high value chemical and foundry grade chrome concentrates. The Group's research and development activities are also undertaken through Arxo Metals.

The Group's business also includes logistic operations through Arxo Logistics, which manages road distribution of PGM concentrate and rail and road distribution of chrome concentrates produced by the Tharisa Mine to customers in South Africa and to port facilities in Richards Bay (bulk shipments) and Durban (containerised shipments) for shipment to customers overseas. Arxo Logistics also manages the sea freight of chrome sales.

PGM concentrate is sold to a third party, Impala Platinum, under the terms of a concentrate off-take agreement with Tharisa Minerals.

Exported metallurgical grade chrome concentrates are marketed and sold, mainly to customers in China, by Arxo Resources. Premium chemical and foundry grade chrome concentrates produced by Tharisa Minerals and Arxo Metals are sold to customers in South Africa and internationally.

The Company provides direct access to a PGM and chrome concentrate co-producer with an integrated marketing, sales and logistics platform:

- shallow and large (828 Mt resource) mechanised open pit operation with approximately 20 years' life of open pit and approximately 40 year life underground extension;
- located in the lowest cost quartile of the PGM and chrome concentrate cost curves;
- operationally de-risked:
  - Tharisa Mine was cash generative in the Financial Year ended 30 September 2015;
  - capital investment programme substantially completed (mine and infrastructure development for the Tharisa Mine and processing plants);
  - mining, environmental and water use permits and licenses have been granted and are valid;
  - processing, marketing, sales and logistics platform is fully operational;
  - processing flexibility provided through the Voyager and Genesis standalone concentrator plants which are independently operated by Tharisa Minerals;
  - PGM concentrate is sold to a third party, Impala Platinum, under the terms of a

	<p>concentrate off-take agreement with Tharisa Minerals; and</p> <ul style="list-style-type: none"> <li>– 50 ktpm chrome concentrate marketing agreement with Noble;</li> <li>• global marketing and sales of chrome concentrate to an established customer base;</li> <li>• established marketing and sales platform with direct access to market and price discovery which provides a channel for future growth;</li> <li>• in-house, cost effective mine to customer logistics solution;</li> <li>• stable labour and community relations; and</li> <li>• comparatively small and skilled contractor labour force.</li> </ul> <p>The revenue of the Group from external customers is based on the country of establishment of each customer. The customers of the Group are mainly from South Africa, China, Hong Kong, and South Korea.</p>
<p><b>B.4a</b></p>	<p><b>Significant recent trends</b></p> <p>Subsequent to the end of FY 2015, US\$ global commodity prices continued to weaken significantly. The chrome concentrate contract price came under pressure during the first half of the FY 2016, following the devaluation of the Renminbi against the US\$. This, coupled with the continued slowdown in the Chinese economy, resulted in not only reduced pricing but also reduced product demand.</p> <p>There was a marked decline in the average metallurgical grade chrome concentrate price achieved from an average of US\$158 per tonne in FY 2015 to US\$106 per tonne for the first half of FY 2016. Both chrome concentrate prices and demand have recorded a recovery during the third quarter of FY 2016 as demand returns to previous levels with current transaction prices at approximately US\$145 per tonne.</p> <p>To mitigate the downward pricing pressure, the product mix of the Group was changed following the successful modification of the Voyager Plant chrome processing circuit to produce increased volumes of higher value add speciality chrome concentrates.</p> <p>In regard to the Common Terms Agreement, the Facility Lenders extended the date by which the technical and economic completion tests need to be completed to 28 November 2016 and condoned the non-compliance by Tharisa Minerals of the required historic DSCR at 31 March 2016.</p> <p>On 23 February 2016 the Group's Hong Kong based bankers advised that no further utilisation of the US\$12.5 million packing credit facility (pre shipment finance), would be permitted past 29 February 2016. The Group's bankers continue to provide post shipment finance and the Group continues to enter into chrome concentrate pre-pay arrangements.</p> <p>Tharisa Minerals recorded a number of milestone achievements during the second quarter of FY 2016 with reef mined exceeding the steady state required run rate of 4.8 Mtpa, mill throughput performing at nameplate design capacity of 400 ktpm and contained PGM production on a 6E basis meeting the steady state production level of 144 koz (all on an annualised basis).</p>

<p><b>B.5</b></p>	<p><b>Group structure</b></p> <p>The Company is the parent company of the Group. The material Subsidiaries of the Company are as follows:</p> <table border="1"> <thead> <tr> <th data-bbox="252 450 459 483">Name</th> <th data-bbox="459 450 715 517">Country of incorporation</th> <th data-bbox="715 450 1118 517">Proportion of equity ownership interest</th> <th data-bbox="1118 450 1402 483">Principal activity</th> </tr> </thead> <tbody> <tr> <td colspan="4" data-bbox="252 546 1402 613"><b>Active Subsidiaries</b></td> </tr> <tr> <td data-bbox="252 636 459 669">Tharisa Minerals</td> <td data-bbox="459 636 715 669">South Africa</td> <td data-bbox="715 636 1118 669">74%</td> <td data-bbox="1118 636 1402 669">Mining and processing</td> </tr> <tr> <td data-bbox="252 696 459 730">Arxo Metals</td> <td data-bbox="459 696 715 730">South Africa</td> <td data-bbox="715 696 1118 730">100%</td> <td data-bbox="1118 696 1402 763">Processing and beneficiation</td> </tr> <tr> <td data-bbox="252 790 459 824">Arxo Resources</td> <td data-bbox="459 790 715 824">Cyprus</td> <td data-bbox="715 790 1118 824">100%</td> <td data-bbox="1118 790 1402 824">Sales and distribution</td> </tr> <tr> <td data-bbox="252 851 459 884">Arxo Logistics</td> <td data-bbox="459 851 715 884">South Africa</td> <td data-bbox="715 851 1118 884">100%</td> <td data-bbox="1118 851 1402 884">Logistics</td> </tr> </tbody> </table>	Name	Country of incorporation	Proportion of equity ownership interest	Principal activity	<b>Active Subsidiaries</b>				Tharisa Minerals	South Africa	74%	Mining and processing	Arxo Metals	South Africa	100%	Processing and beneficiation	Arxo Resources	Cyprus	100%	Sales and distribution	Arxo Logistics	South Africa	100%	Logistics
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<p><b>B.6</b></p>	<p><b>Major Shareholders</b></p> <p>As at the Last Practical Date, the Company is aware of the following Shareholders that, directly or indirectly, hold interests in 5% or more of the Company's capital or voting rights:</p> <table border="1"> <thead> <tr> <th data-bbox="252 1048 863 1081">Name</th> <th data-bbox="863 1048 1161 1115">Number of Ordinary Shares</th> <th data-bbox="1161 1048 1402 1115">Percentage interest</th> </tr> </thead> <tbody> <tr> <td data-bbox="252 1137 863 1171">Medway Developments Limited*</td> <td data-bbox="863 1137 1161 1171">119 030 073</td> <td data-bbox="1161 1137 1402 1171">46.52%</td> </tr> <tr> <td data-bbox="252 1198 863 1232">Pershing LLC</td> <td data-bbox="863 1198 1161 1232">40 548 241</td> <td data-bbox="1161 1198 1402 1232">15.85%</td> </tr> <tr> <td data-bbox="252 1258 863 1326">Fujian Wuhang Stainless Steel Products Co. Limited</td> <td data-bbox="863 1258 1161 1292">28 070 211</td> <td data-bbox="1161 1258 1402 1292">10.97%</td> </tr> <tr> <td data-bbox="252 1352 863 1386">Total</td> <td data-bbox="863 1352 1161 1386">187 648 525</td> <td data-bbox="1161 1352 1402 1386">73.34%</td> </tr> </tbody> </table> <p>* Medway Developments Limited is held 96.74% by the Leto Settlement of which the trustees are Artemis Trustees Limited and the beneficiaries are Adonis Pouroulis, his spouse and his children. Adonis Pouroulis is the son of Loucas Pouroulis and brother of Phoevos Pouroulis, both executive directors of the Issuer.</p> <p>There are no differences between the voting rights enjoyed by the Shareholders detailed above and those enjoyed by the holders of Ordinary Shares. The Company is not aware of any person who, directly or indirectly, owns or controls the Company.</p>	Name	Number of Ordinary Shares	Percentage interest	Medway Developments Limited*	119 030 073	46.52%	Pershing LLC	40 548 241	15.85%	Fujian Wuhang Stainless Steel Products Co. Limited	28 070 211	10.97%	Total	187 648 525	73.34%									
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<p><b>B.7</b></p>	<p><b>Selected historical key financial information</b></p> <p>The table below sets out summary financial information of the Group as derived from the audited consolidated financial statements of the Company as at and for the Financial Years ended 30 September 2013, 2014 and 2015.</p> <p><i>Selected consolidated statement of profit and loss and other comprehensive income</i></p> <table border="1"> <thead> <tr> <th colspan="3" data-bbox="986 1865 1289 1899"><u>Years ended 30 September</u></th> </tr> <tr> <th data-bbox="970 1899 1026 1933"><u>2015</u></th> <th data-bbox="1129 1899 1185 1933"><u>2014</u></th> <th data-bbox="1289 1899 1345 1933"><u>2013</u></th> </tr> <tr> <th data-bbox="930 1933 1026 1955">US\$'000</th> <th data-bbox="1090 1933 1185 1955">US\$'000</th> <th data-bbox="1257 1933 1345 1955">US\$'000</th> </tr> </thead> </table>	<u>Years ended 30 September</u>			<u>2015</u>	<u>2014</u>	<u>2013</u>	US\$'000	US\$'000	US\$'000															
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Revenue	246 782	240 731	215 455
Cost of sales	<u>(203 692)</u>	<u>(208 119)</u>	<u>(189 570)</u>
<b>Gross profit</b>	43 090	32 612	25 885
Other income	42	149	48
Administrative expenses	<u>(24 777)</u>	<u>(26 908)</u>	<u>(26 596)</u>
<b>Results from operating activities</b>	<u>18 355</u>	<u>5 853</u>	<u>(663)</u>
<b>Net finance costs</b>	<u>(8 723)</u>	<u>(46 178)</u>	<u>(62 305)</u>
<b>Profit/(loss) before tax</b>	9 632	(40 325)	(62 968)
Tax	<u>(3 617)</u>	<u>(14 548)</u>	<u>15 525</u>
<b>Profit/(loss) for the year</b>	<u>6 015</u>	<u>(54 873)</u>	<u>(47 443)</u>
<b>Total comprehensive income for the year</b>	<u>(33 384)</u>	<u>(76 035)</u>	<u>(86 224)</u>
<b>Profit/(loss) for the year attributable to:</b>			
Owners of the Company	<u>4 623</u>	<u>(48 997)</u>	<u>(48 347)</u>
Non-controlling interests	<u>1 392</u>	<u>(5 876)</u>	904
	<u>6 015</u>	<u>(54 873)</u>	<u>(47 443)</u>
<b>Total comprehensive income for the year attributable to:</b>			
Owners of the Company	<u>(24 721)</u>	<u>(66 188)</u>	<u>(75 989)</u>
Non-controlling interests	<u>(8 663)</u>	<u>(9 847)</u>	<u>(10 235)</u>
	<u>(33 384)</u>	<u>(76 035)</u>	<u>(86 224)</u>
<b>Earnings per share</b>			
Basic and diluted earnings per share (US\$ cents)	<u>2</u>	<u>(20)</u>	<u>(20)</u>

The Group achieved a net profit after tax of US\$6.0 million for the year ended 30 September 2015 with net profit margin of 2.4%, from a loss of US\$54.9 million for the year ended 30 September 2014. The major items contributing to the increase in net profit were an increase of revenue by US\$6.1 million mainly due to increased PGM concentrate sales, a decrease in cost of sales by US\$4.4 million, a decrease in the administrative expenses by US\$2.1 million and lastly, a decrease in net finance costs by US\$37.5 million.

The net loss after tax of the Group for the year ended 30 September 2014 amounted to US\$54.9 million, in comparison to a loss of US\$47.4 million for the year ended 30 September 2013. The major items contributing to this variance are attributed to an increase in revenue by US\$25.3 million largely due to increased PGM concentrate sales, an increase in costs of sales by US\$18.5 million and a decrease in net finance costs by US\$16.1 million.

*Selected consolidated statement of financial position*

	<b>As at 30 September</b>		
	<b><u>2015</u></b> <b>US\$'000</b>	<b><u>2014</u></b> <b>US\$'000</b>	<b><u>2013</u></b> <b>US\$'000</b>
<b>Assets</b>			
Non-current assets	<u>229 683</u>	<u>280 024</u>	<u>302 662</u>
Current assets	<u>71 394</u>	<u>67 156</u>	<u>81 494</u>
Total assets	<u>301 077</u>	<u>347 180</u>	<u>384 156</u>
<b>Equity</b>			
Equity attributable to owners of the Company	<u>216 742</u>	<u>235 906</u>	<u>(37 436)</u>
Total equity	<u>178 948</u>	<u>209 854</u>	<u>(53 641)</u>
<b>Liabilities</b>			
Non-current liabilities	<u>40 430</u>	<u>68 695</u>	<u>97 550</u>

Current liabilities	<u>81 699</u>	<u>68 631</u>	<u>340 247</u>
<b>Total liabilities</b>	<u>122 129</u>	<u>137 326</u>	<u>437 797</u>
<b>Total equity and liabilities</b>	<u>301 077</u>	<u>347 180</u>	<u>384 156</u>

Non-current assets decreased from US\$302.7 million at the end of FY 2013 to US\$280.0 million at the end of FY 2014, and to US\$229.7 million at the end of FY 2015. For the FY 2015, the decrease of US\$50.3 million was mainly due to the decrease in property, plant and equipment by US\$ 38.8 million. For FY 2014, the decrease of US\$22.6 million was mainly due to a decrease in the deferred tax asset by US\$14.7 million at the end of FY 2014.

Current assets decreased from US\$81.5 million at the end of FY 2013 to US\$67.2 million at the end of FY 2014, a decrease of US\$14.3 million and increased to US\$71.4 million at the end of FY 2015, an increase of US\$4.2 million. The decrease for the FY 2014 is mainly attributable to a decrease in the inventories by US\$ 9.5 million and a decrease in the cash and cash equivalents by US\$8.4 million whilst the increase for FY 2015 is mainly due to the increase in cash and cash equivalents from US\$19.6 million at the end of FY 2014 to US\$24.3 million at the end of FY 2015.

Total liabilities decreased from US\$437.8 million at the end of FY 2013 to US\$137.3 million at the end of FY 2014 and to US\$122.1 million, at the end of FY 2015. For the FY 2014, following the listing of the Company on the JSE on 10 April 2014, the redeemable convertible preference shares were converted to Ordinary Shares resulting in a decrease of US\$260.3 million from the end of the FY 2013 and the repayment of the secured bank borrowings commenced during the year ended 30 September 2014 resulting in a further decrease in total liabilities from 30 September 2013. For the FY 2015, the Group continued to repay the secured bank borrowings resulting in a decrease in non-current borrowings from US\$64.2 million at the end of FY 2014 to US\$36.3 million at the end of FY 2015 which was partly offset by an increase in trade and other payables by US\$10.3 million from the end of the FY 2014 to the end of the FY 2015.

*Selected consolidated statement of cash flows*

	<b>Years ended 30 September</b>		
	<u>2015</u>	<u>2014</u>	<u>2013</u>
	<u>US\$'000</u>	<u>US\$'000</u>	<u>US\$'000</u>
<b>Net cash flows from/(used in) operating activities</b>	<u>41 404</u>	<u>22 356</u>	<u>(2 956)</u>
<b>Net cash flows used in investing activities</b>	<u>(21 217)</u>	<u>(25 159)</u>	<u>(24 613)</u>
<b>Net cash flows from/(used in) financing activities</b>	<u>(18 365)</u>	<u>(1 318)</u>	<u>7 749</u>
<b>Net increase/(decrease) in cash and cash equivalents</b>	<u>1 822</u>	<u>(4 121)</u>	<u>(19 820)</u>
<b>Cash and cash equivalents at the beginning of the year</b>	<u>19 629</u>	<u>28 017</u>	<u>52 805</u>
<b>Effect of exchange rate fluctuations on cash held</b>	<u>2 814</u>	<u>(4 267)</u>	<u>(4 968)</u>
<b>Cash and cash equivalents at the end of the year</b>	<u>24 265</u>	<u>19 629</u>	<u>28 017</u>

In FY 2013, net cashflows used in operating activities amounting to US\$3.0 million changing to net cashflows from operating activities of US\$22.4 million in FY 2014, and to US\$41.4 million in FY 2015. The cash inflow for the FY 2014 and FY 2015 was mainly attributed to the increased sale of PGM concentrates which is reflected in the increased net profit.

Net cashflows used in investing activities increased by 2.2% from FY 2013 to FY2014, i.e. from US\$24.6 million to US\$25.2 million and decreased by 15.7% to US\$21.2 million in FY 2015. The

	<p>additions to property, plant and equipment amounted to approximately US\$24.3 million each year for the period 2013-2015 mainly relating to capital expenditure on the mining assets and infrastructure.</p> <p>In FY 2013, net cashflows from financing activities amounted to US\$7.7 million. The cash inflow in FY 2013 was mainly due to proceeds from borrowings net of transaction costs amounting to US\$16.1 million. Net cashflows used in financing activities increased from US\$1.3 million in FY 2014 to US\$18.4 million in FY 2015, an increase in cash outflow of US\$17.0 million. This can primarily be attributed to the issue of Ordinary Shares in the FY 2014 raising an amount of US\$47.9 million, offset in part by the redemption of certain preference shares issued by a subsidiary from the share issue proceeds of US\$6.8 million and the costs associated with the listing of US\$1.4 million.</p>
<b>B.8</b>	<p><b>Selected key pro forma financial information</b></p> <p>Not applicable.</p>
<b>B.9</b>	<p><b>Profit forecast</b></p> <p>Not applicable.</p>
<b>B.10</b>	<p><b>Description of the nature of any qualifications in the audit report on the historical financial information</b></p> <p>Not applicable.</p> <p>While the audit reports on the consolidated financial statements of the Company as at and for the years ended 30 September 2013, 2014 and 2015 do not contain any qualifications, shareholders' attention was drawn to the consolidated financial statements for the years ended 30 September 2013, 2014 and 2015, by way of emphasis of matter to the disclosure on "going concern", more fully set out below.</p> <p>For the Financial Year 2015, the Auditor's Report included an "emphasis of matter" which states the following:</p> <p><i>"We draw attention to note 2(d) of the consolidated financial statements which indicated that notwithstanding that the Group made a profit of US\$6 015 thousand for the year ended 30 September 2015, as at that date its current liabilities exceeded its current assets by US\$10 305 thousand. The note indicates that subsequent to year end, global commodity prices have weakened significantly to the extent that short term cash flows reflect a shortfall in cash. In the event that the weakened commodity prices persist, forecast production is not achieved and the Group is unable to raise further funding, a material uncertainty will exist which may cast significant doubt on the ability of the Group to continue as a going concern. Our opinion is not qualified in respect of this matter."</i></p> <p>For the Financial Year 2014, the Auditor's Report included an "emphasis of matter" which states the following:</p> <p><i>"We draw attention to note 2(d) of the consolidated financial statements which indicates that the Group incurred a loss of US\$54 873 thousand for the year ended 30 September 2014 and, as at that date its current liabilities exceeded its current assets by US\$1 475 thousand. The note states that should the forecast production not be achieved and/or South African Rand</i></p>

	<p><i>commodity prices weaken, a material uncertainty exists which may cast doubt on the Group's ability to continue as a going concern. Our opinion is not qualified in respect of this matter."</i></p> <p>For the Financial Year 2013, the Auditor's Report included an "emphasis of matter" which states the following:</p> <p><i>"We draw attention to note 2(c) to the consolidated financial statements which indicates that at 30 September 2013 the Group's current liabilities exceeded current assets by US\$266 710 thousand and its total liabilities exceeded total assets by US\$53 641 thousand. These conditions, along with the matters as set forth in note 2(c), indicate that in an event of a no listing scenario and/or should there be a different interpretation to the Board of Directors' opinion as to the legal obligation of the Group to redeem the convertible redeemable preference shares, which will result in full redemption of the convertible redeemable preference shares, payable within 10 business days from a redemption notice, the Group may not have the necessary liquid funds required to redeem its convertible redeemable preference shares and continue as a going concern. Our opinion is not qualified in respect of this matter."</i></p>
<b>B.11</b>	<p><b>Working capital</b></p> <p>In the opinion of the Company, the working capital available to the Group is sufficient for the Group's present requirements and, in particular, is sufficient for at least 12 months from the date of this Prospectus.</p>

<b>Section C – Disclosure requirement</b>	
<b>C.1</b>	<p><b>Type and class of the securities admitted to trading</b></p> <p>The securities being admitted to trading are the Ordinary Shares of the Company of nominal value US\$0.001 each. The ISIN of the Ordinary Shares is CY0103562118.</p>
<b>C.2</b>	<p><b>Currency of the securities issue</b></p> <p>The Ordinary Shares are issued in US\$. Nevertheless, following Admission the price of the Ordinary Shares will be quoted on the London Stock Exchange in pounds sterling. The Ordinary Shares will also continue to be listed on the JSE and are quoted in ZAR.</p>
<b>C.3</b>	<p><b>Issued share capital</b></p> <p>On Admission, the Company will have an issued share capital of US\$255 891.89 comprising 255 891 886 fully paid Ordinary Shares of nominal value US\$0.001 each.</p>

<b>C.4</b>	<p><b>Rights attaching to the securities</b></p> <p>The Ordinary Shares rank equally for voting purposes. On a show of hands, each Shareholder present has one vote and on a ballot each Shareholder has one vote per Ordinary Share held.</p> <p>The Ordinary Shares rank equally for dividends declared and for any distributions on a winding-up.</p> <p>The Ordinary Shares rank equally in the right to receive a relative proportion of the Company's assets upon dissolution.</p>
<b>C.5</b>	<p><b>Restrictions on free transferability of the securities</b></p> <p>The Ordinary Shares are freely transferable and there are no restrictions on transfer.</p>
<b>C.6</b>	<p><b>Admission to trading</b></p> <p>Application will be made to the UK Listing Authority and the London Stock Exchange for all of the Ordinary Shares to be admitted to the standard segment of the Official List and to trading on the LSE's Main Market for listed securities. It is expected that Admission will become effective and that unconditional dealings will commence at 8.00 a.m. on 8 June 2016 subject to the approval of the UK Listing Authority.</p> <p>Additionally, the Ordinary Shares are currently listed on the Johannesburg Stock Exchange, where the Company will maintain its primary listing. The Company is seeking a secondary listing for the Ordinary Shares on the standard segment of the Official List and to trading on the London Stock Exchange.</p>
<b>C.7</b>	<p><b>Dividend policy</b></p> <p>The dividend policy of the Company is to pay a dividend of 10% of consolidated net profit after tax. However, notwithstanding that the Group made a consolidated net profit after tax in FY 2015, in view of the decline in global commodity consumption and global economic uncertainty, the Board did not recommend the payment of a dividend in respect of the Financial Year ended 30 September 2015. The Company did not declare any dividends on the Ordinary Shares for the Financial Years 2013, 2014 or 2015.</p>

	<p><b>Section D - Risks Key risks specific to the Company or its industry</b></p>
<b>D.1</b>	<p><i>Risks relating to the Group's Business and Industry</i></p> <ul style="list-style-type: none"> <li>• The Group's business is working capital intensive and the Group's ability to finance its business depends on generating sufficient capital to support its operations;</li> <li>• The Group is dependent on the Tharisa Mine;</li> <li>• The Group's business may be adversely affected if it is unable to secure an adequate and timely supply of water at favourable prices or at all;</li> <li>• The Group relies on the services of third parties to undertake its mining operations;</li> <li>• The Mineral Resources and Mineral Reserves data cited in this Prospectus are</li> </ul>

estimates based on a number of assumptions that may prove inaccurate;

- The market prices for PGM and chrome products have experienced a high degree of volatility and future fluctuations in the market prices for these products could adversely affect the Group;
- The Group may be exposed to fluctuations in currency exchange and interest rates;
- The Group depends on a limited number of customers and is subject to counterparty risk;
- Mine design risk;
- The cash flow and performance of the Tharisa Mine is heavily reliant on the geology of the area being mined and the efficient processing of mined ore;
- Geology, Mineral Resources and geotechnical engineering risk of the Tharisa Mine;
- The Group's activities are subject to operational risks, hazards and unexpected disruptions, including damage to property or injury to persons, some of which are beyond its control;
- The unavailability or shortage of reliable and sufficient transportation capacity could adversely impact the Group's revenues and profitability or cause the Group to reduce its production volume;
- The Group's business may be adversely affected if it is unable to secure an adequate and timely supply of electricity at favourable prices, or at all;
- The Group may encounter shortages or delays in obtaining critical mining and processing equipment;
- The mining industry is subject to a significant number of laws and governmental regulations, compliance with which may be costly;
- The Group's compliance with health and safety laws and regulations may require increased capital expenditures, and non-compliance may subject the Group to significant penalties;
- The Group may be forced to lower the prices of its products due to competition from domestic and foreign suppliers of PGM and chrome products;
- The Group is subject to litigation risk which may be costly and result in significant liability;
- The Group's insurance and indemnities may not adequately cover all risks or expenses;
- The Group is dependent on its executive management, senior management team and employees with relevant experience;
- Mining companies, including the Group, may be adversely affected by current global economic conditions;
- The use of foreign subsidiaries by the Group may affect the Company's ability to pay dividends or make distributions;

	<ul style="list-style-type: none"> <li>• The Group is exposed to financial risk;</li> </ul> <p><i>Risks relating to Cyprus</i></p> <ul style="list-style-type: none"> <li>• Distributions by the Company to Shareholders who are Cypriot tax residents may be subject to Defence Tax in Cyprus;</li> <li>• Interest expenses may not be deductible by the Company for tax purposes in Cyprus;</li> <li>• The Company may be subject to potential adjustment of its taxable profits if transactions with related parties are not carried out on an arm's length basis;</li> </ul> <p><i>Risks relating to South Africa</i></p> <ul style="list-style-type: none"> <li>• Exchange control restrictions could adversely affect the Group;</li> <li>• Labour disruptions and/or increased labour costs could have an adverse effect on the Group;</li> <li>• Regulatory, political, economic and social conditions in South Africa could adversely affect the Group's business and the market prices of its securities;</li> <li>• Possible disruptions to operations at the Tharisa Mine by members of the local community could have an adverse effect on the Group;</li> <li>• Increasing incidence of, or changes in, legislation related to, HIV/AIDS and tuberculosis could adversely affect the Group's business;</li> <li>• The South African government's transformation initiatives under the MPRDA, Code of Good Practice and the Mining Charter, including any change in the requirements for HDSA ownership, may have an adverse impact on the Group;</li> <li>• Policy changes in terms of black equity ownership and ongoing compliance could have an adverse effect on the Group;</li> </ul> <p><i>Risks relating to the taxation of the Group</i></p> <ul style="list-style-type: none"> <li>• The Group seeks to structure its affairs in a tax efficient manner;</li> <li>• Change in the Company's tax status or in taxation law could negatively affect the Company's ability to provide returns to Shareholders.</li> </ul>
<b>D.2</b>	<p><b>Risks relating to the Ordinary Shares</b></p> <ul style="list-style-type: none"> <li>• External perceptions of the jurisdictions in which the Group operates may adversely affect the market price of the Shares, and increase the Group's cost of capital;</li> <li>• Substantial future sales or additional offerings of Ordinary Shares could impact the market price of Ordinary Shares;</li> <li>• The issuance of additional Ordinary Shares in the Company may dilute other shareholdings;</li> <li>• There may be volatility in the value of an investment in Ordinary Shares and the market price for Ordinary Shares may fluctuate;</li> </ul>

	<ul style="list-style-type: none"> <li>• There can be low liquidity or volatility;</li> <li>• The Company cannot guarantee its ability to pay dividends in the future;</li> <li>• If the Company is wound up, distributions to Shareholders will be subordinated to the claims of creditors;</li> <li>• The Company is applying for a Standard Listing and, accordingly, the Company will not be required to comply with those protections applicable to a Premium Listing;</li> <li>• The rights of Shareholders under Cypriot law may differ from the rights of shareholders of companies in other jurisdictions;</li> <li>• Restrictions on sale for Shareholders in the United States may make it difficult to resell the Ordinary Shares or may have an adverse impact on the market price of the Ordinary Shares;</li> <li>• Introducing the Ordinary Shares to trading on the LSE may be suspended or prohibited;</li> <li>• There may be a delay in introducing the Ordinary Shares to trading on the LSE;</li> <li>• Trading in Ordinary Shares may be suspended;</li> <li>• Holders of Depositary Interests must rely on the Depositary or the Custodian to exercise rights attaching to the underlying Ordinary Shares for the benefit of the holders of Depositary Interests.</li> </ul>
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	<b>Section E - Offer</b>
<b>E.1</b>	<p><b>Net proceeds/estimate of expenses</b></p> <p>Not applicable; the Company is not offering any Ordinary Shares nor any other securities in connection with Admission. The Company is therefore not receiving any proceeds.</p> <p>The total costs (including fees and commissions, but exclusive of VAT) payable by the Company in connection with Admission are estimated to be £600 000.</p>
<b>E.2a</b>	<p><b>Reasons for the offer/use of proceeds/net amount of proceeds</b></p> <p>Not applicable.</p>
<b>E.3</b>	<p><b>Terms and conditions of the offer</b></p> <p>Not applicable.</p>
<b>E.4</b>	<p><b>Interests material to the issue/ conflicting interests</b></p> <p>Not applicable; there are no interests, known to the Company, material to Admission or which are conflicting interests.</p>
<b>.5</b>	<p><b>Name of the offeror/lock-up agreements</b></p> <p>Not applicable.</p>

<b>E.6</b>	<b>Dilution</b> Not applicable.
<b>E.7</b>	<b>Estimated expenses charged to the investor</b> Not applicable.

## RISK FACTORS

***The Group's business, financial position or results of operations could be materially and adversely affected by the risks described below. In such cases, the market price of the Ordinary Shares may decline due to any of these risks and investors may lose all or part of their investment. The Company considers the following risks to be the material risks for potential investors in the Company, but the risks listed do not necessarily comprise all those associated with an investment in the Company.***

*Any investment in the Ordinary Shares may not be suitable for all recipients of this Prospectus and is subject to a high degree of risk. Prior to investing in the Ordinary Shares, prospective investors should carefully consider the risks and uncertainties associated with any investment in the Ordinary Shares, the Group's business and the industry in which it operates, together with all other information contained in this Prospectus, including, in particular, the risk factors described below. Any of the risks described below, as well as other risks and uncertainties discussed in this Prospectus, could have a material adverse effect on the Group's business and could therefore have a negative effect on the trading price of the Ordinary Shares. Prospective investors should note that the risks relating to the Group, its industry and the Ordinary Shares summarised in section "SUMMARY" of this Prospectus are the risks that the Company believes to be the most essential to an assessment by a prospective investor of whether to consider an investment in the Ordinary Shares. However, as the risks which the Group faces relate to events and depend on circumstances that may or may not occur in the future, prospective investors should consider not only the information on the key risks summarised in section "SUMMARY" but also, among other things, the risks and uncertainties described below.*

*The following factors do not purport to be a complete list or explanation of all the risk factors involved in investing in the Ordinary Shares and should be used as guidance only. The factors listed under a single heading may not provide a comprehensive view of all risks relevant to the subject to which the heading relates. Additional risks and uncertainties that are not currently known to the Group, or that it currently deems immaterial, may individually or cumulatively also have an adverse effect on the Group's business, results of operations, financial position and prospects. In particular, the Group's performance might be affected by changes in market and/or economic conditions and in legal, regulatory and tax requirements. If such changes were to occur, the price of the Ordinary Shares may decline and investors could lose all or part of their investment. Prospective investors should also consider carefully whether an investment in the Ordinary Shares is suitable for them in light of the information in this Prospectus and their personal circumstances.*

*The information contained in this prospectus is based upon current legislation and tax practice and any changes in the legislation or in the levels and bases of, and reliefs from, taxation may affect the value of an investment in the Ordinary Shares.*

### **Risks relating to the Group's Business and Industry**

**The Group's business is working capital intensive and the Group's ability to finance its business depends on generating sufficient capital to support its operations.**

The Group requires substantial capital to fund its working capital and other cash needs. The Group's working capital needs generally relate to the financing of payments to suppliers and subcontractors.

The Group's ability to generate sufficient operating cash flow to support its operations to a certain extent depends on competitive, general economic, financial and other factors that are beyond the Group's control, such as commodity prices and including the availability of credit. In particular, should commodity prices weaken significantly and/or should forecast production not be achieved and without

approval for any further fundraising or a waiver or extension to any requirement to repay, an event of default may occur in terms of the CTA for which the Group may not have sufficient funds to meet its obligations. Consequently, the Group may experience periodic cash demands that it is unable to fully satisfy. In the event that the Group is unable to satisfy its payment obligations, this could have a material adverse effect on its business, results of operations and financial position.

The Auditor's report of the statutory auditors of the Issuer, KPMG Limited, in the Auditor's Report for the Financial Year 2015, included the following "emphasis of matter":

*"We draw attention to note 2(d) of the consolidated financial statements which indicates that notwithstanding that the Group made a profit of US\$6 015 thousand for the year ended 30 September 2015, as at that date its current liabilities exceeded its current assets by US\$10 305 thousand. The note indicates that subsequent to year end, global commodity prices have weakened significantly to the extent that short term cash flows reflect a shortfall in cash. In the event that the weakened commodity prices persist, forecast production is not achieved and the Group is unable to raise further funding, a material uncertainty will exist which may cast significant doubt on the ability of the Group to continue as a going concern. Our opinion is not qualified in respect of this matter."*

Additionally, note 2(d) of the audited consolidated financial statements of the Company for the year ended 30 September 2015, states the following:

*"Based on the commodity prices prevailing at the financial year end, the short term cash flow forecasts of the Group reflect a positive cash flow position sufficient to meet the operational cash flows, the approved capital expenditure and the debt repayments. However, subsequent to the financial year end, global commodity prices weakened significantly and the weakening of the South African Rand against the US\$ has been insufficient to off-set the weakened commodity prices. Based on current commodity spot prices and US\$ exchange rate, the short term cash flow forecasts reflect a shortfall in cash. Should the current depressed commodity prices persist beyond the near term and/or should forecast production not be achieved, the Group will need to source additional cash to fund its operations. The operations are, in part, funded through chrome pre-pay transactions and it is the intention of the Group to continue with these arrangements. In addition, the Group may secure a further working capital facility or the Company may undertake a placement of shares to provide this funding should this be required. In addition, the Group is reviewing its cost structure in order to reduce operating costs.*

*The financial statements however continue to be prepared on the going concern basis. In the event that the weakened commodity prices persist, forecast production is not achieved and the Group is unable to raise further funding, a material uncertainty will exist which may cast significant doubt on the ability of the Group to continue as a going concern and, therefore, it may be unable to realise its assets and settle its liabilities in the normal course of business."*

For the Financial Year 2014, the Auditor's Report included the following "emphasis of matter":

*"We draw attention to note 2(d) of the consolidated financial statements which indicates that the Group incurred a loss of US\$54 873 thousand for the year ended 30 September 2014 and, as at that date its current liabilities exceeded its current assets by US\$1 475 thousand. The note states that should the forecast production not be achieved and/or South African Rand commodity prices weaken, a material uncertainty exists which may cast doubt on the Group's ability to continue as a going concern. Our opinion is not qualified in respect of this matter."*

Additionally, note 2(d) of the audited consolidated financial statements of the Company for the year ended 30 September 2014, states the following:

*“The Group incurred a loss for the year ended 30 September 2014 of US\$54 873 thousand (2013:US\$47 443 thousand) and, as at that date its current liabilities exceeded its current assets by US\$1 475 thousand (2013: US\$258 753 thousand).*

*The short term cash flow forecasts of the Group reflect a positive cash flow position sufficient to meet the operational cash flows, the approved capital expenditure and the debt repayments. Achievement of the short term cash flow forecast is dependent on the planned production levels being achieved and/or no weakening in future South African Rand commodity prices. Should forecast production not be achieved and/or South African Rand commodity prices weaken, this may result in a shortfall in cash. Certain capital expenditure can be postponed in such event and alternative funding options are being evaluated including the release of the environmental rehabilitation guarantee collateral included in “other financial assets” in note 15 which would then be available for operational cash requirements.*

*During the financial year, insufficient correct reef layers were exposed as a result of waste and interburden stripping being below plan because of contractor mining equipment availability being below industry norms. Following a strategic review, an additional mining contractor has been appointed to undertake the more specialised blasting and extraction of the reef layers and removal of interburden. The existing mining contractor will focus on bulk waste removal.*

*The Group experienced ramp-up problems typical of large complex concentrators coupled with mechanical failure of certain key equipment. De-bottlenecking and process optimisation together with equipment re-engineering have overcome these problems. Initiatives to improve recoveries and yields are ongoing.*

*The senior debt providers have waived certain facility covenants relating to the debt service cover ratio as at 30 September 2014 and have extended the date for completion of the technical completion tests to 28 November 2015.*

*Should the forecast production not be achieved and/or the South African Rand commodity prices weaken, a material uncertainty exists which may cast doubt on the ability of the Group to continue as a going concern and it may be unable to realise its assets and settle its liabilities in the normal course of business without additional fund raising.*

*The financial statement however continue to be prepared on the going concern basis”*

#### **The Group is dependent on the Tharisa Mine.**

The Group’s revenues and cash flows are currently derived primarily from sales of PGM and chrome concentrates produced by the Tharisa Mine, which is the Group’s sole operating mine. Any event or circumstances leading to a reduction in production at, or a suspension or closure of, the Tharisa Mine may have a material adverse effect on the Group’s financial performance and results of operations. Further, the relevant legislation in South Africa provides that the Mining Right may be suspended or terminated if Tharisa Minerals fails to comply with its obligations under such Mining Right or is in contravention of the provisions of MPRDA.

The Competent Person’s Report identified a low to medium risk in the technical risk summary of Tharisa Mine as per the table below:

<b>Overall Risk Assessment Analysis</b>			
<b>Hazard/Risk Issue</b>	<b>Likelihood</b>	<b>Consequence Rating</b>	<b>Overall Risk Assessment</b>
<b><u>Geology and Mineral Resources</u></b>			
Significant variance in resource tonnage	Unlikely	Moderate	Low
Resource grade variation	Unlikely	Moderate	Low
Significant variance in geological losses	Unlikely	Minor	Low
Western extend of mineral resource	Possible	Minor	Low
<b><u>Mining Engineering</u></b>			
Tonnage variation	Possible	Moderate	Medium
Grade variation	Possible	Moderate	Medium
Open pit mining method	Unlikely	Minor	Low
Production schedule	Unlikely	Moderate	Low
Highwall collapse	Possible	Moderate	Medium
Underground mining method	Unlikely	Minor	Low
Negative change in Opex	Possible	Moderate	Medium
Negative change in Capex	Possible	Moderate	Medium
<b><u>Metallurgy and Processing</u></b>			
ROM grade variation – Feed to plant	Possible	Moderate	Medium
Recoveries	Possible	Moderate	Low
Negative change in Opex	Possible	Moderate	Low
Process technology / complexity	Unlikely	Moderate	Low
Negative change in Capex	Unlikely	Moderate	Low
Ore response to processing	Unlikely	Minor	Low
<b><u>Infrastructural</u></b>			
Water Supply	Possible	Moderate to Minor	Medium to Low
Power Supply	Unlikely	Moderate	Low
<b><u>Environmental*</u></b>			
Potential for ground and surface water	Possible	Moderate to	Medium to Low

contamination		Minor	
Relocation of informal settlement and related social issues	Possible	Moderate to Minor	Medium to Low
Potential for air pollution	Possible	Moderate to Minor	Medium to Low
Blasting and noise disturbance of surrounding land users	Possible	Minor	Low
Soil and biodiversity management	Possible	Minor	Low
Traffic impacts	Possible	Minor	Low
Disturbance of archaeological resources	Possible	Minor	Low
Rehabilitation and closure planning	Possible	Moderate to Minor	Medium to Low
Ongoing permitting	Unlikely	Minor	Low
TSF and waste rock dump rehabilitation	Unlikely	Low	Low
<b><u>Manpower and Management</u></b>			
Lack of skills availability	Possible	Moderate	Medium
Inability to retain skills	Unlikely	Moderate	Medium
HIV	Possible	Minor	Low
Labour costs	Possible	Moderate	Medium
Disruptions to business	Possible	Moderate	Medium
Industrial action	Possible	Moderate	Medium
Safety/DMR	Possible	Moderate	Medium
<b><u>Infrastructure</u></b>			
Water supply	Possible	Moderate	Medium
Power supply	Unlikely	Moderate	Medium

\* Environmental risks shown above reflects the managed scenario which assumes successful implementation of the EMP commitments

**The Group's business may be adversely affected if it is unable to secure an adequate and timely supply of water at favourable prices or at all.**

South Africa is a water-scarce country and water is one of the primary utilities the Group uses in its production process. The Group cannot guarantee that its water supply will be sufficient for its current or future operations. The NWA imposed a new regime on the use of water resources and requires a water licence for all water uses including taking water from a water resource, storing water, impeding

or diverting water courses, engaging in a stream flow reduction activity, engaging in certain “controlled activities” as identified in the NWA, and discharging waste and water containing waste into a water resource. The Group was granted an integrated water use licence by the DWS on 16 July 2012. In order to supplement its water supply, the Group has applied, in terms of the DWS, for a conversion of the water rights attaching to various properties on which the Tharisa Mine is situated, from agricultural use to industrial use, thereby entitling the Group to source additional water from the nearby Buffelspoort Dam. If the Group’s application for conversion of existing water rights from agricultural use to industrial use is not successful, the Group’s water supply may be inadequate in the event of a severe drought, which could affect the Group’s ability to continue its operations at the Tharisa Mine, and could thereby have a material adverse effect on the Group’s business, financial position and results of operations.

According to the Competent Person’s Report, Tharisa Minerals has obtained commitments to water and power that are suitable for the operations of the Tharisa Mine. According to the mine water consultant, there is adequate water to take the mine up to 400 ktpm and maintain it at steady state production. This is in agreement with the water licence and water balance, however there may be a risk of water shortages during extreme dry periods. If the amendment of the water licence is approved, allowing use of agricultural water, then the risk during extreme dry seasons will be reduced and allow the mine to function as required. Coffey associates a medium to low risk rating for infrastructure.

As at the Last Practical Date the Group has not experienced any instances of disruption to its operations caused by insufficient water supply. However, because the level of surface water is dependent on a number of factors beyond the Group’s control including a change in the precipitation rate in the region, the occurrence of factors beyond the Group’s control may materially reduce the amount of water available to the Tharisa Mine. Any failure to obtain sufficient water supplies at economically viable rates, or at all, could materially and adversely affect the Group’s business, financial condition, results of operations and future development plans.

**The Group relies on the services of third parties to undertake its mining operations.**

The Group relies to a large extent on external contractors and, in particular MCC, to carry out certain mining operations including drilling, blasting, loading, hauling and rehabilitation.

While MCC is aware of the Group’s future production plans, there can be no assurance that it will have sufficient resources to meet the Group’s requirements. The Group, to the extent required, will seek to enter into additional agreements with third party service providers in connection with its future development plans. However, there can be no assurance that the Group will be able to secure in a timely manner, on commercially acceptable terms or at all, the provision of all of the services that the Group will need to execute its current and future requirements or development plans, or that such arrangements will be sufficient for its future needs or will not be interrupted. In addition, certain of the services the Group requires are, or may in the future, be available on commercially reasonable terms only from a limited number of providers and it may encounter difficulties in securing the services of specialised contractors due to high demand for those services.

As a result, the Group is dependent on external contractors performing satisfactorily and fulfilling their obligations. While the Group is not aware of any specific matters, the Group’s business and development plans may be adversely affected by any failure or delay by third parties in supplying these services, by any change to the terms on which these services are made available or by the failure of such third party providers to provide services that meet its quality or volume requirements. If the Group is obliged to change a provider of such services, it may experience additional costs, interruptions

to production or other adverse effects on its business. Finally, there can be no assurance that upon the expiry of the Group's existing contracts, it will be able to negotiate new contracts on similar or more favourable terms than such existing contracts. Less favourable terms could result in increased operation and maintenance costs. Should the Group be unable to acquire or retain providers of key services on favourable terms, or should there be interruptions to, or inadequacies with, any services provided, this could have a material adverse effect on its business, financial position and results of operations. The emphasis of matter included in the Auditor's report for the consolidated financial statements ending on 30 September 2014 and 2015 describe the risk of not meeting budgeted production (see risk factor above "The Group's business is working capital intensive and the Group's ability to finance its business depends on generating sufficient capital to support its operations").

**The Mineral Resources and Mineral Reserves data cited in this Prospectus are estimates based on a number of assumptions that may prove inaccurate.**

The Group's Mineral Resources and Mineral Reserves data cited in this Prospectus, in respect of the Tharisa Mine, are based on a number of assumptions that have been made by the Competent Person in accordance with the SAMREC Code. For additional information see the section "Competent Person's Report" of this Prospectus. Mineral Resources and Mineral Reserves estimates are inherently prone to variability as they involve expressions of judgment based on various factors such as knowledge, experience and industry practice, and the accuracy of these estimates may be affected by many factors, including quality of the results of exploration drilling and analysis of samples, as well as the procedures adopted by and the experience of those making the estimates.

Estimates of the Mineral Resources and Mineral Reserves may change significantly in the future when new information becomes available or new factors arise, and interpretations and deductions on which these Mineral Resources and Mineral Reserves estimates are based may prove to be inaccurate. Should the Group encounter mineralisation different from that predicted by past drilling, sampling and similar examination, Mineral Resource and/or Reserve Estimates may have to be adjusted downward. Additionally, lower market prices, increased production costs, reduced recovery rates and/or other factors may render the Group's reserves uneconomical to exploit and may result in the revision of its reserves estimate from time to time.

There can be no assurance that the Group's Mineral Resources and Mineral Reserves will be recovered in the quantities or yields presented. The inclusion of Mineral Resources and Mineral Reserves estimates should not be regarded as a representation that all these amounts can be economically exploited, and nothing contained herein (including, without limitation, estimates of mine life) should be interpreted as assurance of the economic life of its Mineral Resources and Mineral Reserves or the profitability of its future operations. If the Group's actual Mineral Resources or Mineral Reserves are less than current estimates, the Group's business, development plans, financial position and results of operations could be materially and adversely affected.

**The market prices for PGM and chrome products have experienced a high degree of volatility and future fluctuations in the market prices for these products could adversely affect the Group.**

Due to its reliance on the sale of production from the Tharisa Mine as the Group's primary source of income, the Group's revenues, profitability and future rate of growth will depend on the prevailing market price of PGMs and chrome. A sustained downward movement in the market price for PGMs and/or chrome may negatively affect the Group's profitability and cash flows. In addition, fluctuations in the price of PGMs and/or chrome, due to factors beyond the Group's control, including, but not limited to imbalance in the supply of and demand for PGMs and/or chrome in local, national and global

markets, currency exchange rates, interest rates and the level of inflation, global economic trends, inventory levels and actions of participants in the commodity markets could result in a significant oversupply or decreased demand for PGMs and/or stainless steel which, in turn, could result in fluctuations in the market price and demand for PGM and/or chrome products.

There have been periods of time when the market prices of PGMs and chrome products have fluctuated widely with significant appreciation and significant decline. The Group has a limited ability to manage commodity price fluctuations. There can be no assurance that the market price of any or all metals will not decline in the future or that such prices will otherwise remain at sufficiently high levels to support the Group's profitability.

All of these factors could result in a material decrease in the Group's revenue and the financial resources available to it, resulting in a material adverse effect on its financial position, business, prospects and results of operations.

While the Auditor's Reports on the consolidated financial statements of the Company as at and for the years ended 30 September 2013, 2014 and 2015 do not contain any qualifications, shareholders' attention was drawn to the consolidated financial statements for the years ended 30 September 2014 and 2015, by way of emphasis of matter to the disclosure on "going concern", as a result of weakening global commodity prices and the ZAR against the US\$ exchange rate.

**The Group may be exposed to fluctuations in currency exchange and interest rates.**

The Group is exposed to currency, exchange and interest rate fluctuations which may affect the Group's results of operations. The Group's revenues are denominated in US\$ and its reporting currency is the US\$; however, substantially all of its on-mine operating costs (including mining, processing and administration costs) are, and for the foreseeable future will be, denominated in ZAR.

**The Group depends on a limited number of customers and is subject to counterparty risk.**

The Group is currently economically dependent upon a limited number of customers. The Group is currently reliant on Impala Platinum for the sale of its PGM concentrate in terms of the existing off-take agreement. For its chrome concentrate sales, approximately 52% of sales were derived from the top five customers for the Financial Year ended 30 September 2015. Exported metallurgical grade chrome concentrates are marketed and sold, mainly to customers in China, by Arxo Resources. Premium chemical and foundry grade chrome concentrates produced by Tharisa Minerals and Arxo Metals are sold to customers in South Africa and internationally.

There can be no assurance that the Group will be able to retain these customers or that they will maintain their current level of business with the Group and such customers could reduce or cease their orders for any reason. Any adverse changes to the terms of the agreement with Impala Platinum could have a material and adverse effect on the Group and its financial results.

The Group's ability to receive payment for its PGM and chrome products sold and delivered to its third party customers generally depends on the continued creditworthiness of such customers. The Group seeks to reduce the risk of customer non-performance by requiring credit support from financial institutions in terms of letters of credit for metallurgical grade chrome concentrate, where appropriate, and by imposing limits on the extension of credit, where applicable; however, there can be no assurance that the Group's efforts to reduce counterparty risk will be successful. Partial payments, delays or failures in payment or the insolvency of any of its customers could materially and adversely affect the Group's business and liquidity. In addition, competition with other suppliers of chrome

products could put pressure on the Group to extend credit to customers and to do so on terms that could increase the risk of payment default. The failure to collect payment from the Group's customers on a timely basis or at all could have a material adverse effect on its business, financial position and results of operations.

The majority of the Group's chrome concentrate products are sold into China for the production of ferrochrome and ultimately stainless steel, as a result the Group is reliant on the performance of the manufacturing sector and performance of the global economy. A material change in the growth rate of the global economy and a reduction in the global stainless steel sector could have a material adverse effect on the business.

#### **Mine design risk.**

The underground design of the Tharisa Mine was not constrained within the extents of the current surface rights and the Mining Right. Small portions exist within the underground design for the Tharisa Mine for which Tharisa Minerals does not currently hold a Mining Right. These areas have been included in the mine design based on the reasonable expectation that the necessary permitting would be in place by the time mining is undertaken in these areas, as underground mining operations will not commence for approximately 20 years.

#### **The cash flow and performance of the Tharisa Mine is heavily reliant on the geology of the area being mined and the efficient processing of mined ore.**

The Mining Right allows Tharisa Minerals to mine an area of 5 475 ha. The MG Chromitite Layer of the South African Bushveld Complex is accessed along a 5.5 km length strike and mined based on a set mine plan and according to available geological data. While the overall geological risk is considered low, there are risks associated with the mining and processing of the orebody. Special emphasis is therefore placed on grade control and mining the correct width of the ore zone so as to ensure the least amount of dilution.

Excessive stripping and non-economical mining of the ore zone could result in the dilution of grades in the ROM feed, which would have an adverse impact on the running of the processing plants. The process used at Tharisa Minerals is conventional crushing, milling, spiral gravity concentration and flotation. Auxiliary processes use thickening, reagent make-up, concentrate dewatering and filtration. These processes in themselves pose low operational risk. Furthermore, the processing plants have been in operation as a 400 ktpm unit since December 2012 and have proven the technology used to liberate the PGM and chrome concentrate from the MG Chromitite Layers.

The primary risks associated with metallurgy and processing relate to the quality of the PGM and chromite feed grade and potential increases in recovery levels. Historical production data shows that feed grades vary from day to day. If not properly managed these inconstant feed grades can have negative impact on production performance.

The Group is targeting sizable increases in concentrate recovery. Without changes to the feed grade, the Group will have to rely on process improvements to optimise concentrate recoveries. There can be no assurance that the Group will achieve its recovery targets without an improvement in feed grade or through process engineering.

The Competent Person's Report associates medium risk with the mining operation due to a concern relating to the amount of dilution which may report to the ROM ore and into the processing facility. Tharisa must place special emphasis on grade control and mining the width of the ore zone with limited

dilution. Any delay in the relocation of the roads, overhead power lines and water canals in the east pit area poses a scheduling risk. Reasonable time allocations were made in the LOM schedule for these relocations. Sufficient flexibility exists in the mining plan to reschedule activities to maintain the planned build-up profile. The planned construction of a dam from the pit void at the end of the economic life of the operation poses a risk since the required regulatory approval must still be obtained. This application is in process and it is reasonable to assume that it will be approved.

The Competent Person's Report identified the risks associated with the metallurgy and processing as medium risk taking into consideration the following:

i) ROM feed variation

The chromite feed grade has a significant impact on the chromite recovery and yield. Similarly the PGM recovery and concentrate grade is influenced by the PGM feed grade into the plant. From the available production data the chromite feed grade seems to be variable day to day and has been declining since the plant commissioning. This variable and possible lower than design chromite feed grade can impact negatively on the production performance of the processing facility. The variable feed grade has been identified as a medium risk due to the possible influence on the production performance.

ii) Chromite and PGM recovery

From the production data the PGM recovery has been following an upward trend since the plant commissioning. This is due to projects implemented in the process plant to improve recovery as well as an increase of non-oxidised ore in the plant feed. The chromite recovery was fairly stable with a slight decrease from 2014 to 2015. The budget for the chromite recovery going forward indicates a steep increase of chromite recovery from 58-59% to 73-74% from 2015 to 2016. This is with similar chromite feed grade. Although a large process improvement drive is currently underway the realization of the high recoveries at a similar feed grade is identified as a medium risk.

iii) Increase in operating costs

The Tharisa Minerals operating unit cost per feed tonne has been maintained stable between 2014 and 2015. The budget for 2016 indicates a significant increase in the total operating cost (cost including overheads). Increased operating cost can have a negative impact on the long-term viability of the operation and has therefore being indicated as a medium risk.

iv) Other process risks

Less significant or low process risks include the increasing complexity of the spiral circuits as the primary recovery method used for chromite recovery. This increased circuit complexity requires detailed knowledge of the circuit and can trigger a shortage of skilled operators to ensure good production performance if adequate training is not supplied.

The process technology employed has been identified as a low risk as the process has been proven to successfully treat the MG Chromitite Layer.

The plant capital cost has been identified as a low risk as this is managed well and a system is in place to prioritise the capital spend to ensure the capital cost does not increase above normal requirements.

### **Geology, Mineral Resources and geotechnical engineering risk of Tharisa Mine.**

The Competent Person's Report associates low risk with geology and Mineral Resources as well as geotechnical engineering.

In particular, the Competent Person's Report indicates that the level of technical risk is defined as the likelihood of variation of resource tonnage and/or grade from the stated values. The geological model developed presents a tabular deposit with some dykes and faults crossing the property. However smaller scale faulting (<10 m throw) must be considered. No potholes have been delineated although it is considered likely that some potholing of the MG Chromitite Layers has occurred. As these chromitite layers are not mined extensively elsewhere, it is difficult to assess the degree of potholing or the presence of small scale faulting. The application of a 7.5% - 15% geological loss is made based on knowledge of the Bushveld Complex and is intended to represent those areas where the MG Chromitite Layers is replaced by mafic pegmatites, intersected by faults or dykes, or disrupted by potholes.

The interpretation of the position of the most westerly point where a Mineral Resource can be declared is subjective. The interpreted position is considered to represent the likely extent of the deposit that can realistically be exploited based on the current data available, the current understanding of the geology and the macroeconomic understanding. It is possible that this boundary could move. It is considered more likely to move westward, effectively increasing the Mineral Resource base.

Additionally, geotechnical open pit slope and underground bord and pillar designs have been carried out using a probability based design, numerical modelling and dynamic wedge analysis, developed from detailed rock mass and rock material data coupled with structural data collected, which provide for greater certainty in the geotechnical design that is at an acceptable level of confidence for a mine of this size.

### **The Group's activities are subject to operational risks, hazards and unexpected disruptions, including damage to property or injury to persons, some of which are beyond its control.**

The Group's mining and processing operations are subject to a number of operational risks and hazards, some of which are beyond its control. These risks and hazards include unexpected maintenance or technical problems, natural disasters, industrial accidents, power or fuel supply interruptions, water supply interruptions and shortages, machinery and equipment failure, malfunction and breakdowns of information management systems, fires, and unusual or unexpected variations in mineralisation, geological or mining conditions, hazards associated with open pit mining including accidents involving the operation of mining and rock transportation equipment, the preparation and ignition of large-scale open pit blasting operations, the collapse of open pit walls and the flooding of open pits. In addition, mining operations at the Tharisa Mine may be interrupted due to inclement or hazardous weather conditions, particularly as a result of heavy rain or lightning. Hazards associated with processing activities include the risk of accidents caused by operating crushing and concentrating plants and equipment and chemical spillage or seepage. These risks and hazards may result in personal injury, damage to or destruction of properties or production facilities, environmental damage, business interruption, legal liability, suspension of mining or processing operations, monetary losses, damage to the Group's business reputation and corporate image and, in severe cases, fatalities. Any disruption to the operations of the Tharisa Mine or processing plants or supporting infrastructure for a sustained period, or any change to the natural environment surrounding the mine may have a material adverse effect on its business, financial position and results of operations. Limiting the impact of such risks if they arise may require additional capital or operational expenditure, which may have a material adverse impact on the business and its profitability.

**The unavailability or shortage of reliable and sufficient transportation capacity could adversely impact the Group's revenues and profitability or cause the Group to reduce its production volume.**

Substantially all of the Group's chrome concentrate is exported from South Africa to customers in China and other overseas markets, which involves a combination of road and rail services to various Indian Ocean ports on the South African coast for shipment. For the Financial Year ended 30 September 2015 approximately 87% of the Group's chrome concentrate production was transported by rail. However, the rail industry in South Africa is constrained due to capacity and a shortage of rolling stock and the Group competes with other producers, purchasers and marketers of mineral or other products for rail capacity and storage facilities at ports and freight terminals.

There can be no assurance that access to adequate means for the transport of the Group's products will be available on commercially reasonable terms, at required levels, or at all. The unavailability, interruption or shortage of transportation or required storage along any of these routes or in the areas surrounding these routes or at discharge ports could adversely affect the Group's ability to supply its customers and result in the Group incurring costs related thereto. Transportation routes could be impacted by a number of factors beyond the Group's control, including among other things extreme weather conditions, earthquakes, poor maintenance of roads, railways, trains or sea vessels, delays caused by accidents, port closures, industrial action, civil disturbances or other social unrest and seasonal congestion. Failure to secure and maintain adequate transportation channels could result in reduced production volumes, and/or delays or suspension of customer deliveries, which could lead to cancelled orders, delays in payment or refusal by customers to pay. In addition, due to the short-term nature of many of the Group's logistics arrangements, the Group may be exposed to short-term increases in logistics prices, for example those relating to container and bulk freight shipping rates. The occurrence of any of these circumstances could result in increased transportation costs, which the Group may not be able to pass on to its customers and which may make it less profitable for the Group to supply its customers. The Group anticipates that its mining, processing and logistics operations will continue to be highly dependent on transportation services, and any significant shortage or disruption could materially and adversely affect its business, financial position and results of operations.

**The Group's business may be adversely affected if it is unable to secure an adequate and timely supply of electricity at favourable prices, or at all.**

Electricity is one of the primary utilities the Group uses in its production process. The Tharisa Mine sources its electricity from Eskom, South Africa's only electricity utility company. The electricity costs incurred at the Tharisa Mine for the three Financial Years ended 30 September 2013, 2014 and 2015 were approximately ZAR86.6 million, ZAR98.9 million and ZAR108.0 million, respectively. The National Energy Regulator of South Africa approved percentage price increases of 8% each year for the years 2013 to 2018. Eskom applied to the National Energy Regulator of South Africa for a 16.6% tariff increase for 2016/2017, and was granted a 9.4% tariff increase. There is a risk that, in the foreseeable future, electricity prices will increase even further. Additionally, there can be no assurance that the Group will be able to renew its existing arrangements with Eskom upon their expiration in a timely manner, on the same or similar terms, or at all. Finally, Eskom may be unable or unwilling to provide sufficient electricity to the Group to meet its existing or future requirements. There can be no assurance that the power supply to the Tharisa Mine will be free of interruptions as South African economic activity

increases or the availability of power supply from the national grid decreases, thereby increasing demand on the national grid.

If the Group is unable to secure reliable and sufficient electricity at acceptable prices or at all, it may experience higher production costs or be forced to decrease or suspend production, either of which could adversely affect its business, financial position and results of operations.

**The Group may encounter shortages or delays in obtaining critical mining and processing equipment.**

The Group's mining and processing operations require specialised mining and processing equipment and materials. Mining work at the Tharisa Mine is carried out by third party contractors, in particular MCC, who is primarily responsible for the purchase, lease or procurement of mining equipment. With respect to its processing operations, the Group must procure critical spares for equipment such as crushers, mills, flotation cells and transformers. The Group must also procure auxiliary materials such as fuel and chemical products.

The availability of mining and processing equipment and materials is influenced by the global demand for commodities and any of the Group's suppliers may divert their equipment to other mines or industries or divert their auxiliary materials to produce other products that have a higher profit margin. The price of diesel fuel is subject to variations in oil prices, exchange rates and taxes. Shortages of equipment and fuel or changes in underlying prices may give rise to unanticipated price increases as well as production delays and shortfalls. Increases in prices may result in an increase in both operating costs and the capital expenditure required to maintain and develop the Group's mining and processing operations. There can be no assurance that the Group's supplies of processing equipment, auxiliary materials or fuel will not be interrupted, or that they will be available on commercially acceptable terms or delivered in a timely manner or at all, or that the prices of such equipment, materials or fuel will not increase in the future. Mining companies, including the Group, have limited or no influence over manufacturers and suppliers of mining equipment and auxiliary materials and the price of fuel, and are therefore subject to shortages, delivery delays and price increases beyond their control. In addition, the supply chain for these items could be disrupted by global economic conditions.

If the Group, MCC, or any other contractor engaged by the Group experiences significantly increased prices, shortages, or increased lead times in delivery of strategic or critical consumables, spare parts and heavy mining and processing equipment, the Group's business, results of operations and financial position could be adversely affected. In addition, the Group may not be able to acquire adequate replacements for these supplies or equipment on a cost-effective basis, or at all, which could materially increase the Group's operating expenses or halt, disrupt or delay its production. This could have a material adverse effect on the Group's business, financial position and results of operations.

**The mining industry is subject to a significant number of laws and governmental regulations, compliance with which may be costly.**

Exploration, development and operational activities in the mining industry are subject to extensive laws and regulations governing various matters. These include, but are not limited to, laws and regulations relating to environmental protection, management and use of hazardous substances and explosives, management of natural resources, licences over resources controlled by governments, exploration, development of mines, production and post-closure reclamation, the employment of labour, and mine health and safety standards.

Mining companies are required to seek and to comply with the terms of governmental licences, mining rights, permits, authorisations and other approvals in connection with their exploration, mining,

construction and operating activities, for example in relation to their exploration licences, mining licences, environmental management, water supply and discharge, and use of hazardous chemicals and explosives. Obtaining the necessary governmental permits and licences can be a complex and time consuming process and may involve costly undertakings. The duration and success of permit and licence applications are contingent on many factors that are outside the Group's control. The Company believes that the Group has all of the material permits and licences required to conduct its current operations.

The costs associated with compliance with these laws, regulations and licences are substantial, and possible additional future laws and regulations, changes to existing laws and regulations (including, but not restricted to, the imposition of higher licence fees, mining royalties or taxes) or more stringent enforcement or restrictive interpretation of current laws and regulations by governmental authorities, or of rulings or clearances obtained from such governmental authorities, could cause additional expenditure (including capital expenditure) to be incurred or impose restrictions on, or suspensions of, the Group's operations and cause delays in the development of its properties. Moreover, these laws and regulations may allow governmental authorities and private parties to bring lawsuits based upon damages to property and injury to persons or infringement of constitutional rights resulting from the environmental, health and safety impacts of the Group's past and current operations, and could lead to the imposition of substantial fines, penalties or other civil or criminal sanctions or suspension of operations. The occurrence of any of these factors may have a material adverse effect on the Group's business, results of operations and financial position.

**The Group's compliance with health and safety laws and regulations may require increased capital expenditures, and non-compliance may subject the Group to significant penalties.**

The Group is required to comply with a range of health and safety laws and regulations in connection with its mining, processing and logistics activities. A violation of health and safety laws relating to a mine, at a processing plant or in the course of on-mine transportation of minerals, or if the mine health and safety authorities determine that any occurrence, practice or condition at the mine or processing plant endangers or may endanger the health or safety of any person, or a failure to comply with the instructions of the relevant health and safety authorities, could lead to, among other things, a temporary shutdown of all or a portion of the Group's mining, processing or on-mine logistics operations, a loss or suspension of the Group's right to mine, operate a processing plant or on-mine transport mineral products, or the imposition of costly compliance measures, criminal sanctions and/or monetary penalties. The Group lost 66.3 production shifts during the Financial Year 2015 due to temporary shutdowns of the Tharisa Mine and processing plants ordered by the authorities in this regard, a production shift being defined as an eight-hour shift of the Group's processing plants. The Group has established various health and safety committees at multiple levels within its organisational structure, implemented a safety compliance plan and contracted safety officers and safety staff to oversee inspections and identify necessary corrective action. There can be no assurance, however, that the Group's health and safety programme will be effective, will comply with applicable laws or that costs of implementation will not increase significantly. If health and safety authorities were to require the Group to temporarily shut down all or a portion of its mining, processing or on-mine logistics operations, or to implement costly compliance measures, whether pursuant to existing or new health and safety laws and regulations, or the more stringent enforcement of existing laws and regulations, such measures could have a material adverse effect on the Group's business, financial position and results of operations.

**The Group may be forced to lower the prices of its products due to competition from domestic and foreign suppliers of PGM and chrome products.**

The Group faces competition from both domestic and international suppliers of PGM and chrome concentrate. Some of the Group's competitors may have competitive advantages over the Group, including among other things, greater access to or availability of financial, technical and other resources, greater economies of scale, broader name recognition and more established relationships in certain markets. Competitive pressure may force the Group to lower its prices or lead to a decrease in its sales which could have a material adverse impact on its business, financial position and results of operations.

**The Group is subject to litigation risk which may be costly and result in significant liability.**

The Group has received threats of possible litigation and has instituted proceedings to defend itself against litigation involving a third party mining contractor as detailed in section "ADDITIONAL INFORMATION", "Litigation". While the Group does not believe there to be merit in the actions threatened or instituted against the Group and will ensure that any action taken against it will be defended, there can be no assurance that threatened actions will not culminate in proceedings being instituted against the Group nor that defences raised by the Group will be successful. Any legal proceedings instituted against the Group will result in the allocation of resources and management time and, while the magnitude of any claim cannot be quantified at this stage, any awards against the Group may result in significant costs to the Group or a cessation or suspension of the Group's business or operations and could have a material adverse effect on its business, financial position and results of operations.

**The Group's insurance and indemnities may not adequately cover all risks or expenses.**

The Group maintains insurance of the type and in the amounts that the Directors consider necessary for the Group's operations. However, there is no assurance that such insurance is adequate or that the Group will be able to insure against all risks. It may also be exposed under certain circumstances, to uninsurable hazards and risks which may result in financial liability, property damage, personal injury or other hazards or liability for the acts or omissions of sub-contractors, operators and other third parties. Although indemnities may have been provided by sub-contractors, operators and other third parties, such indemnities may be difficult to enforce given the financial positions of those giving the indemnities or due to the jurisdiction in which the Group seeks to enforce the indemnities, leaving the Group exposed to claims by third parties.

There is also no assurance that the Group will be able to maintain adequate insurance in the future at rates the Group considers reasonable. Accordingly, the Group could incur substantial losses if an event which is not fully covered by insurance occurs. This could have a material adverse effect on the Group's business, results of operations and financial position.

The nature of the Group's operations exposes it to a wide range of environmental regulations that could result in significant environmental liabilities.

The Group's mining and processing operations at the Tharisa Mine are subject to South African environmental legislation and regulations, including but not limited to (i) the MPRDA (ii) the NWA (iii) AQA (iv) the Waste Act and (v) NEMA. Of these, the provisions of NEMA which provides that every person who causes or may cause significant pollution or degradation of the environment must take reasonable steps to prevent, minimise or rectify such pollution or degradation, are particularly far-

reaching. Section 28 of NEMA imposes a form of strict liability with respect to the causation of environmental impacts.

Under the MPRDA and NEMA, companies that undertake mining activities must make financial provision for rehabilitation or management of negative environmental impacts to the satisfaction of the DMR. Directors of companies may also be held jointly and severally liable for any unacceptable negative impact on the environment, including damages caused by the company which they represent.

Under the NWA, the owner of land and controllers or occupiers of land on which any activity or process is, or was performed or undertaken or on which any situation exists that causes, has caused or is likely to cause the pollution of a water resource, must take all reasonable measures to prevent such pollution from occurring, continuing or recurring. The DWS may issue administrative directives to enforce the provisions of NEMA and the NWA to take specific anti-pollution measures, continue with those measures and/or to complete those measures. In addition to this, it can order the suspension of part or all of a company's operations if there is non-compliance. Contravention of these acts is also an offence and an offender may be liable to a fine or imprisonment.

In addition, mining companies operating in South Africa are subject to extensive environmental laws and regulations with respect to environmental matters such as:

- limitations on land use;
- prospecting and mining rights requirements;
- reclamation and restoration of mining properties after mining is completed;
- management of materials generated by mining operations;
- the storage, treatment and disposal of wastes;
- remediation of contaminated soil and groundwater;
- use, storage and transportation of hazardous substances;
- use, storage and transportation of explosives;
- air quality standards;
- water pollution;
- protection of human health, plant life and wildlife, including endangered or threatened species;
- protection of wetlands;
- the discharge of materials into the environment;
- the effects of mining on surface water and groundwater quality and availability; and
- the management of structures and equipment containing polychlorinated biphenyls.

The costs associated with compliance with these laws and regulations are substantial, and possible future laws and regulation and/or changes to existing laws and regulations (including the imposition of higher taxes and mining royalties) could cause additional expense and capital expenditures (for example the government of South Africa is considering proposals to levy a carbon tax and other measures to mitigate the impact of climate change). It could also cause restrictions on, or suspension of, the Group's operations and delays in further development at the Tharisa Mine or other future mining assets. Moreover, these laws and regulations may allow governmental authorities and private parties, who

have a substantial and direct interest in the mining operations or the consequences of the mining operations to bring lawsuits based upon damages to property and injury to persons or infringement of constitutional rights resulting from the environmental and health and safety impacts of the Group's past and current operations. This could lead to the imposition of substantial fines, penalties or other civil or criminal sanctions, including personal sanctions for directors. Environmental laws and regulations change frequently and are generally becoming more stringent. If the Group's environmental compliance obligations in South Africa were to vary as a result of changes to the legislation, or if certain assumptions it makes to estimate liabilities are incorrect, or if unanticipated conditions were to arise in its operations, the Group's expenses and provisions could increase. This could adversely affect the Group's business, financial position and results of operations.

The Competent Person's Report is of the opinion that a medium risk is associated with the environmental issues based on the managed scenario which assumes successful implementation of the EMP commitments as there are a number of environmental issues material to the future of the Tharisa Mine. The more significant issues include potential for ground and surface water contamination and reduction of water resources available to surrounding users, potential for air pollution, blasting and noise disturbance of surrounding land users, soil and biodiversity management, traffic impacts, disturbance of archaeological resources, rehabilitation and closure planning and ongoing permitting. The outcome of both the 2008 and 2014 EIA/EMP processes determined that all potential impacts of the mine can be managed to a satisfactory level, provided that the management measures detailed in the EIA/EMP reports are adhered to.

**The Group is dependent on its executive management, senior management team and employees with relevant experience.**

The Group is dependent upon its executive Management, as well as its senior management team and employees having relevant mining, processing, logistics, trading and financial experience. While the Group is not aware of the planned departure of any member of the executive Management, the loss of any of such executive Management with its concomitant loss of institutional and operational knowledge, experience and expertise, and its ability to deliver the strategy of the Group could have a disproportionate and material adverse effect on the Group.

Furthermore, the Group has no key-man insurance policies in place, and, therefore, there is a risk that the unexpected loss of the services of any member of its key personnel (through serious injury, death or resignation) could have a material adverse effect on the Group.

The loss of or diminution in the services of qualified mining specialists or of members of the Group's senior management team, or an inability to attract and retain additional senior management and/or specialised personnel could have a material adverse effect on the Group's business, financial position and results of operations.

There is no assurance that the Group will successfully continue to retain existing specialised personnel and senior management or attract additional qualified senior management and/or mining personnel required to successfully execute and implement the Group's strategy and business plan, which will be particularly important as the Group expands. Competition for such personnel is intense. The loss of such personnel and the failure to successfully recruit replacements in a timely manner, or at all, could have a material adverse effect on its business, prospects, financial position and results of operations.

The Competent Person's Report identified man-power and Management loss as a low to medium risk. It suggests that the population of skilled professionals/workers is aging and so suitable individuals will

need to be identified and recruited and where there are skills or experience gaps, suitable training programmes implemented to provide the necessary skilling.

**Mining companies, including the Group, may be adversely affected by global economic conditions.**

The current global economic environment and the volatility of international markets have caused governments and central banks to undertake unprecedented interventions designed to stabilise global and domestic financial systems, stimulate new lending and support structurally important industries and institutions, such as banks. Many developed economies have experienced recessions over the past several years and growth has slowed in many emerging economies with serious adverse consequences for asset values, employment levels, consumer confidence and levels of economic activity. Numerous governments and central banks have responded to these economic conditions by proposing programmes to make substantial funds and guarantees available to boost liquidity and confidence in their financial systems. It is not known whether these responses will be effective in addressing the economic and market conditions that exist at present. The impact of the reversal or withdrawal of such programmes is also uncertain. Any further deterioration of the global economic environment could have a material adverse effect on the Group's business, results of operations and financial position, particularly to the extent it impacts upon the price of PGMs and/or chrome and/or affects the Group's ability to access the capital markets or obtain credit for future funding on commercially acceptable terms.

**The use of foreign subsidiaries by the Group may affect the Company's ability to pay dividends or make distributions.**

The Group conducts most of its operations through the Company's subsidiaries and the Company's ability to pay dividends on the Ordinary Shares is reliant on the ability of its subsidiaries to pay dividends or make other distributions to the Company. The ability of a subsidiary to make payments to the Company may be constrained by, among other things: (i) the level of taxation, particularly corporate profits and withholding taxes, in the jurisdiction in which it operates; (ii) the introduction of exchange controls or repatriation restrictions or the availability of hard currency to be repatriated; and (iii) local law requirements in relation to the payments of distributions. It is Company policy to pay an annual dividend of 10% of consolidated net profit after tax.

**The Group is exposed to financial risk.**

In the ordinary course of business, the Group is exposed to credit risk, liquidity risk and market risk which is supervised by the Board:

a) Credit risk

Credit risk is the risk of financial loss to the Group if a customer or a counterparty to a financial instrument fails to meet its contractual obligations and arises principally from the Group's trade and other receivables and cash and cash equivalents and long term deposits and is connected with

- i) Trade and other receivables: The credit risk is influenced by the individual characteristics of each customer, including among other, the demographics of the Group's customer base, including the default risk of the industry and the country, in which customers operate, as these factors may have a significant influence on credit risk. Nevertheless, the Board reviews on a regular basis the ageing of trade and other receivables to obtain comfort, that there are no post due amounts.

- ii) Cash and cash equivalents and long term deposits: The Group limits its credit risk exposure by dealing only with well-established financial institutions of high quality credit standing. The majority of the Group's cash resources are deposited with HSBC based in Hong Kong and South Africa.
- b) Liquidity risk: See risk factor "The Group's business is working capital intensive and the Group's ability to finance its business depends on generating sufficient capital to support its operations" for further information.
- c) Market risk: changing prices such as foreign exchange and interest rates may affect the Group's income and the values of its financial instruments.
  - i) Currency risk: the value of the financial instruments might fluctuate due to changes in foreign exchange rates. Currency risk arises when future commercial transactions and recognised assets and liabilities are denominated in a currency that is not the Group's functional currency, i.e. exchange rate movements in ZAR, Euro, US\$ or STG.
  - ii) Interest rate risk: The Group is exposed to adverse movements in interest rates which may arise from timing differences on the repricing of assets and liabilities.

#### **Risks relating to Cyprus.**

##### **Distributions by the Company to Shareholders who are Cypriot tax residents may be subject to Defence Tax in Cyprus.**

The Defence Tax currently at the rate of 17% is payable by a Cypriot company on deemed dividends to the extent that its shareholders, being individuals, are both Cyprus tax resident and Cyprus domiciled. A Cypriot company which does not distribute at least 70% of its profits after corporation tax, within two years of the end of the year in which the profits arose, would be deemed to have distributed this amount as a dividend two years after that year-end. The Defence Tax on deemed dividend distributions would be payable only to the extent these profits are attributable to individual shareholders who are Cyprus tax resident as well as Cyprus domiciled. The special defence contribution is exempt if paid from a Cypriot company to another Cypriot company. Defence Tax may also be payable on deemed dividends in the event of a liquidation or capital reduction of the Company. The Company will debit such Defence Tax paid (if any) against the profits attributable to the respective Cypriot tax resident and domiciled shareholders. The amount of any deemed dividend distribution (subject to Defence Tax) would be reduced by any actual dividends paid out of profits for the relevant year at any time up to the date of the deemed distribution. The profits to be taken into account in determining the deemed dividend do not include fair value adjustments to movable or immovable property (if any). In the event that a person who is not tax resident and domiciled in Cyprus receives a dividend from a Cypriot tax resident company and that dividend is paid out of profits which at any stage were subjected to the deemed dividend distribution rule described above, then that portion of the Defence Tax paid in respect of the deemed distribution which relates to the dividends received by such person is refundable. Deemed dividend distribution rules do not apply to shares held directly or indirectly by non-Cypriot tax resident and domiciled shareholders.

##### **Interest expenses may not be deductible by the Company for tax purposes in Cyprus.**

According to Cypriot Tax Law, interest expenses are tax deductible if they are incurred wholly and exclusively for the production of taxable income. However, no deduction is allowed for interest applicable or deemed to be applicable to the cost of purchasing assets not used for business purposes. This restriction on the deductibility of interest expense applies during the seven years from the date of purchase of the relevant asset. In this respect, investment in a subsidiary is considered a non-business asset in Cyprus and any interest expense that relates (or is deemed to relate) to the

acquisition/financing of a subsidiary (even if the subsidiary distributes dividends on a regular basis) is not considered tax deductible in Cyprus. Consequently, if the Company holds assets not used in the business (such as shares in subsidiaries), then all or part of the interest expense of the Company incurred on loans provided from resident and/or non-resident lenders (both corporations and individuals) for the acquisition/financing of such assets would be considered non-deductible for tax purposes in Cyprus.

**The Company may be subject to potential adjustment of its taxable profits if transactions with related parties are not carried out on an arm's length basis.**

The arm's length principle contained in the Cypriot Tax Law requires transactions to be carried out for tax purposes at fair market value and on normal commercial terms. If not, the Cyprus tax authorities may intervene, deem that they were not so carried out and tax the resulting profits/gains accordingly. There are currently no specific transfer pricing rules and transfer pricing documentation requirements in the Cyprus Tax Law. Therefore, the Company may be subject to potential adjustments of its taxable profits on any future examination of its tax affairs by the Cyprus tax authorities if it can be demonstrated that certain transactions with related parties were not carried out on an arm's length basis.

In addition, the arm's length principles contained in the Cyprus Tax Law do not provide for a corresponding adjustment for the related counterparty on a transaction that is subject to adjustment.

**Risks relating to South Africa.**

**Exchange control restrictions could adversely affect the Group.**

The ability of the Group, and its South African subsidiaries and their operations, to transfer funds out of South Africa and to enter into agreements which require or potentially require the transfer of funds out of South Africa is subject to South African Exchange Control Regulations. Exchange Control has been delegated the authority to administer the South African exchange control system, which in turn has delegated certain powers to Authorised Dealers. If the Group makes an application to an Authorised Dealer, or Exchange Control through an Authorised Dealer, for a transfer of funds out of South Africa or to enter into an agreement which will involve such a transfer, there can be no assurance that such a transfer will be approved. Any failure to obtain the necessary approval or the imposition of any restrictions on the Group in respect of any transfer or agreement may have a material adverse effect on the Group's business, operations, financial position or growth prospects.

**Labour disruptions and/or increased labour costs could have an adverse effect on the Group.**

Trade unions in South Africa are prevalent within the mining industry, and future labour disruptions and/or increased labour costs could impact the Group's operations. There can be no assurance that the Group will not experience labour disputes, threats to the security of its workers and assets, or disruption to its operations as a result of industrial action affecting the Tharisa Mine, other mines or the South African mining industry generally in the future. In addition, the Group is exposed to risks from industrial action at its suppliers, customers and other counter-parties. There is also a possibility that labour disruptions could be used to advocate for labour, political or social objectives. Any such disputes or disruptions could materially and adversely affect the Group's business, financial position and results of operations.

The Group has concluded a recognition agreement with the NUM, as the majority trade union at the Tharisa Mine and has concluded a collective agreement with the NUM determining wage increases over

three years effective from 1 July 2015 until 30 June 2018. As at the Last Practical Date, the Group has not experienced any industrial action (by its employees) affecting the Tharisa Mine.

**Regulatory, political, economic and social conditions in South Africa could adversely affect the Group's business and the market prices of its securities.**

Currently, substantially all of the Group's operational activities and a significant portion of its development activities occur in South Africa. The Group may be affected by political or economic instability and the related risks, including among other things security concerns, labour disputes, government policy with respect to mining, labour, monetary and fiscal issues, fluctuations in currency exchange rates and high rates of inflation.

Changes in resource development or investment policies or shifts in political attitude may adversely affect the Group's business. In recent years, there has been a shift toward greater government intervention in economic policy-making through industry policy. This change reflects growing concern about large-scale unemployment and the need for rapid job growth in the country. In addition, a South African state-owned mining company has been granted rights to mine coal and may in future be granted rights to mine for other strategic minerals, including gold, PGMs, uranium, iron ore and manganese. Further expansion in the number of state-owned mines or in the scope of the government's mining activities, or further changes to government regulations with respect to restrictions on production, price controls, export controls, income taxes, expropriation of property, nationalisation of assets, maintenance of claims, environmental legislation, land use, land claims, water use and mine safety, or a combination of any of these factors could materially and adversely affect the Group's business, financial position and results of operations.

**Possible disruptions to operations at the Tharisa Mine by members of the local community could have an adverse effect on the Group.**

As part of the development of the Group's operations the local community which resides in the vicinity of the Tharisa Mine was relocated from the mining area to other properties purchased by Tharisa Minerals. This relocation was undertaken on a voluntary basis and involved a significant improvement in the living conditions and amenities. These improvements were made with an expectation that the resettlement area would receive formal township proclamation. However, the local municipality has declined to support the township proclamation.

Notwithstanding its good relations with the local community and the efforts taken by Tharisa Minerals, there can be no assurance that relations will not deteriorate in the future. It is possible that the local community may object to the Tharisa Minerals' initiatives or the continued operations at Tharisa Mine, or that they may have other unaddressed grievances and this, in turn, could lead to disruption of the Group's operations as a result of actions by the local community. Such disruption could materially and adversely affect the Group's business, financial position and results of operations.

**Increasing incidence of, or changes in, legislation related to, HIV/AIDS and tuberculosis could adversely affect the Group's business.**

HIV/AIDS and tuberculosis represent the major health care challenges faced by the South African mining industry. The exact impact of increased mortality rates due to HIV/AIDS and tuberculosis deaths on the cost of doing business in South Africa and the potential growth in the economy is uncertain. Employee-related costs in South Africa are, however, adversely affected as a result of the HIV/AIDS epidemic and tuberculosis due to increased absenteeism, depressed morale and reduced productivity, in addition to increased recruitment and replacement costs, insurance premiums, benefits payments

and other costs of providing treatment. Associated symptoms of HIV/AIDS and tuberculosis, if suffered by the Group's employees or employees of the Group's third party contractors, could have an adverse impact on the Group's production, and, consequently, on the Group's business, financial position and results of operation.

**The South African government's transformation initiatives under the MPRDA, Code of Good Practice and the Mining Charter, including any change in the requirements for HDSA ownership, may have an adverse impact on the Group.**

The mining industry in South Africa is subject to extensive regulation and the regulatory framework may be subjected to change. The current regulatory framework includes the MPRDA, the Mining Charter, and the Codes of Good Practice for the South African Minerals Industry (the "Code of Good Practice"). There are ambiguities in a number of areas and the regulations are subject to interpretation, review and amendment. The Mining Charter, which was published under the MPRDA, was implemented to regulate transformation of the mining industry following the demise of apartheid in South Africa. The MPRDA establishes as one of its primary objectives the economic empowerment of HDSAs. As a condition to the granting of a prospecting right or mining right, the applicant must provide for the participation by HDSAs in the prospecting and mining operations which result from the relevant prospecting and mining rights. Under the Mining Charter, applicants must be able to demonstrate that HDSAs hold equity participation in a prospecting or mining venture of at least 26%. The Mining Charter also includes provisions relating to skills development, procurement from HDSA companies and social prosperity.

The Group's exploration and mining activities are dependent upon the timely granting or renewal of appropriate licences, permits, rights and regulatory consents which may be granted for a defined period of time, not be granted, be withdrawn subject to a regulatory process, or be subject to statutory restrictions. The Group may require additional licences, permits, rights and regulatory consents for the conduct of any new mining or beneficiation operations. There can be no assurance that such rights will be granted or renewed (as the case may be) or as to the terms of such grants or renewals. The Mining Charter was revised in September 2010 and the DMR retained the minimum 26% ownership target specified in the existing Mining Charter. On 15 April 2016, the government released a draft reviewed Mining Charter for public comment. As defined in the MPRDA, the draft is open to public comment for a period of 30 days, during which the minister will engage with organised business and organised labour. Other interested and affected parties are also invited to submit written inputs and comments by no later than 31 May 2016. The comments will then be considered by the DMR before a new version of the Mining Charter is adopted.

There is no assurance that the Mining Charter will not be adopted in its draft form or revised again to inter alia set new, higher or different HDSA or BEE ownership targets, or that the definition of persons who constitute HDSAs will not be changed or substituted. If there is any future increase in HDSA ownership targets or any change or substitution in the definition of HDSAs, the Company may have to amend the ownership structure of Tharisa Minerals in order to comply with the new requirements. In such circumstances, any disposal or dilution may take place on terms which are not as favourable as those which might otherwise be achieved, and could therefore have an adverse impact on the Group's business, financial position and results of operations. If the Group is unable to continue to comply with the MPRDA, the Code of Good Practice or the Mining Charter in the future, or if there is any modification or difference in their interpretation or enforcement, this could have an adverse impact on the Group's business, financial position and results of operations.

**Policy changes in terms of black equity ownership and ongoing compliance could have an adverse effect on the Group.**

The Group is required to comply with local procurement, employment equity, ownership and other regulations which are designed to address social and economic transformation issues, redress historical social and economic inequalities and ensure socio-economic stability. In South Africa, mining rights are linked to meeting various obligations including compliance with the Mining Charter. Failure to achieve the obligations may result in financial penalties and/or the suspension or revocation of mining rights. Changes to BEE requirements and the cost of compliance thereof may adversely effect the Group's business, operations, financial position or growth prospects.

**Risks relating to the taxation of the Group**

**The Group seeks to structure its affairs in a tax efficient manner.**

A number of tax arrangements entered into by companies within the Group have been structured in a tax efficient manner. If any of these arrangements were to be successfully challenged by the relevant tax authorities, the Group could incur additional tax liabilities which could adversely affect the Group's business, financial position and results of operations. South Africa and Cyprus have a longstanding double taxation treaty in place since 1998; an amending protocol was signed on 1 April 2015 which came into force on 18 September 2015. The main change is dividend withholding taxation which is limited to 5% if the recipient is the beneficial owner of the share and owns 10% or more of the share capital of the company paying the dividend, else the rate shall be 10% in all other cases.

**Change in the Company's tax status or in taxation law could negatively affect the Company's ability to provide returns to Shareholders.**

Statements in this Prospectus concerning the taxation of the Group or of Shareholders are based on current tax law and practice which is subject to change. The taxation of an investment in the Company also depends on the individual circumstances of the relevant Shareholder. Any Shareholder who is in doubt as to its tax position should consult an appropriate advisor.

Any change in the Company's UK tax status or any change in UK taxation law could affect the Company's ability to provide returns to Shareholders resident in the UK.

Statements in this Prospectus concerning the UK taxation of Shareholders are based on current UK tax law and practice, which are subject to change. The taxation of an investment in the Company depends on the individual circumstances of Shareholders.

The Company is not incorporated in the UK. Accordingly, the Company should not be treated as being resident in the UK for corporation tax purposes unless its central management and control is exercised in the UK. The concept of central management and control is indicative of the highest level of control of a company, which is wholly a question of fact. The Company intends to manage its affairs so that it is not resident in the UK for UK tax purposes.

A company not resident in the UK for corporation tax purposes can, nevertheless, be subject to UK corporation tax if it carries on a trade through a permanent establishment in the UK, but the charge to UK corporation tax is limited to profits (including revenue profits and capital gains) attributable directly or indirectly to such permanent establishment.

The Company intends to operate in such a manner that it does not carry on a trade through a permanent establishment in the UK. Nevertheless, because neither case law nor UK statute completely

defines the activities that constitute trading in the UK through a permanent establishment, HMRC might contend successfully that the Company is trading in the UK through a permanent establishment in the UK.

If the Company was treated as being resident in the UK for UK corporation tax purposes, or if the Company was to be treated as carrying on a trade in the UK through a permanent establishment or otherwise subject to UK income tax, the results of the Group's operations could be materially adversely affected.

### **Risks relating to the Ordinary Shares**

#### **External perceptions of the jurisdictions in which the Group operates may adversely affect the market price of the Shares, and increase the Group's cost of capital.**

External perceptions of the jurisdictions in which the Group operates with respect to political and economic instability and civil unrest may have an adverse effect on the market value of securities of Issuer's operating in those jurisdictions, including the Ordinary Shares. This could adversely affect the market price of the Ordinary Shares, and could also make it more difficult for the Group to gain access to the capital markets and finance its operations in the future on acceptable terms or at all and otherwise have a material adverse effect on its business.

#### **Substantial future sales or additional offerings of Ordinary Shares could impact the market price of Ordinary Shares.**

The Company cannot predict what effect, if any, future sales of Ordinary Shares, or the availability of Ordinary Shares for future sale, or the offer (by way of further issuance) of additional Ordinary Shares in the future, will have on the market price of Ordinary Shares. Sales or an additional offering of substantial numbers of Ordinary Shares in the public market, or the perception or any announcement that such sales or an additional offering could occur, could adversely affect the market price of Ordinary Shares and may make it more difficult for Shareholders to sell their Ordinary Shares at a time and price which they deem appropriate and could also impede its ability to raise capital through the issue of equity securities in the future.

#### **The issuance of additional Ordinary Shares in the Company may dilute other shareholdings.**

The Group may issue additional equity whether in connection with convertible equity securities, share incentive or option plans or otherwise. Subject to any existing rights of pre-emption contained in the Articles the Company's existing Shareholders could suffer dilution in their percentage ownership.

#### **There may be volatility in the value of an investment in Ordinary Shares and the market price for Ordinary Shares may fluctuate.**

The market price for the Ordinary Shares may be volatile and subject to wide fluctuations in response to numerous factors, many of which are beyond the Group's control, including the following: (i) actual or anticipated fluctuations in the Group's results of operations; (ii) actual or anticipated changes in chrome and/or PGM prices and/or in the capital markets; (iii) recommendations by securities research analysts; (iv) changes in the economic performance or market valuations of other companies that investors deem comparable to the Company; (v) addition or departure of the Company's executive officers and other key personnel; (vi) sales or perceived sales of additional Ordinary Shares; (vii) significant acquisitions or business combinations, strategic partnerships, joint ventures or capital commitments by or involving the Group or its competitors; (viii) changes in laws, rules and regulations applicable to the Group and its operations; (ix) general economic, political and other conditions, in

particular in South Africa; (x) the Group's involvement in any litigation or dispute, or threat of any litigation or dispute; and (xi) news reports relating to trends, concerns, technological or competitive developments, regulatory changes and other related issues in the Group's industry or target markets.

Financial markets have experienced significant price and volume fluctuations in the last several years that have particularly affected the market prices of equity securities of companies and that have, in many cases, been unrelated to the operating performance, underlying asset values or prospects of such companies. Accordingly, the market price of the Ordinary Shares may decline even if the Group's operating results, underlying asset values or prospects have not changed. Additionally, these factors, as well as other related factors, may cause decreases in asset values that are deemed to be other than temporary, which may result in impairment losses. Also, certain institutional investors may base their investment decisions on consideration of the Group's environmental, governance and social practices and performance against such institutions' respective investment guidelines and criteria, and failure to meet such criteria may result in limited or no investment in the Ordinary Shares by those institutions, which could adversely affect the trading price of the Ordinary Shares. There is no assurance that continuing fluctuations in the price and volume of publicly traded equity securities will not occur. If such increased levels of volatility and market turmoil continue, the Group's operations could be adversely impacted and the trading price of the Ordinary Shares may be adversely affected.

**There can be low liquidity or volatility.**

The Issuer cannot guarantee active and liquid trading in the Ordinary Shares. The lack of an active and liquid public market for the Ordinary Shares may negatively influence the ability of shareholders to sell their Ordinary Shares on satisfactory terms. As a result, the lack of an active and liquid public market for the Ordinary Shares may result in a high volatility in the price of the Ordinary Shares. Consequently, it may be the case that the investors who invest in the Ordinary Shares will not be able to profitably sell the Ordinary Shares at a later stage. In general, this risk is inextricably connected with investments in equity securities.

**The Company cannot guarantee its ability to pay dividends in the future.**

The dividend policy of the Company is to pay a dividend of 10% of consolidated net profit after tax. However, in view of the commodity prices and the impact thereof on the financial position of the Group, the Board did not recommend the payment of any dividend in respect of the Financial Year ended 30 September 2015. The Company has not declared any dividends on the Ordinary Shares for the Financial Years 2013, 2014 or 2015.

Any decision to pay dividends on the Ordinary Shares will be made by the Board on the basis of the Group's earnings, financial requirements and other conditions existing at such future time. The amount of future cash dividends, if any, will be subject to the discretion of the Board and may vary depending on a variety of factors and conditions and are dependent upon the Group's results of operations, cash flows, capital expenditure budgets, earnings, financial position and other factors as the Board may consider appropriate from time to time. Accordingly, the Company cannot guarantee its ability to pay dividends in the future. See section "The Business", "Dividend Policy" for further information.

**If the Company is wound up, distributions to Shareholders will be subordinated to the claims of creditors.**

On a winding-up of the Company, holders of the Ordinary Shares will be entitled to be paid a distribution out of the assets of the Company available to its Shareholders only after the claims of all creditors of the Company have been met.

**The Company is applying for a Standard Listing and, accordingly, the Company will not be required to comply with those protections applicable to a Premium Listing.**

The Company is seeking a Standard Listing and, as a consequence, additional on going requirements and protections applicable to a Premium Listing will not apply to the Company. In particular, the provisions of Chapters 6 to 13 of the Listing Rules, being additional requirements for listing of equity securities (listing principles, sponsors, continuing obligations, significant transactions, related party transactions, dealing in own securities and treasury shares and contents of circulars), will not apply. In addition, a Standard Listing will not permit the Company to gain UK FTSE indexation.

Further details regarding the differences in protections afforded by a Premium Listing as against a Standard Listing are set out in section “*COMPLIANCE WITH THE LISTING*”.

**The rights of Shareholders under Cypriot law may differ from the rights of shareholders of companies incorporated in other jurisdictions.**

As the Company is a Cypriot company, the rights of Shareholders will be predominantly governed by the Cypriot Companies Law as well as the Company’s Articles of Association. The rights of Shareholders under Cypriot Companies Law may differ from the rights of shareholders of companies incorporated in other jurisdictions.

**Restrictions on sale for Shareholders in the United States may make it difficult to resell the Ordinary Shares or may have an adverse impact on the market price of the Ordinary Shares.**

The Ordinary Shares have not been registered in the United States under the Securities Act or under any other applicable securities laws and are subject to restrictions on transfer contained in such laws.

There are additional restrictions on the resale of Ordinary Shares by Shareholders who are in the United States and on the resale of Ordinary Shares by any Shareholders to any person who is in the United States. These restrictions may make it more difficult to resell the Ordinary Shares in many instances and this could have an adverse effect on the market value of the Ordinary Shares. There is no assurance that Shareholders in the United States will be able to locate acceptable purchasers or obtain the required certifications to effect a sale.

**Introducing the Ordinary Shares to trading on the LSE may be suspended or prohibited.**

If the Issuer, or any other entity acting on behalf of, or on instructions from, the Issuer, violates the law in connection with the process of introducing the Ordinary Shares to trading on the LSE, or if there is a reasonable suspicion that such a violation has occurred or may occur, CySEC or the UK FCA may, in general: (i) order that the process of introducing the Ordinary Shares to trading on the LSE be withheld for a period of not more than 10 business days; (ii) ban the Ordinary Shares from being introduced to trading on the LSE; (iii) publish, at the expense of the Issuer, information concerning the illegal activities with respect to the process of introducing the Ordinary Shares to trading on the LSE. While the process of introducing the Ordinary Shares to trading on the LSE are pending, the UK FCA may apply the above-mentioned measures more than just once.

Additionally, the above-mentioned measures can also be applied if the contents of the documents or information submitted to CySEC or the UK FCA or made available to the public indicate that: (i) the admission or introduction of the Ordinary Shares would materially infringe the investors' interests; (ii) there are grounds which, in the context of the legislation in force, may lead to the termination of the legal status of the Issuer; (iii) the activities of the Issuer were, or are, conducted in a gross violation of applicable laws, which may have a material impact on the assessment of Issuer’s Ordinary Shares, or, in

the context of the legislation in force, may lead to the termination of the legal status or to the bankruptcy of the Issuer; or (iv) the legal status of the Ordinary Shares does not comply with the applicable laws, and in the context of those laws, there is a risk that the Ordinary Shares would be considered to not exist or to be burdened with a legal defect having material impact on their assessment.

If the circumstances which had given rise to the application of the above-mentioned measures ceased to exist, CySEC or the UK FCA, acting at the Issuer's request or on an ex officio basis, may repeal such decision.

**There may be delay in introducing the Ordinary Shares to trading on the LSE.**

It is the aim of the Issuer to introduce the Ordinary Shares to trading on the LSE as soon as possible. The Admission and introduction of the Ordinary Shares to trading requires, however, certain conditions to be met. In particular, the UK FCA should receive the certificate from the CySEC confirming that the Prospectus has been approved in Cyprus; the Ordinary Shares should be registered in the clearing and settlement system; then finally, the FCA and LSE should approve the admission and introduction of the Ordinary Shares on the Official List and to trading on the LSE.

When adopting a decision on admission and introduction of the Ordinary Shares to trading, the LSE is obliged to take into account the conditions set forth by the LSE Rules as well as by other applicable regulations. In particular, it is necessary the Issuer complies with the *"Listing Rules and Disclosure and Transparency Rules with which the Company must comply under a Standard Listing"* as described in section *"COMPLIANCE WITH THE LISTING"*.

It should be noted that some of the conditions have a discretionary nature and therefore, the Issuer cannot guarantee that all those conditions will be considered to be met in the time schedule expected by the Issuer. Because of the discretionary character of some of those conditions, there is also a risk that the Admission and introduction to trading on the LSE may be refused.

**Trading in Ordinary Shares may be suspended.**

The LSE may suspend trading in Ordinary Shares (i) upon a request of the Issuer, (ii) if it considers this necessary to protect the interests and safety of trading participants, (iii) if the Issuer is in breach of the regulations governing the trading operations on the LSE. Additionally, if the UK FCA considers that trading in the Ordinary Shares is carried out in circumstances which indicate a possible threat to the proper operation of the regulated market or the security of trading on such a market, or a possible infringement of investors' interests, it may demand that the LSE suspends the trading in Ordinary Shares.

The Issuer intends to comply with all respective regulations. However, the Issuer cannot guarantee that the suspension of Ordinary Shares in trading will not occur. The situations of suspending the Ordinary Shares in trading may potentially negatively influence the liquidity of Ordinary Shares.

**Holders of Depositary Interests must rely on the Depositary or the Custodian to exercise rights attaching to the underlying Ordinary Shares for the benefit of the holders of Depositary Interests.**

On Admission, the Company will enter into depositary arrangements to enable investors to settle and pay for Ordinary Shares through the CREST system. The rights of holders of Depositary Interests will be governed by, among other things, a Deed Poll entered into by the Depositary, Computershare Investor Services PLC. As the registered shareholder, the Depositary will have the power to exercise voting and other rights conferred by Cyprus Companies Law and the Articles of Association of the Company on

behalf of the relevant holder. Consequently, the holders of Depositary Interests must rely on the Depositary to exercise such rights for the benefit of the holders of Depositary Interests.

## **PERSONS RESPONSIBLE**

The current Prospectus has been prepared in accordance with the relevant legislation and has been approved by CySEC acting as the competent authority of the home Member State of the Company, for the purposes of Admission.

This Prospectus contains all information concerning the Company required to be published by the Cyprus Prospectus Law and the Prospectus Regulation and which concerns the Company and the Ordinary Shares. Thus, this Prospectus contains all the information necessary for investors to evaluate the assets, liabilities, financial position, performance and prospects of the Group as well as the rights attached to the Ordinary Shares.

### **Company and Directors responsible for the content of the Prospectus**

The Issuer assumes full responsibility for the information contained in this Prospectus and declares that the information contained in this Prospectus is in accordance with the facts and contains no omission likely to affect its import.

The Directors of the Issuer signing this Prospectus, are also responsible jointly and severally for the information contained in this Prospectus and declare that: (i) having taken all reasonable care to ensure that such is the case, the information contained in it are, to the best of their knowledge, in accordance with the facts, complete and true; (ii) contains no omission of which is likely to affect its import; and (iii) save as disclosed in this Prospectus no legal actions or claims of material importance are pending or threatened against the Issuer or the Group that could materially affect the Group's financial position.

In accordance with section 20 of the Cyprus Prospectus Law, this Prospectus has been signed by the Chairman of the Board, the Chief Executive Officer and the Chief Finance Officer, whose names appear below, which persons are responsible for the completeness, clarity, accuracy and update of the information contained herein:

- Mr. Loucas Christos Pouroulis, in his capacity as Executive Chairman of the Board.
- Mr. Phoevos Pouroulis, in his capacity as Chief Executive Officer of the Board.
- Mr. Michael Gifford Jones, in his capacity as Chief Finance Officer of the Board.

### **Underwriter responsible for drawing up of the Prospectus**

Sharelink Securities and Financial Services Ltd whose registered address is at Ellinas House, 6 Theotoki Street, 1055 Nicosia, Cyprus, in its capacity as Underwriter is responsible for the drawing up of this Prospectus. By virtue of section 23 of the Cyprus Prospectus Law, the Underwriter responsibly declares that, having taken all reasonable care to ensure that that is the case, the information contained in the Prospectus is, to the best of its knowledge, in complete accordance with the facts and contains no omissions likely to affect its import.

### EXPECTED TIMETABLE OF PRINCIPAL EVENTS

Publication of this Prospectus	2 June 2016
Admission to the Official List and commencement of unconditional dealings in Ordinary Shares	On or about 8:00 a.m. UK time On 8 June 2016

The Ordinary Shares of the Issuer are expected to be admitted to the standard segment of the Official List and to trading on the LSE, on or about 8 June 2016 subject to the approval of the UK Listing Authority.

Any changes in the dates shown above shall be published in the form of an announcement pursuant to section 27 of the Cyprus Prospectus Law or in a supplement published in the same manner as this Prospectus in particular, on the website of the Issuer and the Underwriter.

## DIRECTORS, SECRETARIES, REGISTERED AND HEAD OFFICE AND ADVISERS

### Directors

Loucas Christos Pouroulis	<i>Executive Chairman</i>
Phoevos Pouroulis	<i>Chief Executive Officer</i>
Michael Gifford Jones	<i>Chief Finance Officer</i>
John David Salter	<i>Lead Independent Non-Executive director</i>
Antonios Djakouris	<i>Independent Non-Executive director</i>
Omar Marwan Kamal	<i>Independent Non-Executive director</i>
Brian Chi Ming Cheng	<i>Non-Executive director</i>
Carol Bell	<i>Independent Non-Executive director</i>
Joanna Ka Ki Cheng	<i>Alternate Non-Executive director for Brian Chi Ming Cheng</i>

### Company Secretaries

Lysandros Lysandrides  
26 Vyronos Avenue  
1096 Nicosia  
Cyprus

Sanet de Witt  
Eland House The Braes 3 Eaton Avenue  
Bryanston Johannesburg  
2191 South Africa

### Registered address / Head office of the Company

Office 108 – 110  
S. Pittokopitis Business Centre  
17 Neophytou Nicolaides and Kilkis Streets  
8011 Paphos  
Cyprus

**Underwriter responsible for drawing up of the Prospectus**

Sharelink Securities and Financial Services Ltd  
Ellinas House  
6 Theotoki Street  
1055 Nicosia  
Cyprus  
P.O. Box 22379, 1521 Nicosia, Cyprus

**Financial Adviser**

Arlington Group Asset Management Limited  
New Liverpool House  
3rd floor, 15 Eldon Street  
London  
EC2M 7LD  
United Kingdom

**UK legal advisers to the Company**

Memery Crystal LLP  
44 Southampton Buildings  
London WC2A 1AP  
United Kingdom

**South African legal advisers to the Company**

Eversheds  
3rd Floor, 54 Melrose Boulevard  
Melrose Arch Melrose North  
Johannesburg  
South Africa

**Cyprus legal advisers to the Company**

Lysandrides Lysandros LLC  
26 Vyronos Avenue  
1096 Nicosia  
Cyprus

**Statutory Auditors to the Company and accredited JSE Auditors**

KPMG Limited (Cyprus)  
14 Esperidon Street  
1087 Nicosia  
Cyprus

**Competent Person**

Coffey Mining (South Africa) Proprietary Limited  
Block D, Somerset Office Estate,  
604 Kudu Street, Allens Nek,  
Johannesburg 1737  
South Africa

**Depositary**

Computershare Investor Services PLC  
The Pavilions  
Bridgewater Road  
Bristol BS99 6ZZ  
United Kingdom

**Registrars**

Cymain Registrars Limited  
26 Vyronos Avenue  
1096 Nicosia  
Cyprus

## **CERTAIN CYPRIOT AND UK SECURITIES MARKET REGULATIONS AND PROCEDURES**

*The Issuer is incorporated under the laws of Cyprus and thus is subject to the provisions of Cypriot Companies Law. The Issuer has applied and will apply, respectively, to list all its Ordinary Shares, on the Official List (by way of a Standard Listing under Chapter 14 of the Listing Rules) and to trading on the London Stock Exchange's Main Market for listed securities. As a result, the Issuer will be subject to certain Cypriot and UK securities and capital market regulations, in particular with respect to disclosure of information and tender offers. The Issuer will also be subject to supervision of relevant regulatory authorities in Cyprus and UK.*

*The information set out below describes certain aspects of Cypriot and UK securities market regulation relevant in connection with the acquisition, holding and disposal of the Ordinary Shares and is included for general information only. This summary does not purport to be a comprehensive description of all Cypriot and UK securities market regulatory considerations that may be relevant to a decision to acquire, hold or dispose of the Ordinary Shares. Each prospective investor should consult a professional legal adviser regarding legal consequences of acquiring, holding and disposing of the Ordinary Shares under the laws of their country and/or state of citizenship, domicile or residence.*

*This summary is based on legislation, in force as of the Last Practical Date of this Prospectus, without prejudice to any amendments introduced at a later date and implemented with retroactive effect.*

### **Application of the Takeover Code**

Since the Company has its registered office in Cyprus and the Ordinary Shares will be listed on a regulated market in the United Kingdom, the takeover protection regime applicable to the Company is not confined to the provisions of the UK City Code on Takeovers and Mergers (the "Code") nor shall it be solely governed by the UK Panel on Takeovers and Mergers (the "Panel"). The Ordinary Shares and any purported takeover bids related to the same will be subject to the provisions of the Code in respect of, inter alia, determination of consideration and procedural and timeframe matters applicable to the offer, while the relevant provisions of the "Law to make provision for public takeover bids for the acquisition of securities of companies and related matters", N.41(I)/2007, as amended (the "Cyprus Takeover Law"), regulated by CySEC as the supervisory authority responsible for implementing provisions of the Takeover Law will apply to, inter alia, employee information and company law matters, determination of voting thresholds offering control for the purposes of mandatory offers, any derogation from a possible obligation to launch a mandatory offer, circumstances within which the board of directors may frustrate a takeover bid, as well as squeeze out and sell out rules. For more information, refer to the "Shared Jurisdiction Table" included in CySEC's website <http://www.cysec.gov.cy/en-GB/legislation/issuers/TAKEOVERS>.

### **The UK Takeover Code**

#### *The announcement*

The Code requires that a bidder (or its advisers) must notify a firm intention to make an offer in the first instance to the target board (or its advisers)

As well as confirming the fact and terms of the offer, the announcement must contain details of any relevant securities of the target company in which the bidder or any person acting in concert with it has an interest or in respect of which it has a right to subscribe, together with similar details of any short positions, any agreement to sell, any delivery obligation or right to require another person to purchase or take delivery, and all of the conditions or pre-conditions to which the offer or the making of an offer is subject.

There are a number of situations where an announcement is required under the Code, including, when a firm intention to make an offer has been communicated to the target board by or on behalf of a offeror or when an acquisition of an interest in shares gives rise to an obligation to make a mandatory bid.

Once an announcement has been made identifying a potential offeror, that potential offeror must, within 28 days of the relevant announcement (unless the Panel has consented to an extension of the deadline) either announce a firm intention to make an offer (unless the potential offeror has already done so) or announce that it does not intend to make an offer.

#### *Other actions prior to the offer*

During the course of an offer, or even before the date of the offer if the board of an offeree company has reason to believe that a bona fide offer might be imminent, the offeree board must not, without the prior approval of the offeree company's shareholders in general meeting, take any action which may result in any offer or bona fide possible offer being frustrated or in shareholders being denied the opportunity to decide on its merits, including, issue any shares, issue or grant any options in respect of unissued shares, create or issue any securities with conversion or subscription rights or sell, dispose of or acquire, agree to sell, dispose of or acquire, any material assets, or enter into contracts other than in the ordinary course of business.

#### *Consideration and underwriting*

One of the early matters for the bidder to consider is whether it intends to offer cash consideration or securities (shares, loan notes or other bidder securities), or a mixture of both. This is usually a commercial or financial question, but there may be tax consequences for the target shareholders where potential liabilities to taxation on capital gains can be deferred by accepting consideration consisting of securities (including loan notes).

A bid should only be announced when the bidder has decided on the form of consideration it intends to offer and has put the necessary financing arrangements in place.

#### *Mandatory offer*

A mandatory offer must, in respect of each class of share capital involved, be in cash or be accompanied by a cash alternative at not less than the highest price paid by the offeror or any person acting in concert with it for any interest in shares of that class during the 12 months prior to the announcement of that offer. If, after an announcement of a mandatory offer for a class of share capital and before the offer closes for acceptance, the offeror or any person acting in concert with it acquires any interest in shares of that class at above the offer price, it shall increase its offer for that class to not less than the highest price paid for the interest in shares so acquired.

When an interest in shares has been acquired for a consideration other than cash, the offer must nevertheless be in cash or be accompanied by a cash alternative of at least equal value, which must be determined by an independent valuation. When there have been significant acquisitions in exchange for securities, such securities may be required to be offered to all shareholders: a cash offer will also be required.

#### *The Content of Public Documentation and Responsibility*

The Code sets out certain prescribed content for an offer document. The offeree company and offeror boards will need to be able to demonstrate (both for the purposes of the Code and for the purposes of

legal liability generally) that all reasonable care has been taken in the preparation of all documents published in connection with the offer.

If an offer involves the offer of transferable securities to the public in the United Kingdom or the admission of transferable securities to trading on a regulated market, the offeror may need to publish a prospectus approved by the UK Listing Authority in relation to those securities. There is a general duty on an issuer to ensure that the prospectus contains all the information necessary to enable investors to make an informed assessment of the assets and liabilities, financial position, profits and losses, and prospects of the issuer and of the rights attaching to the relevant securities, and to issue a supplementary prospectus in respect of any significant new factor, material mistake or inaccuracy.

### **Cyprus Takeover Law**

Cyprus implemented the Directive 2004/25/EC of 21 April 2004 on takeover bids (“Takeover Bids Directive”) by the Cyprus Takeover Law, which provides mandatory takeover bid rules where a person, as a result of his own acquisition or the acquisition by persons acting in concert with him, holds securities of a company which, added to his existing holdings and the holdings of persons acting in concert with him, directly or indirectly give him a percentage of 30% or more of existing voting rights in that company at the date of the acquisition. The rule, which is subject to various exemptions which may be granted upon application to the competent authority in Cyprus, triggers an obligation on such a person to make a bid at the earliest opportunity to all the other holders. The bid must be addressed to all the remaining shareholders and must be at a fair price.

The obligation to make a mandatory bid is valid when, following the acquisition, the offeror holds at least 30% of the voting rights of a company. The following cases constitute a non-exhaustive list of situations where the obligation to make a bid applies:

(i) where the offeror holds no securities or holds securities representing less than 30% of the voting rights of a company and with an acquisition of securities he/she reaches or supersedes 30% of the voting rights of a company; or

(ii) where the offeror already holds a percentage equal to or greater than 30% and below 50% of the voting rights of a company and increases his/her percentage of holding.

In circumstances such as those of the Company, where the registered office is in Cyprus and its securities are only traded on a regulated market other than in Cyprus, the Takeover Bids Directive provides for dual regulation.

Specifically, pursuant to the Takeover Bids Directive, the percentage of voting rights conferring ‘control’ is to be determined by the rules of the Member State in which a company has its registered office. In addition to this, matters of notification of the offeree company personnel, the exceptions from the obligation to launch the bid and the terms under which the board of the offeree company has capacity to proceed with acts capable of frustrating a bid, as well as squeeze out and sell out rules, are also regulated by the rules of the Member State in which a company has its registered office, therefore is regulated by the Cyprus Takeover Law and supervised by CySEC. Matters concerning the consideration of the bid, in particular price as well as matters concerning the procedure for a bid, in particular notification by the offeror of his decision to launch a bid, the content of the offer document and publication of a bid are governed by the laws of the jurisdiction of the regulated market and therefore the Code would apply and would be supervised by the Panel on Takeovers and Mergers.

### *Squeeze-Out Rules*

Section 36 of the Cyprus Takeover Law provides that, where an offeror makes a bid to all the holders of securities of an offeree company for the total of their holding, he is able to require all the holders of the remaining securities to sell him/her those securities in the following situations:

- where the offeror holds securities in the offeree company representing not less than 90% of all securities capital carrying voting rights and not less than 90% of the voting rights in the offeree company; or
- where the offeror holds or has irrevocably agreed to acquire, following the acceptance of a takeover bid, securities in the offeree company representing not less than 90% all securities capital carrying voting rights and not less than 90% of the voting rights included in the takeover bid.

The offeror may exercise the right within three months from the end of the time allowed for acceptance of the bid. The consideration for the acquisition of securities shall take the same form as and be at least equal to the consideration offered in the bid. A cash alternative is permitted, if accepted by the recipient.

### *Sell Out Rules*

Section 37 of the Cyprus Takeover Law allows for the holder of the remaining securities (i.e. the remaining 1-10%) of the offeree company in any of the two situations described above, to require the offeror (holding not less than 90% of the securities carrying voting rights and not less than 90% of the voting rights as described above) to buy his/her securities from him/her at a fair price, provided that this right is exercised within three months of the end of the time allowed for acceptance of the bid.

### *Squeeze-Out and Sell Out Rules under the Cyprus Companies Law*

The Cyprus Companies Law also contains provisions for the squeeze out and/or sell out of remaining shareholders in circumstances where a company is subject to a takeover bid, inter alia, takeover bids, however, it is deemed that for as long as the Company's shares remain admitted to trading on a regulated market and it is the subject of a purported takeover bid during such time, the provisions of the Cyprus Takeover Law shall be applicable to the Company, at the exclusion of such provisions.

Should it be the case however, that the Company becomes delisted, the provisions of the Cyprus Companies Law may be applicable to subsequent takeover bids as follows:

Section 201 of the Cyprus Companies Law (CAP 113) denotes that, corporate entities and not physical persons, are permitted to make a voluntary offer to shareholders in order to acquire their shares, in which case, should 90% of the free float subject to the offer (and 3/4 in number where the offeror already holds 10% of the Company's share capital prior to the offer) accept the terms of the offer, the offeror may be obliged and/or shall be entitled to purchase the shares of the remaining shareholders, subject to any dissenting shareholder making a relevant petition to Court against the same.

### **Disclosures pursuant to the Cypriot requirements**

#### *Disclosure and Transparency Rules Applicable in Cyprus*

Further to successful Admission on the standard segment of the Official List, the Company will be trading its titles on a regulated market and therefore, The Disclosure and Transparency Law will be applicable with respect to relevant market disclosure requirements. As at the Last Practical Date, The Disclosure and Transparency Law requires the publication and timely dissemination of company

information on an ongoing and periodical basis. Such information includes, inter alia, publication of the following periodic reports and financial statements during a financial year:

- The annual financial report comprising of, inter alia, the audited annual financial statements and the management report. The annual financial report must be disclosed as soon as possible and in any event, within four months from the end of each financial year; and
- The half yearly financial report covering the first six months of the financial year comprising of, inter alia, the interim financial statements and the interim management report. The half yearly financial report must be disclosed as soon as possible and in any event, within three months from the end of the first six month period of each financial year; and
- Issuers operating in the mining industry should also publish annually, on an annual basis, within six months from the end of the financial year, a report regarding payments and fees paid to governments.

Other disclosure requirements include changes, inter alia, changes to the share capital structure, acquisitions and disposals by the Company of its own Shares, changes to the rights attached to any class of Ordinary Shares, or any derivative securities issued by the Company giving access to the Company's Ordinary Shares. Such regulated information will have to be disseminated to the market as well as published on the Company's website and notified to the CySEC, according to the relevant provisions of The Disclosure and Transparency Law.

Additionally, The Disclosure and Transparency Law imposes notification obligations on persons who acquire or dispose of the Ordinary Shares in, inter alia, the following circumstances: any person who will directly or indirectly acquire or dispose of the Ordinary Shares to which voting rights are attached such that its holding reaches, exceeds or falls below 5%, 10%, 15%, 20%, 25%, 30%, 50% or 75% of the total voting rights of the Company is under an obligation to notify. The obligation to notify is towards the Company and the CySEC and the notification should cover the information and particulars required in accordance with the relevant provisions of The Disclosure and Transparency Law.

#### *Insider Trading and Market Abuse Rules Applicable in Cyprus.*

Further to successful Admission on the standard segment of the Official List, the Company will be considered as trading on a regulated market and will thus be subject to CySEC Law 116(I)/2005, as amended, where applicable, governed by the CySEC prohibiting the misuse of inside information that may lead to insider trading and market abuse with respect to the company's securities admitted to trading.

Inside information is defined as information of a precise nature, not having previously been made public relating to the company's shares, which if made public, could have a profound effect on the market price of the company's shares and which is used by persons having access to such information before such information is made public to their financial advantage.

Market abuse is defined as the placing of market orders for the sale and/or purchase of company shares which are likely to give false or misleading signs as to the supply and demand and ultimately the price of company shares.

**Disclosures pursuant to the UK requirements**

The provisions of DTR5 apply to the Company and its shareholders. For the purposes of DTR5, the Company is a “non-UK issuer” as such term is defined in DTR5.

DTR5 requires a shareholder to notify the Company if the voting rights held by any such shareholder (including by way of certain financial instruments) reach, exceed or fall below 5%, 10%, 15%, 20%, 25%, 30%, 50% and 75% of the Company’s outstanding share capital. Under DTR5, certain voting rights in the Company may be disregarded.

## **COMPLIANCE WITH THE LISTING RULES**

Application will be made for the Ordinary Shares to be admitted to the standard segment of the Official List. A Standard Listing affords Shareholders and investors in the Company a lower level of regulatory protection than that afforded to investors in companies whose securities are admitted to the premium segment of the Official List, which are subject to additional obligations under the Listing Rules. However, by reason that the Company will maintain its primary listing on the JSE, such listing will afford Shareholders and investors in the Company protection under the JSE Listings Requirements.

It should be noted that, following Admission, the UK Listing Authority will monitor the Company's compliance with the applicable Listing Rules and/or the Disclosure and Transparency Rules.

After careful consideration, the Board has concluded that to promote liquidity in the Ordinary Shares through a public listing on the LSE while allowing a sufficient degree of flexibility for a company of its size and type, it is appropriate for the Ordinary Shares to be admitted to listing on the standard segment of the Official List pursuant to Chapter 14 of the Listing Rules, which sets out the requirements for Standard Listings and does not require the Company to comply with, inter alia, the provisions of Chapters 6 to 13 of the Listing Rules (excluding Listing Principles 1 and 2). As a result, the Company's securities will not be eligible for inclusion in the UK series of the FTSE indices.

### **Listing Rules which are not applicable to a Standard Listing**

Such non-applicable Listing Rules include, in particular:

- Chapter 8 of the Listing Rules regarding the appointment of a listing sponsor to guide the Company in understanding and meeting its responsibilities under the Listing Rules in connection with certain matters. In particular, the Company is not required to appoint a sponsor in relation to the publication of this Prospectus or Admission;
- Chapter 9 of the Listing Rules relating to further issues of shares, issuing shares at a discount in excess of 10% of market value, notifications and contents of financial information;
- Chapter 10 of the Listing Rules relating to significant transactions which requires Shareholder consent for certain acquisitions;
- Chapter 11 of the Listing Rules regarding related party transactions;
- Chapter 12 of the Listing Rules regarding purchases by the Company of its Ordinary Shares; and
- Chapter 13 of the Listing Rules regarding the form and content of circulars to be sent to Shareholders.

### **Listing Rules and Disclosure and Transparency Rules with which the Company must comply under a Standard Listing**

There are, however, a number of continuing obligations set out in Chapter 14 of the Listing Rules that will be applicable to the Company:

- compliance with the Listing Principles set out in Listing Rule 7.2.1;
- inclusion of a corporate governance statement in accordance with DTR 7.2 in its directors' report;
- compliance with the reverse takeover rules set out in Listing Rule 5.6.1R;

- where shares of the same class of shares that are already listed are allotted, the Company must apply for such newly allotted shares to be admitted to listing. The application must be made as soon as possible and in any event, within one year of the allotment;
- the forwarding of circulars and other documentation to the UKLA for publication through the document viewing facility and related notification to a regulatory information service;
- the provision of contact details of appropriate persons nominated to act as a first point of contact with the UKLA in relation to compliance with the Listing Rules and the Disclosure and Transparency Rules;
- the form and content of temporary and definitive documents of title;
- the appointment of a UK registrar;
- compliance with DTR 4, 5, 6 and 7.2;
- the making of regulatory information service notifications in relation to a range of debt and equity capital issues. This information includes proposed changes to the capital structure, any redemption of listed shares, any extension of time granted for the currency of temporary documents of title and the results of any new issue of equity securities or public offering of existing equity securities; and
- save where the FCA accepts a lower percentage than 25%, at least 25% of the Ordinary Shares need to be held by the public in one or more EEA states or the jurisdiction in which the Ordinary Shares are listed (which for the Company is South Africa).

Notwithstanding the above, it must be noted that the Issuer will be admitted to trading on the regulated market of an EU member state and as such, the Issuer must further comply with all the provisions of the EU Directives as transposed by National Laws. For further information, see section *“CERTAIN CYPRIOT AND UK SECURITIES MARKET REGULATIONS AND PROCEDURES”*.

#### **Listing on the JSE**

The Ordinary Shares will, following Admission, continue to be listed and posted for trading on the JSE and consequently, obligations arising from applicable securities and corporate legislation in South Africa, as well as the JSE Listings Requirements, will continue to apply to the Company.

The Company listed all of its Ordinary Shares on the JSE in April 2014 and all of its Ordinary Shares continue to be admitted to listing and trading on the JSE. The listing on the JSE will be construed under the JSE Listings Requirements as the primary listing of the Company and as such the Company is required to comply with the JSE Listings Requirements. Such Listings Requirements include the following continuing disclosure and compliance obligations:

- (a) The Company must without delay, unless the information is kept confidential for a limited period of time, release an announcement providing details relating to the Company that constitute price sensitive information.
- (b) The Company must publish a trading statement as soon as it is satisfied that a reasonable degree of certainty exists that the financial results for the period to be reported upon next, will differ by at least 20% from the financial results of the Company for the corresponding period.
- (c) Immediately after the Company knows of any price sensitive information and that the necessary degree of confidentiality of such information cannot be maintained, the Company must place a

cautionary announcement. Thereafter, the Company is required to provide updates of such cautionary announcement every 30 business days thereafter, until the cautionary announcement is withdrawn.

- (d) The Company is required to make an announcement immediately once dividends, interest and other payments are declared. Alternatively, if the Company decides not to declare a dividend payment and such decision is deemed to be price sensitive, this decision must immediately be announced.
- (e) The Company must within six months after the end of its Financial Year and at least 15 business days before the date of the Annual General Meeting, distribute to all shareholders and submit to the JSE a notice of the Annual General Meeting and the Annual Financial Statements for the relevant year.
- (f) If a Company has not distributed its Annual Financial Statements to all shareholders within three months of its Financial Year end, it must publish provisional Annual Financial Statements within the three months, even if the financial information is unaudited at that time. Unaudited provisional reports must be reviewed by the Company's auditor.
- (g) The Company is required to ensure that all holders of any class of security, are in the same position and receive fair and equal treatment.
- (h) A Company proposing to issue shares for cash must first offer those shares, by way of a rights offer, to existing holders of Ordinary Shares in proportion to the existing holdings.
- (i) A Company must ensure that all necessary facilities and information are available to enable holders of Ordinary Shares to exercise their rights. In particular, the Company must inform such holders of meetings they are entitled to attend, enable them to exercise their right to vote where applicable and release announcements and distribute circulars in terms of the JSE Listings Requirements.
- (j) All circulars (including all circulars concerning proposed transactions of the Company) must be distributed to all shareholders.
- (k) The Company must notify the JSE of any change in the Board of Directors or the Company Secretary. In addition, such changes must be announced as soon as practically possible.
- (l) The Company must submit to the JSE, the relevant Directors' declaration in respect of its Directors within 14 days of their appointment and Directors are required to disclose to the Company all information that is required in order to complete the said declaration. All Directors are bound by and must comply with the JSE Listings Requirements, in their capacity as Directors and in their personal capacities.
- (m) The Company must announce details of all transactions in relation to shares of the Company by or on behalf of its Directors and Company Secretary, the Directors and Company Secretary of a major subsidiary company of the Company and any associate of the directors. Such transaction includes any sale, purchase or subscription for Ordinary Shares.
- (n) A Director may not deal in any Ordinary Shares without first advising the Chairman of the Board of the Company and receiving clearance from such chairman or other designated director.
- (o) A Director must not be given clearance during a prohibited period, being a closed period or any period where there exists any matter which constitutes price sensitive information.

- (p) A Director is required to advise the Company of any dealing in Ordinary Shares by its associates and any investment manager dealing on his behalf.
- (q) The Company must notify the JSE of the termination or the appointment of its auditor, the resignation of the auditor or any change of the individual auditor classified as a designated auditor.
- (r) The Company must publish the beneficial interest in Ordinary Shares of Directors and major shareholders (5% or more interest in Ordinary Shares) in its Annual Financial Statements.
- (s) The Company must comply with the following specific requirements concerning corporate governance:
  - i. There must be a policy detailing the procedures for the appointment of the Board.
  - ii. There must be a policy evidencing a clear balance of power and authority of the Board level to ensure that no one Director has unfettered powers of decision making.
  - iii. The Company must have an appointed Chief Executive Officer and a Chairman and these positions must not be held by the same person. The Chairman must either be an independent non-executive director or the Company must appoint a Lead independent director in accordance with the King Code.
  - iv. All companies must in compliance with the King Code, appoint an Audit Committee and a Remuneration Committee and if required, Risk and Nomination Committees.
  - v. The capacity of each Director must be categorised as executive, non-executive or independent.
  - vi. The Company must have an executive financial Director.
  - vii. The Audit Committee must consider, on an annual basis and satisfy itself of the appropriateness of the expertise and experience of the financial Director.
  - viii. The Board must consider and satisfy itself, on an annual basis, on the competence, qualifications and experience of the Company Secretary.
  - ix. The Board, or the Nomination Committee, must have a policy on the promotion of gender diversity at board level.

## **SOUTH AFRICA AND SOUTH AFRICAN REGULATORY FRAMEWORK**

### **Country Overview**

The majority of the Group's operations are located in South Africa. South Africa is Africa's fifth most populous country and has the continent's second largest economy, as measured by GDP in 2015. It is a parliamentary representative democratic republic, which held its first multi-racial general elections in April 1994, when Nelson Mandela, as leader of the largest party in the parliament, the ANC, was elected President.

The constitution of South Africa, adopted in 1996, establishes a central government headed by the President, who is elected by parliament for a five-year term and who serves as both head of state and head of government. The constitution includes an extensive Bill of Rights and establishes an independent judiciary.

### **Regulatory Framework**

#### **South African laws and regulations relating to exploration for and production of minerals**

##### **General**

Mining in South Africa is primarily governed by the MPRDA. The MPRDA regulates the prospecting, mining, processing and utilisation of minerals. The MPRDA together with NEMA also provides for the rehabilitation of land disturbed by exploration and mining. The MPRDA came into effect on 1 May 2004.

The objects of the MPRDA include:

- to substantially and meaningfully expand opportunities for HDSAs to enter the mineral and petroleum industries in order to benefit from the exploitation of the nation's mineral and petroleum resources; and
- to promote employment and advance the social and economic welfare of all South Africans.

**The following relevant legislation is also applicable to the mining industry:**

##### **Mining Titles Registration Act, 1967**

The purpose of the MTRA is, essentially, to:

- regulate the registration of mineral and petroleum titles and other rights connected therewith;
- effect certain petroleum titles and other rights connected therewith;
- effect certain amendments as to where mining titles are registered (to ensure consistency with the MPRDA); and
- remove the functions relating to the registration of rights to minerals from the ambit of the Deeds Registries Act, 1937.

Registration of mineral and petroleum titles in terms of the MTRA creates a limited real right which is binding on third parties.

##### **Precious Metals Act, 2005**

The PMA regulates the acquisition, possession, smelting, refining, beneficiation, use and disposal of precious metals (i.e. gold, any platinum group metal and the ores of such metals and any other metals

that the Minister of Mineral Resources has declared by notice in the Government Gazette to be a precious metal for the purposes of the PMA). Under the PMA, unwrought PGMs (which include PGM concentrate) may only be sold or disposed of to a person who has the necessary authority under the PMA.

### **Mineral and Petroleum Resources Royalty Act, 2008**

Under the Mineral and Petroleum Resources Royalty Act, the holders of mineral rights are required to pay the State royalties for minerals removed and disposed of during prospecting and for minerals mined. The method used to determine the royalty depends on whether the Mineral Resource is refined or unrefined. The royalties incurred by Tharisa Minerals in respect of the Financial Years ended 30 September 2013, 2014 and 2015 were ZAR6.2 million, ZAR8.4 million and ZAR10.7 million, respectively.

### **National regulatory authorities governing the mining industry**

The DMR is the authority responsible for ensuring compliance with the MPRDA, the issuing of prospecting and mining rights and ensuring compliance with those rights. Regional offices are located in each of the nine provinces and applications for a prospecting right or mining right must be lodged at the regional office where the land is situated. Tharisa Mine falls under the administrative jurisdiction of the North West Regional Office of the DMR.

### **Licensing**

The Group is required to obtain various licences, authorisations and permits from relevant governmental authorities to conduct its operations. In relation to the Tharisa Mine, licences, authorisations and permits would include: a mining right, EA, water use licence and transportation and storage of hazardous substances permits.

### **Prospecting and mining rights**

The DMR considers a wide range of factors and principles before approving any application for a prospecting or mining right. These factors include proposals relating to BEE and social responsibility and evidence of an applicant's ability to conduct mining optimally and applications for EA's associated with such prospecting and mining rights. The DMR must also approve the environmental management programme and the financial provision for annual rehabilitation, rehabilitation on closure and latent and residual environmental impacts that become apparent past closure. Section 11 of the MPRDA deals with the transferability of the rights and provides that prospecting or mining rights cannot be transferred, ceded, assigned, sublet etc. without the consent of the Minister of Mineral Resources.

### **Prospecting right**

In order to prospect for any mineral, a person must obtain an EA and a prospecting right from the DMR. No prospecting right will be granted if another person has a prospecting right or mining right for the same mineral and land. The holder of a prospecting right must commence prospecting operations within 120 days from the effective date of the prospecting right and in order to retain the prospecting right, the holder must continuously and actively carry out prospecting operations in accordance with the prospecting work programme submitted with the prospecting right application and comply with the terms and conditions of the prospecting right and the requirements of the approved environmental management programme. A prospecting right is valid for the period stipulated in the prospecting right, which may not exceed five years, provided that it may be renewed for one additional period not exceeding three years.

Subject to compliance with the provisions of the MPRDA, the holder of a prospecting right has the exclusive right to apply for and be granted a mining right in respect of the minerals and area applicable to the prospecting right.

### **Mining right**

In order to mine for any mineral or commence any work incidental thereto, a person must obtain a mining right from the DMR. The holder of a mining right must commence mining operations within one year from the effective date of the mining right and in order to retain the mining right, the holder of a mining right must actively and optimally conduct mining in accordance with the mining work programme.

A mining right is valid for the period stipulated in the mining right. The maximum period is 30 years, after which the holder of a mining right may apply to renew the mining right for further periods of up to 30 years for each renewal. A holder of a mining right has, subject to compliance with the requirements of the MPRDA, the exclusive right to apply for and be granted a renewal of the mining right in respect of the mineral and mining area to which the existing mining right relates. The holder of a mining right can carry out any other activity incidental to mining, provided the activity does not contravene the provisions of the MPRDA. The holder of a mining right may enter the land to which such right relates together with his or her employees, and may bring onto the land any plant, machinery or equipment and build, construct or lay down any surface, either aboveground or underground, which may be required for purposes of mining.

### **Export restrictions**

The export of chrome is governed by the laws and regulations generally applicable to the export of goods. The export of precious metals is governed by the PMA. The PMA prohibits the export of any unwrought or semi-fabricated PGMs without the prior written approval of the Minister of Mineral Resources. In considering whether to grant the approval, the Minister of Mineral Resources will consider the promotion of equitable access to and the orderly local beneficiation of such metals.

The PMA also contains ongoing compliance obligations for any person who has been granted such an approval to export precious metals, in accordance with the terms and conditions of its licence and the provisions of the PMA. Once such approval is granted and subject to compliance with ongoing obligations, the holder of such an export licence need not seek further specific approval for the export of unwrought or semi-fabricated PGMs. Tharisa Minerals does not hold an export licence as it does not currently export PGMs.

### **Access to land**

#### **MPRDA**

Under the MPRDA, any holder of a prospecting or mining right may enter the land to which such right relates. The holder of the mining right does not have to own the land in order to conduct mining or any other activity incidental to mining. Under the MPRDA, in situations where the landowner or lawful occupier of the land in question refuses access to the holder of the prospecting or mining right or places unreasonable demands in return for access to the land, the holder of a mining right must notify the relevant Regional Manager (in the Group's case, the North West Regional Manager of the DMR).

The Regional Manager must, within 14 days from the date of being notified by the holder of the prospecting or mining right: (1) call upon the owner of the land to make representations regarding the issues raised by the holder of the prospecting or mining right; (2) inform that owner of the rights of the

holder of the prospecting or mining right in terms of the MPRDA; (3) set out the provisions of the MPRDA which such owner is contravening; and (4) inform the owner of the steps which may be taken against the owner, should he or she persist in contravening the provisions.

If the relevant Regional Manager concludes that the owner or lawful occupier of the land will suffer loss or damage as a result of the mining operations, he or she may request the parties concerned to reach an agreement for the payment of compensation for such loss or damage. If the parties are unable to reach agreement, the compensation must be determined by arbitration or by a competent court. However, if the Regional Manager concludes that future negotiation between the parties will detrimentally affect the objects of the MPRDA, the Regional Manager may recommend to the Minister of Mineral Resources that the land in question be expropriated against fair value being paid to the owner or lawful occupier. On the other hand, if the Regional Manager determines that the failure to reach agreement on the amount of compensation is due to the fault of the holder of the mining right, the Regional Manager may prohibit the holder of the mining right from commencing or continuing with mining operations until the dispute is settled by arbitration or by a competent court.

#### **Land zoning**

Where land that is the subject of a mining right under the MPRDA falls within a municipal area, the use of that land must comply with the scheme regulations of the municipality, which determine the use to which the land may be put in accordance with the applicable zoning. Land to be used for mining must be zoned as mining and quarrying or an application to re-zone the land from another use type to mining and quarrying must be approved before mining operations commence. The Group has successfully applied for the re-zoning of the land covering its open pit operations from agriculture to mining.

#### **National heritage resources**

The National Heritage Resources Act, 1999 provides for the protection and management of heritage resources, which include resources of archaeological, cultural or historical significance, collectively forming South Africa's national estate. Sites containing heritage resources such as archeological or paleontological resources, graves and burial grounds, must be investigated and, if necessary, protected for the nation. This may include procedures relating to the relocation of graves. Heritage resources including graves and burial grounds have been identified in the project area in Tharisa Minerals' environmental impact assessment reports and its environmental management plans. The EMP also sets out undertakings by and obligations on Tharisa Minerals relating to heritage resources.

#### **Transfer pricing restrictions**

South Africa has adopted the "arm's length principle" to counter the impact of transfer pricing and if conditions are made between two associated enterprises which differ from those which would have been concluded between independent enterprises at arm's length, then any profits which would have been accrued to one of the enterprises but for those conditions will be included in the profits of the enterprise and taxed accordingly. The onus is on the taxpayer to show that its cross-border related party transactions are entered into at arm's length and the South African Revenue Service requires taxpayers to keep records in relation to potentially affected transactions.

## **South African laws and regulations relating to BEE**

### **General**

BEE is governed generally by the Broad-Based Black Economic Empowerment Act, 2003 and the Codes of Good Practice promulgated under the BEE Act. BEE in the mining sector, however, is not governed by the BEE Act or Codes but rather by the MPRDA and the Mining Charter. The objective of the MPRDA is to facilitate meaningful participation of Black people in the mining and minerals industry. In particular, section 100 (2) (a) of the MPRDA provides for the development of the Mining Charter as an instrument to effect transformation with specific targets.

### **Mining Charter**

The Mining Charter came into force in 2004 and contained a provision to review the BEE targets set out therein every five years so that the government could determine the progress made and further steps that may be needed to be taken to achieve BEE objectives. In 2009, consistent with this provision, the DMR conducted a comprehensive assessment to ascertain the progress of transformation within the industry.

This resulted in the Mining Charter being amended in 2010. The objectives of the Mining Charter, as it stands, include the promotion of economic opportunities for HDSAs in the mining sector.

- The DMR will only issue a prospecting or mining right to an entity if that entity meets specific targets. The level of compliance with the Mining Charter is required to be reported each calendar year;
- has a minimum of 26% HDSA ownership; and
- has a plan to convert and upgrade all hostels in line with requirements of the Mining Charter (which ensures that mine workers have a good living environment).

After fulfilling the three criteria above, an entity is measured on the BEE Scorecard contained in the Mining Charter and is assigned a BEE score. An entity will be attributed a particular BEE compliance level as follows: 0% – 25% (gross non-compliance), 25 – 50% (non-compliance), 50 – 75% (marginal to acceptable performance) and 75% – 100% (excellent performance). Despite obtaining a specific score, the essential BEE requirement in the mining sector is whether the measured entity fulfils the relevant conditions and obligations set out in its prospecting and/or mining right(s). Failure to fulfil such conditions and obligations may result in the holder being sanctioned under the MPRDA. These sanctions could include a monetary fine, the prospecting right or mining right being suspended, cancelled/revoked or a refusal to renew the prospecting right or mining right.

The elements of the Mining Charter BEE scorecard against which an entity is measured, are:

- ownership;
- procurement and enterprise development;
- beneficiation;
- employment equity;
- human resource development;
- mine community development;

- housing and living conditions;
- sustainable development and growth of the mining industry; and
- reporting (monitoring and evaluation).

The Mining Charter sets targets for the various elements. For example, the Mining Charter sets a target for the preferential procurement element of procuring a minimum of 40% of capital goods, 70% of services and 50% of consumer goods from BEE entities by 2014 and the employment equity element of 40% HDSA representation by 2014 at each of the levels of executive management (board), senior management (EXCO), core and critical skills, middle management and junior management. In addition, mining companies must identify and fast-track their existing talent pools through career path programmes to ensure high level operational exposure. As at 30 September 2015, Tharisa Minerals has a BEE compliance score of 96% and therefore achieves an excellent performance in terms of the Mining Charter.

In 2015, the government initiated a second review process aimed at strengthening the efficacy of the Mining Charter. On 15 April 2016, the government released a draft reviewed Mining Charter for public comment. The draft reviewed Mining Charter for the first time aligns the historic Mining Charter to the provisions of the BEE Act and the Codes.

The key pillars against which companies are measured have not been changed but there are several proposed changes in the draft. These include the introduction of definitions from the BEE Act including the definition “Black people” being black Africans, Coloureds and Indians (which is proposed to replace the definition of HDSA) setting a minimum target of 26% ownership being held by Black people of which 5% is to be distributed equitably amongst workers, black entrepreneurs and the local community. It also targets increased representation for black people at board and management level, increased local procurement from BEE companies and the requirement of the mining company to improve housing standard and living conditions of mine employees.

As defined in the MPRDA, the draft is open to public comment for a period of 30 days, during which the minister will engage with organised business and organised labour. Other interested and affected parties are also invited to submit written inputs and comments by no later than 31 May 2016. The comments will then be considered by the DMR before a new version of the Mining Charter is adopted.

#### **South African laws relating to access to water**

The use of water in South Africa is governed by the NWA and the regulations promulgated under the NWA. A person is only entitled to use water if it is permissible under the NWA. The environmental aspects of water use are discussed under the environmental section below. Under the NWA, a person may:

- use water in or from a water resource on the land occupied by that person or from an area forming a boundary of that land for reasonable domestic use, animal watering, firefighting and recreational use;
- continue using water under an existing lawful water use licence issued in terms of the previous Water Act; and
- use water in terms of a general authorisation or specific licence. The nature and volume of the water use will determine whether a general authorisation or specific licence is required.

## **Electricity**

The supply (trading, generation, transmission or distribution) of electricity in South Africa is governed by the Electricity Regulation Act 2006 and regulations promulgated thereunder. There is currently a monopoly on the supply of electricity in South Africa as only Eskom, an organ of state that was converted into a public company by the Eskom Conversion Act 2001, has the licence to operate an electricity network and all electricity must be purchased from Eskom. In order to use electricity, an entity may require Eskom to connect it to the electrical grid and Eskom may not refuse to make such a connection.

## **Railway transportation**

All transport by rail in South Africa is under the administration and control of TFR. Transnet is wholly owned by the South African government. No independent regulator (other than for safety purposes) has been appointed in order to regulate the business of TFR. The Deputy Minister of Transport has, however, recently announced that such a regulator will be appointed in the near future. At present, TFR do not publish any sort of tariff but quotes will be provided on request. TFR usually contracts on the basis of its conditions of carriage which provide that TFR deals with all goods at the risk of the owner of the goods.

## **Road haulage**

Roads are governed at a national level, in the main, by the South African National Roads Agency and National Roads Act, 1998. The agency has the power to reach agreement with any person who is authorised to operate a national road as a toll road. Most routes to the relevant harbours will require road transport to proceed on various toll roads. Road use (whether on toll roads or otherwise) by vehicles is governed by the National Road Traffic Act and the many regulations passed in terms of that Act. The National Road Traffic Act and the regulations passed in 2000, as amended, deal with the licensing of drivers and vehicles, the roadworthiness of vehicles, and the conditions in terms of which certain goods, especially dangerous goods, must be carried. These conditions include the permissible maximum and gross axle and axle unit mass load of a vehicle and the massload carrying capacity of roads and bridges. Where indivisible loads exceed the maximum allowed load weights, then a request must be made for an exemption under the National Road Traffic Act (the so-called abnormal load permit). Parties are free to contract with road hauliers on such terms as may be negotiated. Many road hauliers operate in terms of standard trading terms that exclude or restrict liability.

## **Port access**

There is both road and rail access to all ports. There are no specific regulations that determine port access and such access is negotiated with the relevant Transnet division depending on the type of access required. Where access is to be by way of a leasehold berth, then the access will be determined by negotiations (and the terms of any subsequent lease) with the National Ports Authority. Use of any stockpile or dry bulk terminal will be determined by whatever terms are negotiated with TPT, a division of Transnet. The National Ports Authority tariffs are published each April and are subject to regulation by the Ports Regulator. Generally, TPT operates in terms of standard trading terms that are amended from time to time, with each type of terminal having its own dedicated set of terms. These terms contain provisions that exclude or restrict Transnet's liability. Transnet also attempts to regulate what goods are exported through its ports through the operation of tariffs. In the past, excessive tariff increases, either overall or on specific products, have been effectively dealt with by the Ports Regulator.

## **South African laws and regulations relating to protection of the environment**

### **Introduction**

Environmental law in South Africa is becoming increasingly stringent and is based around the concept of integrated environmental management. A justiciable environmental right is enshrined in the Bill of Rights under South Africa's Constitution. In essence, individuals are entitled to an environment that is not harmful to human health or well-being and to have the environment protected for the benefit of present and future generations. This has created a new form of legal standing for individuals and classes of individuals and has enabled the enforcement of environmental laws through, for example, class actions.

### **Environmental management**

Four major pieces of legislation presently account for the bulk of environmental management in South Africa. They are:

- the National Environmental Management Act, 1998;
- the National Water Act, 1988;
- the National Environmental Management: Air Quality Act, 2004; and
- the National Environmental Management: Waste Act, 2008.

NEMA is the overarching legislation which provides an underlying framework and relates to all three fields of environmental concern, namely resource conservation and exploitation, pollution control and waste management, and to a limited degree, land use planning and development. NEMA is underpinned by the globally accepted concept of sustainable development.

Two important principles are contained in NEMA:

- the "polluter pays" principle – which requires the person involved in any polluting activity to be responsible for the costs of preventing or dealing with any pollution caused by that activity, instead of passing this responsibility on to another. This principle is both proactive (preventative) and reactive (compensatory); and
- the precautionary principle – which requires the application of preventative measures in situations of scientific uncertainty where a course of action may cause harm to the environment. This principle is applied in the provisions relating to scoping and environmental impact assessment reports.

### **Environmental approval**

The EIA Regulations issued under NEMA on 8 December 2014 ("2014 EIA Regulations") provides a list of activities which require an EA prior to commencement of the activity. Depending on the anticipated severity of the impact, the application process will require either a BAR or a S&EIR to precede the granting of the EA. Three lists of activities have been published under NEMA which are categorised on the basis of the severity of an activity's environmental impact or location in geographically sensitive areas and therefore require either a BAR or an S&EIR. An activity requiring a mining right as contemplated in the MPRDA, such as the Tharisa Mine, is considered to have a more severe environmental impact and is listed as Activity 19 and requires an S&EIR prior to commencement. The commencement date for Activity 19 was 8 December 2014. The Group's application for an EA was submitted prior to 2014 in terms of the 2006 EIA regulations and was granted in October 2009. The

Group's mining activities triggered several listed activities, requiring both BARs and S&EIRs. All EAs granted prior to the commencement of the 2014 EIA Regulations are deemed to be approved in terms of the 2014 EIA Regulations and compliance with both the construction and operational conditions attached thereto is an ongoing requirement. However, any expansion of facilities will be regarded as a separate activity that may require the application for and obtaining of a further EA in the event that any expansion activity to be undertaken will be in excess of any of the various applicable thresholds provided for in the listed activity. It is also common for EAs to be issued by the competent provincial environmental authorities for certain activities that are carried out on mining areas but are not directly related to mining operations, such as for road infrastructure. These authorisations are only issued once an environmental impact assessment has been performed. Similarly, the Waste Act, AQA and NWA include listed activities which may not commence until a licence or authorisation has been issued by the relevant authorities. Compliance with the provisions of NEMA does not therefore absolve a person from complying with any other statutory requirements to obtain authorisation from any organ of state allowing for the implementation of any activity in question.

### **Air pollution**

Common law principles and case law applicable to the civil wrong of nuisance still play an important part in the control of air pollution. Air pollution legislation falls within the ambit of the AQA, which repealed the Atmospheric Pollution Prevention Act, 1965. The AQA regulation provides a list of activities which result in atmospheric emissions which have or may have a significant detrimental effect on the environment, including health, social conditions, economic conditions, ecological conditions or cultural heritage. The activities listed in the AQA Regulations may not commence without either a provisional atmospheric emission licence or an atmospheric emission licence. The AQA Regulations include activities relating to, amongst others, mineral processing, blast furnace operations and the storage and handling of ore. South Africa has also acceded to the 1997 Kyoto Protocol on measures to combat global warming.

### **Water pollution**

South Africa's water resources are regulated by the NWA. The NWA has provisions governing the prevention and remediation of pollution, and provides for a liability regime similar to that of NEMA.

A water use licence or general authorisation, as the case may be, is required for the discharge of waste into a water resource. The manner in which the waste water is treated must be done in accordance with the conditions prescribed in the water use licence or general authorisation issued for the particular activity.

The infrastructure aspects of water use are discussed under the infrastructure section above. Under the NWA Regulations, any person intending to operate a new mine or conduct a new mining related process must notify the DWS not less than 14 days before the start of such activity. A mining related process includes the operation of washing processing facilities, mineral refineries, extraction plants and mineral storage yards. Those in control of an existing mine or mining related process must submit a copy of its EMP to DWS and also notify DWS in writing 14 days before the temporary or permanent cessation of the operation of the mine or the conduct of the mining related process, or the resumption of such operation or process. The NWA Regulations also prescribe, amongst others, restrictions on locality and use of materials, capacity requirements of clean and dirty water systems, protection of water resources, security and additional measures relating to pollution control.

## **Waste management**

Although waste management is generally governed by the Waste Act and residue stockpiles and residue deposits at mines are governed by regulations promulgated under NEMA, the DMR is the competent authority for administering these. Residue deposits means any residue stockpiles remaining at the termination of mining, while residue stockpiles means any product derived from a mining operation which is stockpiled or disposed. A mine is therefore required to manage its residue stockpiles and residue deposits as prescribed in its approved EMP or in terms of a waste management licence issued in relation to new residue stockpiles and residue stockpiles not covered in the EMP. Failure to comply with the approved EMP and/or waste management licence is an offence.

## **Hazardous substances**

Hazardous substances are regarded as dangerous goods and the storage of dangerous goods falls within the list of activities published by NEMA. Depending on the quantity of dangerous goods being stored, a BAR or S&EIR must be conducted and an authorisation obtained before the commencement of this activity.

Mines that make use of explosives have conditions prescribed in their approved EMP and EA relating to the management of the explosives, such as having the explosives stored safely in a demarcated area and the requirement of a permit to transport the explosives to site. Regulations promulgated under the Occupational Health and Safety Act 1993 are also relevant as the Act also has an environmental aspect. The regulations deal with hazardous chemical substances, asbestos, and general safety issues. They also incorporate various codes of practice which deal with, amongst others, the identification, classification and transport of dangerous substances and goods which relates to any "existing contamination" on the site.

## **Prospecting and mining**

All prospecting and mining related activities require an EA from the DMR in terms of 2014 EIA Regulations. The granting of an EA will result in the approval of the mines EMP. Although the granting of an EA in terms of the 2014 EIA Regulations and the approval of the EMP is approved by the DMR, this does not absolve the holder from complying with the objectives under NEMA and applying for any other authorisation or licences required in order to lawfully conduct all the activities of the mine.

A significant feature of NEMA is that the holder of a prospecting or mining right under the MPRDA is responsible for any environmental damage, pollution or ecological degradation as a result of its prospecting or mining operations. The directors of a company may be jointly and severally liable for any unacceptable negative impact on the environment. In addition, the Minister of Mineral Resources will not issue an EA, approve an EMP and grant a mining right unless the prescribed financial provisions for rehabilitation or management of the negative environmental impacts have been assessed and made. The environmental liability of the mine must be re-assessed annually and, if applicable, the financial provisions must be increased to the satisfaction of the Minister of Mineral Resources. Failure to comply with these provisions is an offence and may result in sanctions, including the mining right being cancelled or revoked.

## **South African laws and regulations relating to health and safety**

Health and safety in the mining sector is governed by the Mine Health and Safety Act, 1996. The MHSA requires owners (which, in relation to mines, includes the holders of a prospecting permit or a mining

right issued under the MRPDA or the person for whom the mining activities are conducted) to, inter alia:

- ensure responsibility for health and safety through the creation of codes of practice, training, identifying potential hazardous factors and risks, investigating such risks, conducting occupational hygiene measures and establishing a system of medical surveillance of employees exposed to health hazards; and
- safeguard the rights of employees to refuse to work in or move away from areas which are unsafe or potentially unsafe.

The MHS Act provides for effective monitoring systems and involves inspections, investigations and enquiries to achieve its aims. The legislation has created a system of employee, employer and State participation in health and safety matters. The MHS Act provides for the establishment of the Mine Health and Safety Inspectorate under the auspices of the DMR, whose strategic objective is to improve occupational health and safety in mines through establishing systems for the regulation, monitoring, auditing and inspection of mines. Inspectors are given wide powers to enter and inspect conditions at a mine, to question people and to order the performance of certain acts in the interest of health and safety. Compliance with the MHS Act and its regulations is mandatory and failure to comply is a criminal offence. The MHS Act provides inspectors with wide powers, including but not limited to the right to issue contravention/prohibition notices and in so doing, to suspend the non-compliant entity's operations. These wide powers do not, however, include the power to revoke or cancel a prospecting or mining right. In addition, the MHS Act provides for a monetary administrative fining system which can be imposed on owners where there have been contraventions of the legislation.

There are two different statutes in South Africa that provide compensation for occupational diseases. These statutes are COIDA and ODMWA. ODMWA provides compensation for occupational lung diseases in miners and ex-miners only. ODMWA pays lump sum benefits based on the level of impairment and does not make any further pension provision. COIDA covers occupational injuries and diseases in all industries including those from the mining sector that are not covered by ODMWA; for example, noise-induced hearing loss. COIDA pays both lump sum and in certain circumstances pensions for permanent disability. Compensation is paid out of the fund established under the COIDA from employer contributions and no common law action lies with an employee against the employer for an occupational injury or disease.

## **South African laws and regulations relating to employment and labour**

### **General**

Employment and labour matters in South Africa are primarily governed by the Labour Relations Act, 1995 and the Basic Conditions of Employment Act. The LRA provides a framework within which employees, trade unions, employers and employer organisations can bargain collectively on wages, terms and conditions of employment and other matters of mutual interest and essentially gives effect to and regulates an employee's fundamental right to fair labour practices as conferred by the Constitution of the Republic of South Africa, 1996. The BCEA, prescribes minimum standards of employment and regulates payment of remuneration, working hours, leave and termination of employment.

## **Trade unions**

In South Africa, employees have the constitutional right to join, refuse to join or resign from a trade union. The primary role of trade unions is to engage in collective bargaining with their members' employers, and to represent their members in grievance and disciplinary matters. Trade unions also appoint members or officials to bodies which monitor and challenge employers' compliance with their statutory obligations.

While trade unions may exist and function without registering with the Department of Labour, organisational rights conferred by the LRA are restricted to registered unions. In relation to employees of the Group's contractors, the contractor and the Group are jointly and severally liable if the contractor, in respect of any of its employees, contravenes a collective agreement concluded in a bargaining council that regulates terms and conditions of employment; a binding arbitration award that regulates terms and conditions of employment; the BCEA; or a determination made in terms of the BCEA. There would also be joint and several liability where the contractor commits an act of unfair discrimination on the employee, as a consequence of the express or implied instructions of the Group.

## PGM AND CHROME INDUSTRIES

### The PGM Industry

#### Introduction to PGMs

Platinum group metals typically comprise a suite of six silvery-white metals that include platinum (Pt), palladium (Pd), rhodium (Rh), iridium (Ir), ruthenium (Ru) and osmium (Os). These six naturally occurring metals have similar physical and chemical properties and tend to occur together in the same mineral deposit.

Platinum, iridium and osmium are the densest known metals, with platinum being 11% denser than gold and about twice the weight of the same volume of silver or lead. Palladium, rhodium and ruthenium are lighter, with palladium having about the same density as silver.

The usefulness of PGMs are determined by their particular chemical and physical properties.

#### *Platinum and palladium*

Platinum and palladium are soft, ductile and resistant to oxidation and high temperature corrosion. They have widespread catalytic uses. In industry they are often used with the addition of other metals, including other PGMs.

Platinum is the least reactive metal. It has remarkable resistance to corrosion, even at high temperatures. Platinum is used in catalytic converters, laboratory equipment, electrical contacts and electrodes, platinum resistance thermometers, dentistry equipment, and jewellery.

Being a heavy metal, it leads to health issues upon exposure to its salts, but due to its corrosion resistance, it is not as toxic as some metals. Compounds containing platinum, such as cisplatin, oxaliplatin and carboplatin, are applied in chemotherapy against certain types of cancer.

Palladium most closely resembles platinum. It is the least dense and has the lowest melting point of the platinum group metals. Over half of the supply of palladium and platinum goes into catalytic converters, which convert up to 90% of harmful gases from auto exhaust (hydrocarbons, carbon monoxide, and nitrogen dioxide) into less-harmful substances (nitrogen, carbon dioxide and water vapour).

Palladium is also used in electronics, dentistry, medicine, hydrogen purification, chemical applications, groundwater treatment and jewellery. Palladium plays a key role in the technology used for fuel cells, which combine hydrogen and oxygen to produce electricity, heat, and water.

#### *Rhodium and iridium*

Rhodium and iridium are more difficult to work, but are valuable alone as well as in alloys.

Their chemical compounds have many uses, and rhodium is a particularly good catalyst.

Approximately 80% of the world's rhodium production is used in three-way catalytic converters in automobiles. Because rhodium metal is inert against corrosion and most aggressive chemicals, and because of its rarity, rhodium is usually alloyed with platinum or palladium and applied in high-temperature and corrosion-resistive coatings. White gold is often plated with a thin rhodium layer to improve its appearance while sterling silver is often rhodium-plated for tarnish resistance. Rhodium detectors are used in nuclear reactors to measure the neutron flux level.

Iridium, on the other hand, is one of the rarest elements in the earth's crust, with annual production and consumption of only about three tonnes. The most important iridium compounds in use are the

salts and acids it forms with chlorine, though iridium also forms a number of organometallic compounds used in industrial catalysis, and in research.

Iridium metal is also used when high corrosion resistance at high temperatures is needed, such as in high-performance spark plugs, crucibles for recrystallization of semiconductors at high temperatures. Iridium radioisotopes are used in some radioisotope thermoelectric generators.

#### *Ruthenium and osmium*

Ruthenium and osmium are hard, brittle and almost unworkable in the metallic state, with poor oxidation resistance, but are valuable as additions to other metals, usually other PGMs, and as catalysts.

Ruthenium does not tarnish unless subject to high temperatures. Small amounts of ruthenium can increase the hardness of some metals, such as platinum and palladium, and the corrosion resistance of others (titanium). Aside from its use as a catalyst to harden other metals, its alloys are used in electrical contacts and to colour glass and ceramics.

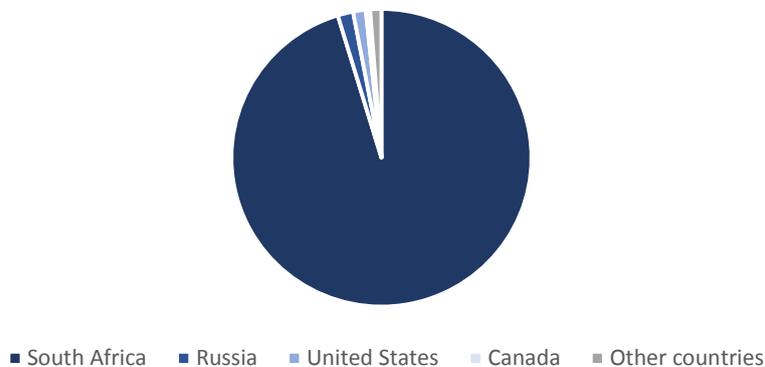
Osmium is a hard but brittle metal that remains lustrous even at high temperatures. It has a very low compressibility. Because of its hardness, brittleness, low vapour pressure (the lowest of the platinum group metals), and very high melting point (the fourth highest of all elements), solid osmium is difficult to machine, form, or work. Osmium alloys such as osmiridium are very hard and, along with other platinum group metals, are used in the tips of fountain pens, instrument pivots, and electrical contacts, as they can resist wear from frequent operation.

#### **Sources of PGMs**

PGMs are among the rarer elements in the earth's crust. The elements are typically hosted in base metal sulfides and in some nickel and copper ores. Because of its scarcity in the earth's crust and given their important uses, they are highly valuable, making them precious metal commodities.

The majority of the world's PGM resources are located in South Africa, which accounts for almost 80% of the known global PGM resources. Zimbabwe, Russia and North America hold much of the remaining global resource. The most extensive ore deposits have been found in the norite belt of the Bushveld Complex in South Africa, the Stillwater Complex in Montana, United States, the Thunder Bay District of Ontario, Canada, and the Norilsk Complex in Russia.

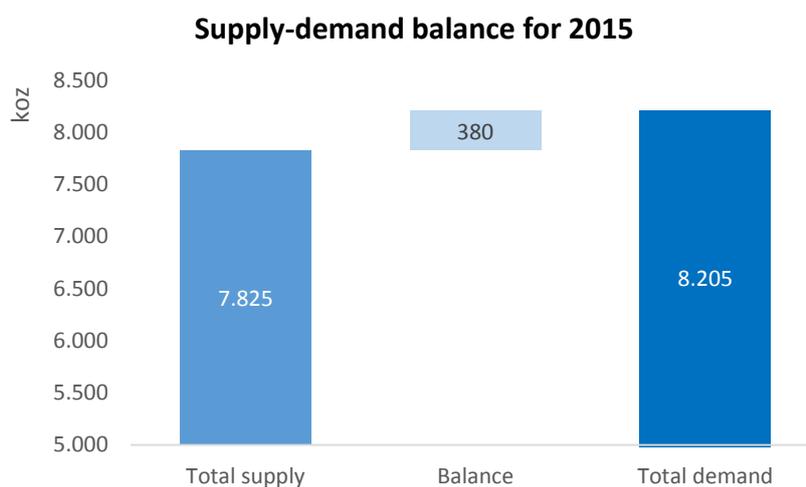
Global platinum reserves by weight



Source: Statista 2016

## Supply and Demand Overview

The World Platinum Investment Council, and its research partners SFA (Oxford) Limited, reported in its sixth edition of the Platinum Quarterly (released in March 2016), that the global platinum market ended year 2015 was in deficit by 380 koz (2014: 725 koz). The forecast for 2016, potentially a fifth deficit year, is a deficit of 135 koz.



Source: SFA (Oxford) Limited

Total demand increased to 8 205 koz in 2015 on stronger automotive, industrial and investment demand, which more than offset a drop in jewellery demand.

## Sources of PGM demand

### *Autocatalyst demand*

The largest application for PGMs is in the manufacture of catalytic converters in which one or more of platinum, palladium and rhodium are coated onto a substrate housed in the exhaust system of internal combustion engines and act as catalysts to reduce emitted levels of carbon monoxide, hydrocarbons and oxides of nitrogen to within legislated levels. As a general rule, catalytic converters for diesel engines predominantly use platinum, whereas those for gasoline-powered on-road engines currently predominately use palladium. Over 85% of all new on-road vehicles sold globally each year are fitted with catalysts containing PGMs.

As a significant portion of primary PGM supply is purchased and consumed by original equipment manufacturers of autocatalysts for vehicles and other equipment powered by internal combustion engines, global demand for PGMs is correlated to the level of global demand for newly-built motor vehicles. Motor vehicle industry demand for PGMs is also driven by engine design specifications and, in particular, the size of vehicle engines as this influences the quantity of PGMs required for their exhaust catalysts.

In the latest report prepared for the World Platinum Investment Council, SFA (Oxford) Limited states that gross automotive demand for platinum reached 3 455 koz in 2015, up 5% year-on-year from 3 290 koz in 2014. Growth in demand for PGMs used in the automotive industry is expected to show moderate growth again in 2016 with the implementation of the Euro 6 emission legislation leading the drive. Euro 6 is the latest diesel engine emission legislations implemented by the European

Commission. The first Euro 1 standard was introduced for trucks and buses in 1993 and the standards have progressively been implemented to cover various vehicle types. Euro 6, which came into effect from September 2015, applies to light passenger and commercial vehicles.

The automotive sector is also the largest consumer of palladium. As catalytic converter technology advances, there is a continual fine tuning of the technology to steadily thrift down the PGMs required to meet a given emission standard. Palladium's current and historic cost advantage has meant that gasoline catalytic converter technology worldwide is now almost exclusively palladium based.

The trend to exchange the more expensive PGM metals for cheaper metals has, however, meant that the use of rhodium in autocatalysts is contracting. Autocatalysts continue to dominate demand, accounting for 83% of gross consumption of rhodium in 2015. Sales of rhodium to automakers are set to contract further this year with thrifting on three-way catalysts fitted to gasoline cars outweighing an increase in rhodium use for diesel emissions control.

The largest automotive market globally is China, which reported a 7.3% growth in the sales of passenger cars in 2015. The Chinese government in late September 2015 halved the 10% purchase tax for vehicles with 1.6 litre engines or smaller in a bid to rejuvenate its car industry. Nearly 70% of China's new-car sales fall into the category that qualifies for the tax break. The government-backed China Association of Automobile Manufacturers is predicting sales growth of 6% in 2016.

### ***Jewellery demand***

The jewellery industry comprises another significant source of demand for PGMs, principally platinum.

Jewellery demand contracted 4% to 2 880 koz from 3 000 koz in 2014 as weaker demand in China, the largest market, more than outweighed the combined gain in all the other regions. Platinum jewellery demand in China declined by 11% to 1 765 koz in 2015 from 1 975 koz in 2014, while demand in all other regions was up by 9% to 1 115 koz from 1 025 koz in 2014.

Jewellery sales were likely to have been negatively impacted by the slowdown in economic growth in China, which would have made consumers more cautious. The World Platinum Investment Council said retailers reported lower platinum jewellery sales during the year, with Hong Kong being more adversely affected than mainland China owing to a decline in tourists from the mainland. Retailers' store expansion on the mainland continued but have been focused on lower tier cities. Chinese jewellery buyers have traditionally bought platinum items because of investment growth. But in the last two years, platinum prices have been declining. This has had negative consequences for consumer perceptions of value.

In recent years, the Chinese jewellery industry has also been a significant source of recycled palladium, but returns of old jewellery have reduced, and recoveries of palladium from this sector contracted in 2015.

In China, the use of palladium in jewellery has collapsed to the extent that net demand is close to zero. The palladium jewellery market is now dominated by its traditional uses, in white gold alloys worldwide, in platinum jewellery alloys in Japan, and as a jewellery metal in its own right in a small number of western markets, including the US, the UK and Germany.

In India, however, platinum is finding a place alongside gold in the bridal jewellery market. Platinum jewellery demand increased by 26% year-on-year to 220 koz in 2015, making India the third largest global platinum jewellery market behind China and Japan. Gold jewellery has traditionally been associated with Indian weddings, but a new industry marketing campaign, named 'Evara', launched in

late 2014, promotes the concept of parents giving their blessings to newly married couples in the form of a platinum jewellery set. This promotion aims to create a new bridal segment, rather than positioning platinum as a direct competitor with gold in the traditional wedding jewellery market.

There has also been an increase in sales of men's jewellery, although this remains a small part of the overall platinum jewellery market.

### **Industrial demand**

Significant demand for PGMs also comes from a variety of industrial applications, including their use in the magnetic layers of hard-disk drives, in the manufacture of speciality glass such as flat screen televisions and in catalytic processes in the petroleum, agrochemical and chemical industries. Industrial demand for PGMs has been, and is likely to continue to be, reliant on macroeconomic conditions.

Platinum demand for industrial end-uses grew by 4% year-on-year to 1 610 koz in 2015, driven mainly by higher net requirements in the petroleum sector but also lifted by greater net usage in chemical processes, medical applications and other end-uses. However, lower demand for glass fabrication and electrical devices offset some of this growth during the year.

Regionally, Western Europe accounted for most of the growth last year, underpinned by the petroleum and chemical sectors, whilst demand also increased in China and Japan. In North America and the rest of the world, industrial usage of platinum declined in 2015, mainly owing to lower requirements in the petroleum, electrical and glass sectors in these regions.

Industrial demand for platinum is expected to remain firm in 2016 as the current cycle of investment in the chemicals sector continues. New demand will be supported by investment in both reforming capacity and lubricant base oil production. There are also good prospects for higher demand from the electrical industry, both in hard disks and in large stationary fuel cells. Over the long term, industrial demand is seen increasing in line with rising per capita wealth and urbanisation in emerging markets.

Below is the World Platinum Investment Council's summary of the 2015 industrial demand by sector.

- **Chemicals**

Platinum demand in chemical processes rose by 2% to 585 koz in 2015, supported by demand growth in North America, Western Europe and China.

North America's requirements were boosted by propane dehydrogenation capacity expansion and greater nitric acid production, with the fertiliser industry also lifting demand in Western Europe.

In China, lower platinum requirements for paraxylene production were outweighed by stronger demand for nitric acid and silicone production, as well as for the ongoing expansion of PDH and butane dehydrogenation capacity in the country.

Conversely, lower demand by paraxylene and nitric acid producers outweighed requirements for new propane dehydrogenation plants in the rest of the world, whilst demand also decreased marginally in Japan.

- **Petroleum**

Petroleum sector requirements increased by 95 koz year-on-year to 160 koz in 2015, with greater global demand for oil refining processes outweighing lower use by gas-to-liquids (GTL) plants in the rest of the world.

Western Europe accounted for the majority of refining demand growth, owing to reforming capacity expansions and fewer capacity reductions than previously envisaged.

Elsewhere, Japan's petroleum industry stabilised following substantial capacity cuts in 2014, whilst China's capacity growth accelerated, increasing new metal requirements. However, North America's demand declined, as some of the anticipated capacity growth in this region was delayed, and the rest of the world's usage also fell as a result of fewer GTL and refining capacity expansions this year, offsetting demand growth in Japan and China.

- Electrical

Platinum usage in electrical devices fell by 21% to 150 koz in 2015 as usage by hard disk drive (HDD) manufacturers decreased considerably owing to weaker demand for HDDs. Lower HDD demand also affected platinum requirements in the rest of the world, with China's usage remaining stable.

- Glass

Net platinum consumption by the glass industry decreased by 14% to 155 koz in 2015, mainly owing to a greater number of plant closures returning metal to the market, particularly in the US, Japan and Western Europe.

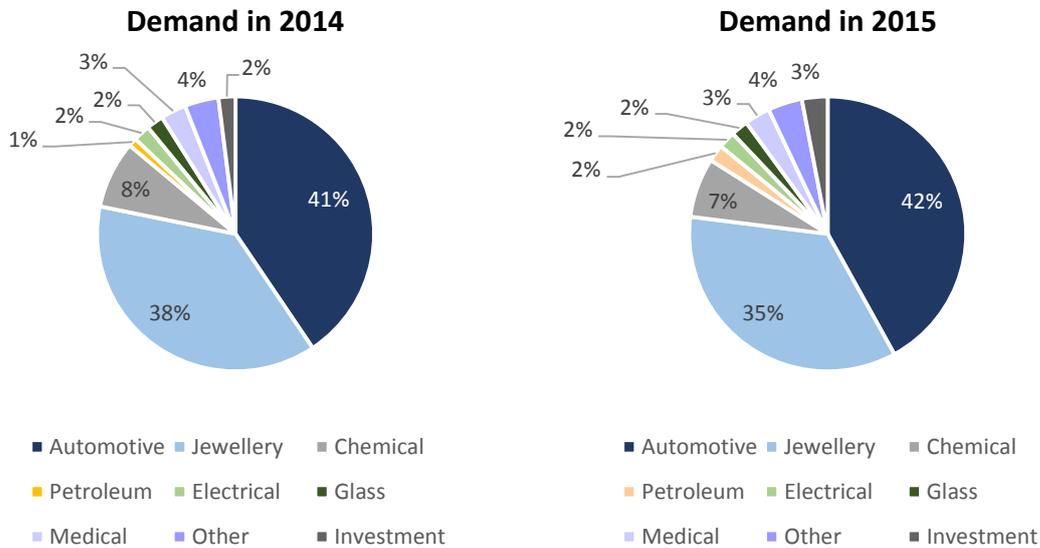
The number of new plants and expansions commissioned in China and the rest of the world was broadly similar to that in 2014, although plant closures in these regions rose marginally, whilst Japanese capacity continued to contract in 2015.

- Other

Demand for other industrial end-uses climbed by 5 koz year-on-year to 310 koz, with growth in Japan and China outweighing slight falls in North America and the rest of the world.

Japan's consumption was lifted by developing demand from the fuel cell industry, particularly for use in fuel cell vehicles, whilst China's demand growth was driven by greater usage in automotive sensors and spark plugs.

However, a reduction in turbine-powered plane shipments lowered North America's requirements and demand in the rest of the world decreased in various other end-uses, hindering overall demand growth last year. Platinum demand in Western Europe stayed flat from 2014.



Source: SFA (Oxford) Limited

**Investment in PGMs**

According to the World Platinum Investment Council, up to US\$10 billion in assets is invested in platinum globally.

Platinum investment products are available in markets around the world. Investors can buy securities, listed and tradeable on authorised stock exchanges around the world, which are backed by physical platinum and therefore offer direct exposure to platinum – most typically exchange traded funds (ETFs). They can alternatively purchase physical platinum as bars both directly and via platinum accounts or platinum certificates, or as coins.

Platinum is both an effective diversifier of risk alongside other investments and a long-term store of value. In 2015, global investment demand more than doubled to 260 koz. However, this overall growth in investor interest masked a reduction in ETF holdings as bar and coin investment increased. Globally, ETF investors reduced their holdings by 240 koz, while bar and coin demand surged to 480 koz, mostly owing to a jump in bar purchases by Japanese investors. Economic conditions and price movements are generally seen as unfavourable for platinum investment in the longer-established ETF markets in Europe and North America. The market is, however, different in Japan and in South Africa, where commodity price declines and exchange rate fluctuations tend to encourage investment.

In South Africa the depreciation of the ZAR against the US\$ partly offsets declines in the US\$ commodity price. This often slows, but does not reverse, declines in South African ETF holdings. In Japan investors take the view that the price decline makes platinum a more attractive investment. This often results in a steady increase in ETF holdings and bar purchases.

As proof, in 2015 bar and coin purchases increased to 480 koz, a dramatic rise when compared to the 50 koz that investors bought in 2014.

**Sources of PGM supply**

Currently, approximately 73% of global primary platinum supply comes from South Africa. Other key platinum mining regions include Zimbabwe’s Great Dyke, the Stillwater Complex in the United States

and the Sudbury Basin in Canada. Russian PGM supply, with the exception of PGMs produced in the Kondyor, Koryak and Urals regions, is mostly generated as a by-product of nickel mining (from Norilsk Nickel) and is the world's largest source of palladium. Russia is the world's second largest producer of PGMs, accounting for approximately 12% of the world's supply in total.

### ***Mine supply***

The mining and processing of PGMs makes up the primary source supply. Refined production is forecast to have been 24% higher year-on-year at 6 040 koz in 2015, as South African production increased by 1 275 koz year-on-year to 4 390 koz. The decline in production in 2014 was primarily due to a five-month long strike in the platinum industry that year. In 2015, the normalisation of production at strike-affected operations accounted for 91% of South African supply growth in 2015. In the rest of the world, production was flat in North America, but was lower in Russia, Columbia and Zimbabwe.

### ***South African supply***

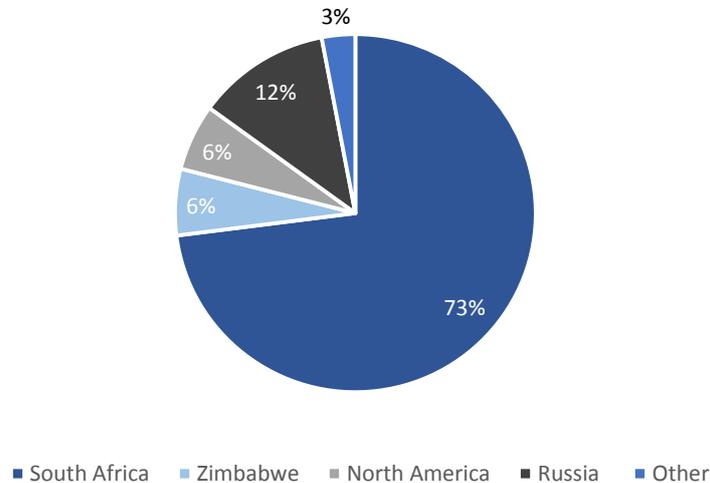
In South Africa, PGMs occur within a large layered igneous intrusion called the Bushveld Complex in which more than 73% of the world's known platinum resources exist. The Bushveld Complex is a basin-shaped intrusion with a width of 370 km but only its rim exposed. The intrusion contains numerous distinct layers, which contain economic concentrations of PGMs. The main PGM-bearing layers, often referred to as 'reefs', are called the Merensky Reef, the UG2 Reef, MG Chromitite Layers and the Platreef.

The UG2 Reef is observed on the western and eastern limbs of the Bushveld Complex and is presently the main target for exploitation, providing 46% of the world's primary platinum supply. The Merensky Reef is also observed on the western and eastern limbs and currently yields 20% of global platinum supply. The UG2 Reef also contains chromite, which is used to produce chrome concentrate as a by-product.

The third reef, known as the Platreef, is observed on the northern limb of the Bushveld Complex and accounts for approximately 5% of the world's platinum supply. This reef comprises a relatively high concentration of base metals (nickel and copper) but has a relatively balanced platinum to palladium ratio compared to the platinum-rich Merensky Reef.

In 2015, South African refined production was 4 390 koz with production from Western Limb operations estimated to have been lower due to mine closures, while Eastern and Northern Limb operations have lifted production.

### Global refined production in 2015



Source: SFA (Oxford) Limited

#### **Recycling**

The secondary production of PGMs includes the recycling of these metals from industrial applications and end-of-life products, as well as the recovery of metals from by-products and residues created in primary production. Secondary production plays an important role in lowering the environmental footprint of global PGM production and contributes a significant part of the PGM supply.

According to the International Platinum Group Metals Association, PGM materials that are collected at a very high rate or enter secondary production directly from industrial processes, such as industrial catalysts, are recycled at a rate near the 95% maximum potential.

In 2015, global supply from recycled platinum dropped 15% to 1 725 koz, with platinum recovered from autocatalysts 5% lower year-on-year at 1 190 koz. The decline in PGM prices reduced the flow of scrapped autocatalysts from collectors and the lower steel price also negatively affected auto scrappage rates.

Jewellery recycling was also negatively impacted by the declining platinum price in Japan, and in China by lower jewellery sales reducing jewellery recycling due to the use of older pieces to upgrade to larger newer ones. Overall global jewellery recycling fell by 32% to 530 koz compared to a 28% decline in the US dollar platinum price.

#### **PGM Pricing Trends**

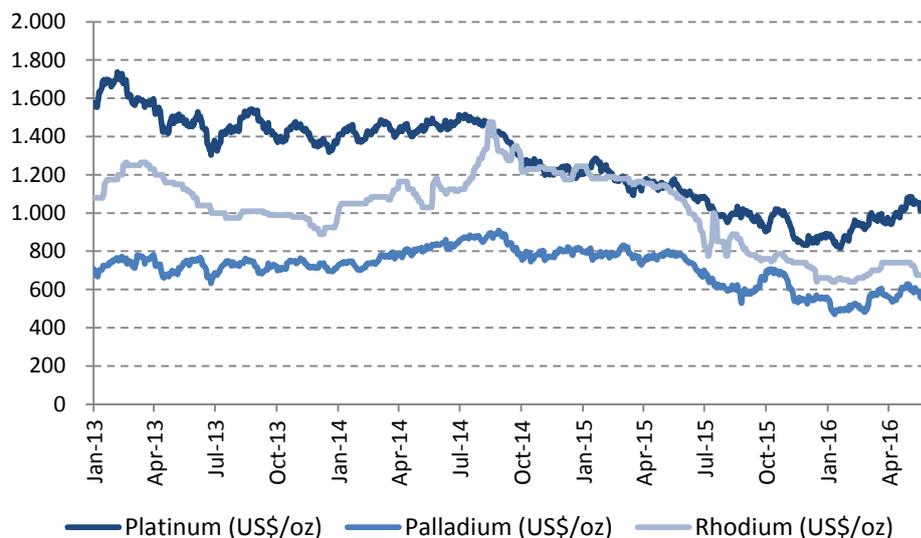
From 1 January 2016 until 31 May 2016, platinum, being the main gauge of the PGM basket price, has traded at an average of US\$958/oz, with a high and low at US\$1 085/oz and US\$818/oz respectively. Platinum prices averaged US\$1 487/oz in 2013, US\$1 386/oz in 2014 and US\$1 055/oz in 2015.

From 1 January 2016 until 31 May 2016, palladium prices averaged US\$547/oz, with a high and low at US\$628/oz and US\$470/oz respectively. Palladium prices averaged US\$726/oz in 2013, US\$804/oz in 2014 and US\$690/oz in 2015.

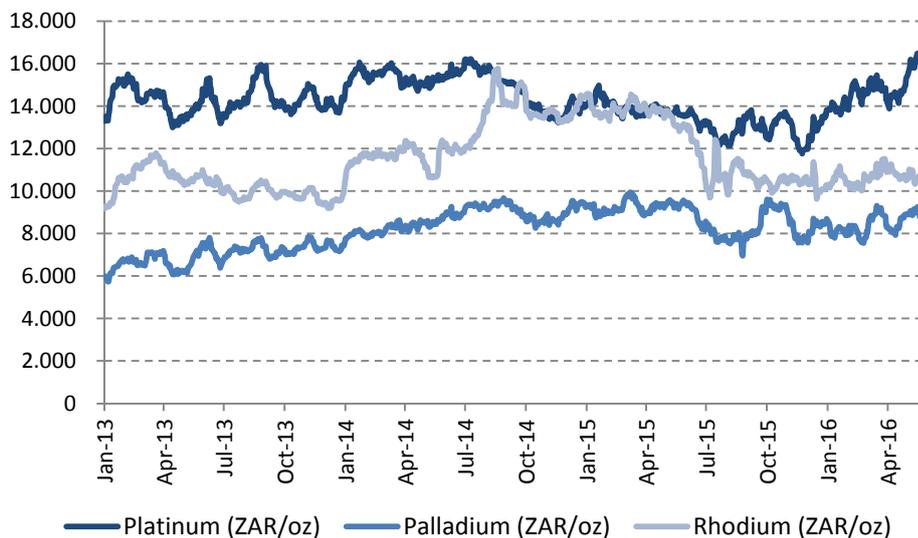
From 1 January 2016 until 31 May 2016 rhodium prices averaged US\$690/oz, with a high and low at US\$740/oz and US\$640/oz respectively. Prices averaged US\$1 066/oz in 2013, US\$1 172/oz in 2014 and US\$953/oz in 2015.

The following charts set out the price history of the major PGMs being platinum, palladium and rhodium since 1 January 2013 in both US\$ and ZAR terms.

**PGM Prices (US\$)**



**PGM Prices (ZAR)**



Source: Factset

The London Bullion Association (LBMA) 2016 Forecast Survey showed that analysts are predicting price increases across the board for precious metals. According to the survey, platinum prices are forecast to

increase by 5.4% in 2016 to an average price of US\$911, with the price trading in an average price band of US\$748 to US\$1 076.

Forecast contributors are most bullish about the prospects of palladium, and are predicting that the average prices will increase by 12.7% in 2016 to US\$568, with the price trading in range of US\$413 to \$674.

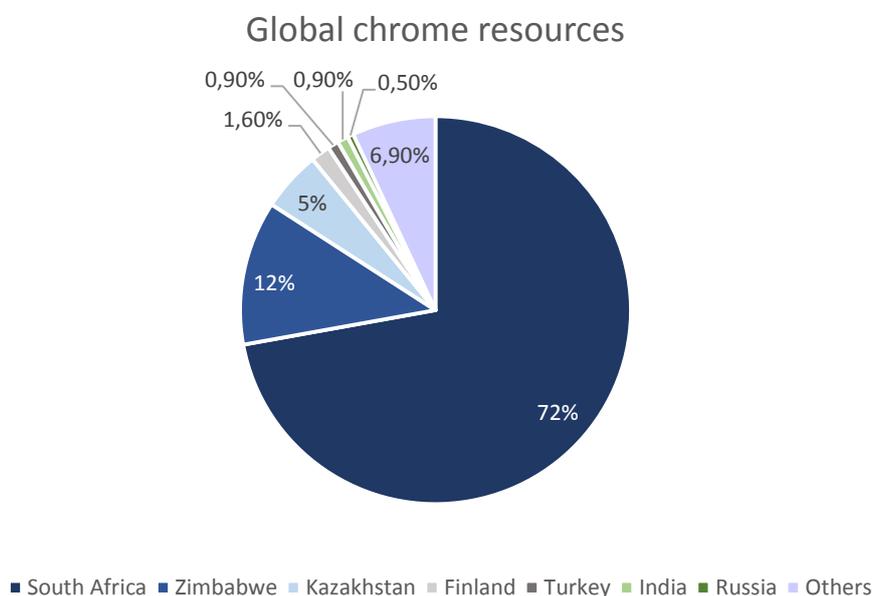
## The chrome Industry

### Introduction to chrome

Chromium is the 14th most abundant metal in the lithosphere (the earth’s crust and the uppermost mantle). Chromite or chrome ore is the commercial name for iron chromium oxide  $FeCr_2O_4$ , a mineral containing chromium. Iron chrome oxide contains around 68% of chromium and 32% of iron oxide (FeO).

Major deposits have been identified in many locations worldwide; however, the main deposits in terms of estimated volumes are located on the African continent, primarily between South Africa and Zimbabwe.

According to the International Chromium Development Association (ICDA), global chromite resources are estimated at over 12 000 Mt while chrome Mineral Reserves are estimated at around 470 Mt. Distribution of global chrome resources is shown in the chart below.



Source: ICDA

A range of chrome ore grades can occur in any deposit with each grade suitable for a specific application. Chrome ore and concentrates are classified in four main grades depending on  $Cr_2O_3$  content and application. Of these four grades, Tharisa produces metallurgical, chemical and foundry grade chrome concentrates.

**Metallurgical grade:** This grade of chrome ore is by far the largest segment in terms of volume, representing 95.7% of global chrome ore production. Characterised by a Cr<sub>2</sub>O<sub>3</sub> content of 42% to 46%, this type of chrome ore is used primarily in metallurgical applications and more specifically to create ferrochrome, which is in turn used to produce stainless steel and other specialty alloys. Stainless steel is the biggest underlying market for chrome ore. The typical metallurgical grade produced by Tharisa is 41.0% to 42.0% chrome (as Cr<sub>2</sub>O<sub>3</sub>) with the silica (SiO<sub>2</sub>) lower than 5.0%.

**Chemical grade:** Chemical grade chrome ore is defined by a Cr<sub>2</sub>O<sub>3</sub> content of between 40.0% and 46.5% and is used mainly to produce sodium dichromate which is used in various applications ranging from leather tanning, pigments and paints, plating, chrome metal or wood preservation. This grade accounts for approximately 2.5% of the global chrome ore output. The typical chemical grade produced by Tharisa is 44.0% to 46.0% Cr<sub>2</sub>O<sub>3</sub> with the SiO<sub>2</sub> lower than 1.0%. This is a higher value chromite product than the metallurgical grade chrome concentrate.

**Foundry grade:** Foundry grade chrome ore is used for foundry applications, primarily for nozzle sands, and for moulds and castings. The Cr<sub>2</sub>O<sub>3</sub> content of this grade is up to 46.0%. This grade represents approximately 1.5% of the global chrome ore output. The typical foundry grade produced by Tharisa is 44.0% to 46.0% Cr<sub>2</sub>O<sub>3</sub> with the SiO<sub>2</sub> lower than 1.0%. The American Foundryman Society Grain Fineness Number (AFS Number) is managed between 45.0 and 50.0. As with the chemical grade chromite, this is a higher value chrome concentrate than the metallurgical grade chrome concentrate.

**Refractory grade:** The smallest segment of the chrome ore market is refractory grade, used mainly to create refractory bricks, or other applications requiring a high refractoriness. This grade represents approximately 0.2% of the global chrome ore output.

### **Chrome demand**

Chrome ore demand is driven by ferrochrome demand as approximately 95% of the chrome ore is used for metallurgical purposes. Two percent of the demand comes from the chemical industry and the rest from refractory and foundry industries. Stainless steel is the largest consumer of ferrochrome and as such a change in the dynamics of the stainless steel industry impacts on the ferrochrome industry.

The stainless steel industry uses chromium for a myriad of functions. The fact that the metal does not rust and can easily be sterilized makes it an ideal substance for many items most people use in their daily lives. It can be found in appliances throughout the home, specifically kitchen sinks, food processing equipment and cutlery. It is also the metal of choice to manufacture medical and dental equipment.

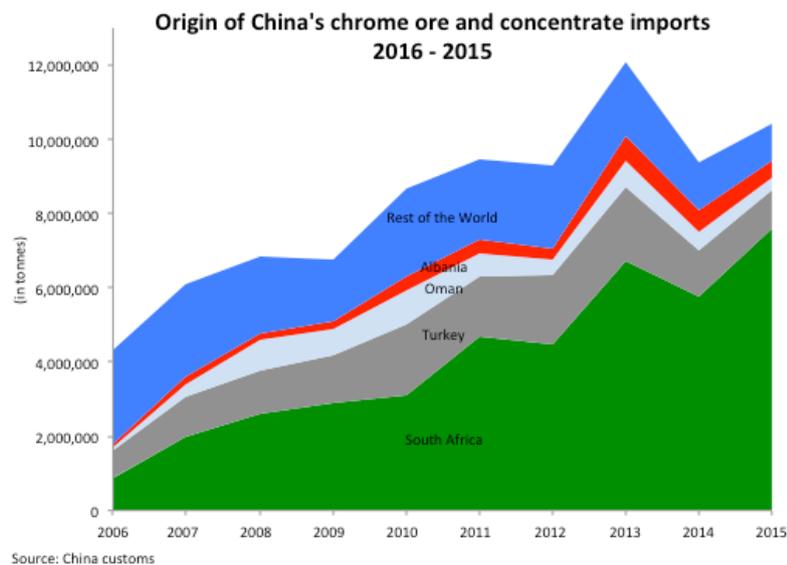
South Africa is the largest chrome ore producer globally, and its biggest export destination is China. China also imports chrome concentrate from Turkey and India but to a far lesser degree than the quantity it sources from South Africa.

China is the biggest chrome consumer in the world, with its imports accounting for over 90% of global imports and approximately one third of the global production. Chrome import volumes have been growing steadily and stood at over 10 Mt in 2015, the bulk of which was shipped from South Africa. These large volumes are used predominantly to feed China's local ferrochrome industry.

Russia is the second largest chrome concentrate importer, accounting for approximately 1 Mt in 2015, primarily imported from its neighbour Kazakhstan for use in ferrochrome plants. The European Union sources most of its material from South Africa and Turkey. European chrome concentrate demand is

predominantly for specialty applications such as chemical grade for chrome metal, which is used in downstream markets like the aerospace sector or for leather tanning.

India, while also a significant primary producer, imports approximately 215 kt per annum primarily from South Africa and Oman. The United States imports material mainly from South Africa to feed their local downstream markets with a strong focus on chemical grade for use in chrome metal and other speciality applications.



### Chrome supply

Global chrome ore and concentrates production in 2014 was 29.0 Mt following on from record high output of 30.3 Mt in 2013. Provisional data for 2015 suggests that global chrome ore output will contract marginally to approximately 28.0 Mt. The chart below depicts the global chrome ore and concentrate output per major producing country.

Global chrome ore production by country 2006 - 2015 Est.



Source: ICDA

As it possesses the largest resources and reserves of chrome ore, South Africa is also the largest producer globally. South Africa's chrome ore and concentrate production reached 15.9 Mt in 2014, including 12.9 Mt of conventional chrome ore, and around 3.0 Mt of UG2 chrome concentrate.

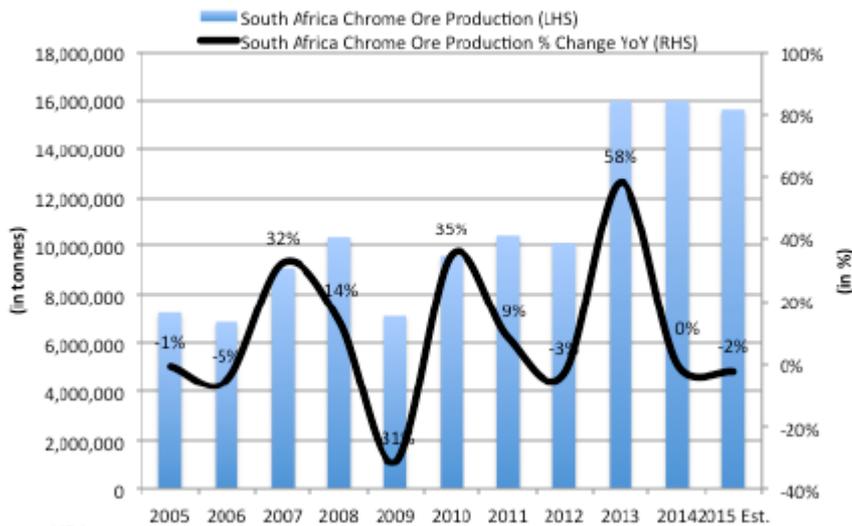
Conventional chrome ore is extracted from LG and MG Chromitite Layers while UG2 Chromitite Layers is a source of chromite and PGMs. The UG2 Chromitite Layers is mined by PGM producers to extract PGMs and the by-product of that extraction process is chrome ore concentrate. As a by-product and therefore accounted for at a lower cost, UG2 chrome concentrate is seen as a cost effective alternative to conventional chrome typically used by ferrochrome producers. UG2 is mainly exported to China where local ferrochrome producers use it in their furnaces as a blend to reduce raw materials costs.

Provisional data for 2015 suggests that South African chrome ore and concentrate output reached around 15.6 Mt, including 3.4 Mt of UG2 concentrate. The top chrome ore producers in South Africa are: Assmang Proprietary Limited, Glencore plc, Merafe Resources Limited, Samancor Chrome Limited and Tharisa.

South Africa exports approximately 90% of its production to China as chrome ore lump and concentrates. Chinese customs data does not distinguish conventional chrome ore from UG2 concentrate but market participants estimate that anywhere between 30% to 50% of South Africa's chrome exports are in the form of UG2 chrome concentrates. In 2014, South Africa exported over 6.5 Mt of chrome ore, while 2015 customs data shows that the country exported close to 8.3 Mt of material.

Kazakhstan, the next biggest producer globally, produced approximately 4.1 Mt in 2015. India and Turkey make up the majority of remaining global production.

## South Africa Chrome Ore Production 2005 - 2015



Source: ICDA

### Recent pricing trends

Chrome ore and concentrate prices were largely stable from 2013 until the end of 2014, thereafter some benchmark prices started to decline, particularly for Iranian and Turkish material. Omani and South African prices remained relatively stable for longer with the Omani price starting to weaken around mid-2015 while South African prices started to decline around September 2015.

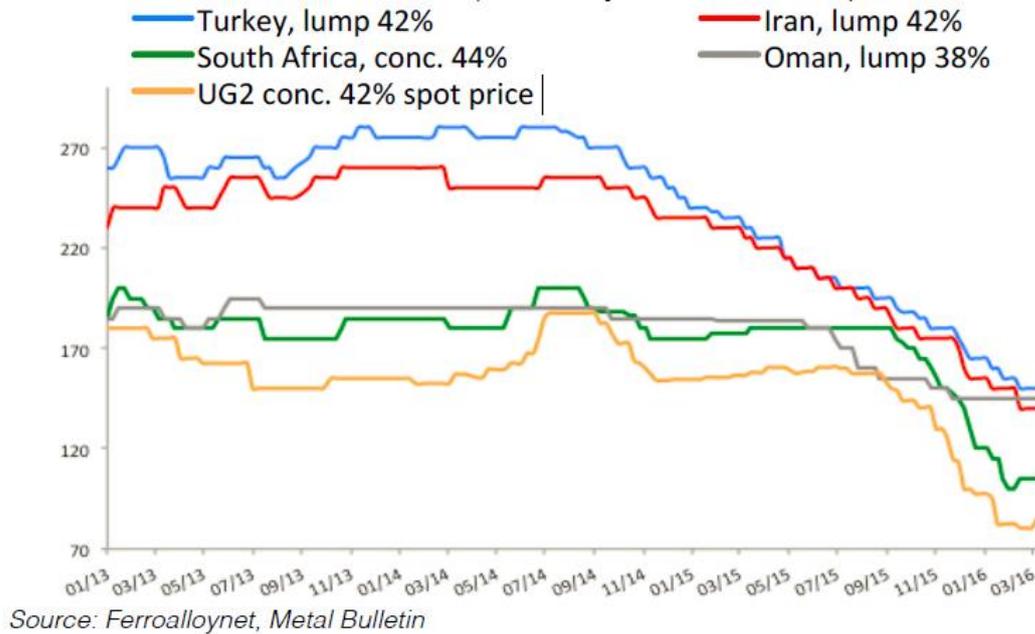
According to ICDA, there are several reasons for the fall in pricing, among them China's diversification of its chrome supply. This diversification in supply over the past several years is in line with producer's shift to producing ferrochrome with lower chrome contents. Chinese ferrochrome smelters no longer require chrome with rich  $Cr_2O_3$  content, hence the strong Chinese interest in UG2 chrome concentrates.

China imported more chrome ore in 2015 than in 2014 and while it is yet to replenish its stockpiles, the country has not increased ferrochrome output. A ferrochrome report prepared by Core Consultants suggests the ferrochrome market is nearing the bottom of the cycle. It says this is evidenced by the fact that the latest price contractions have resulted in closures across the supply chain. The firm estimates that ferrochrome capacity utilisation slowed to 54% in 2015, compared to 60% in 2014. Production has declined to 10.2 Mt compared to 10.8 Mt in 2014.

IDCA suggests that India's increasing chrome output in 2015 has also played a role in depressing prices. The return of South Africa's UG2 chrome production levels, following a five-month strike in the platinum industry in 2014, could also have contributed to an oversupply on the global market. This adds downward pressure on prices.

Given that China is the main chrome ore consumer worldwide, benchmark chrome ore prices are most commonly quoted CIF China.

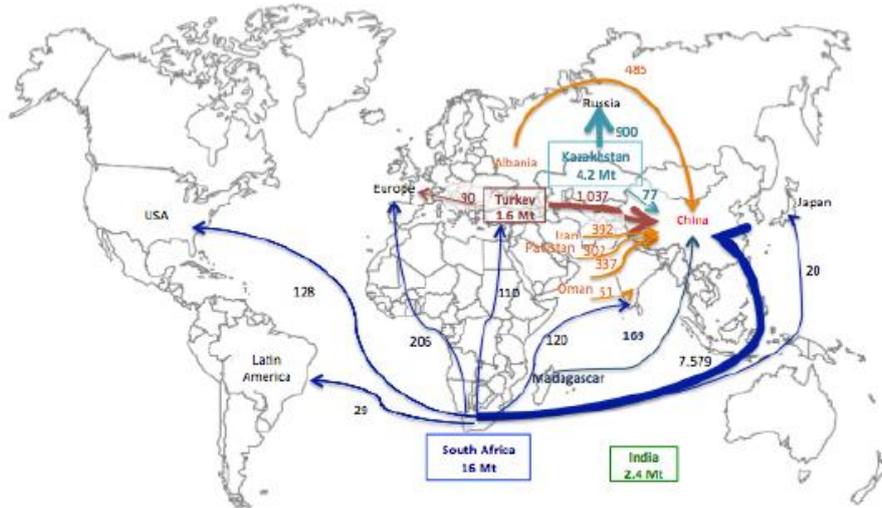
**International chrome ore and concentrate market prices 2013 - 2016 (China CIF basis, US\$/dry metric ton unit)**



From the graph above, the downward pricing pressure on chrome concentrate products post the Financial Year 2015 end can be seen. Metallurgical grade chrome concentrate prices followed the trend of South African 44% chrome concentrate and UG2 chrome concentrate prices. Metallurgical chrome concentrate prices declined to US\$80/t in January 2016 and since Chinese new year in February 2016 have shown a recovery. Prices for 42% metallurgical chrome concentrate improved with current transaction prices at approximately US\$145/t, as demand returned to previous levels. The price improvement is in line with the price movement of South African 44% chrome concentrate and UG2 chrome concentrate.

According to Ferroalloy.net, offering prices are much higher than buyers' target prices but most chrome ore suppliers are not willing to sell their product while prices are lower than US\$85/t on a CIF China basis. While the Chinese market demand supports the current offering prices, ferrochrome plants in China reportedly use South Africa chrome concentrate to control production cost. The usage of South Africa chrome ore concentrate is between 60% and 80%, states Ferroalloy.net.

## Global chrome ore trade flows in 2015 (in '000 tonnes)



Source: ICDA, Official Customs data

## GROUP STRUCTURE

### The Company

The Company was incorporated and registered in Cyprus on 20 February 2008, as a private company limited by shares under the Cyprus Companies Law, as amended, supplemented or otherwise modified from time to time with the name Jamphorina Investments Limited with registration number HE 223412. On 21 May 2008, the Company changed its name to Tharisa Limited and on 19 January 2012 the Company was converted to a public limited company with the name Tharisa plc.

The Issuer, is the parent company of the Group, of which the principal assets are direct or indirect interests in equity of the Issuer’s subsidiaries incorporated and operating in Cyprus, South Africa, and Guernsey. The Issuer does not carry out any business operations except for direct and indirect holding of interests in equity in the Group companies.

The Company is domiciled in Cyprus. Tharisa’s principal place of business and registered office is located at Office 108-110, S. Pittokopitis Business Centre, 17 Neophytou Nicolaidis and Kilkis Streets, 8011, Paphos, Cyprus. The Company’s contact information is as follows:

Telephone: +357 26 257 050

Facsimile: +357 26 913 377

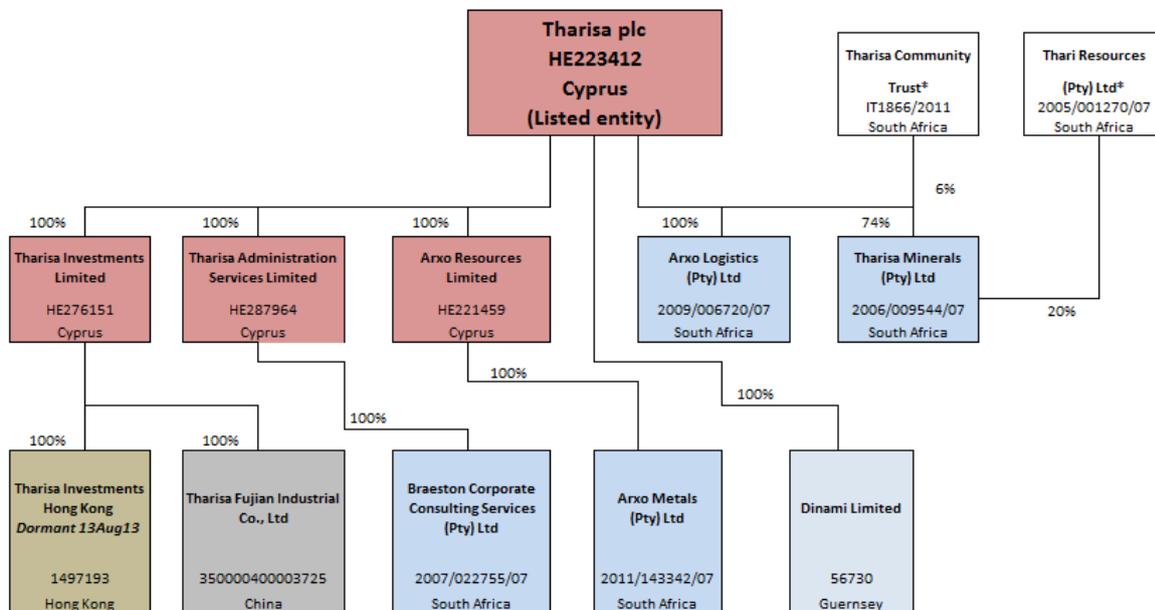
Website: [www.tharisa.com](http://www.tharisa.com)

Tharisa Mineral’s office is located at Eland House, The Braes, 3 Eaton Avenue, Bryanston, Johannesburg, 2191.

The Company’s UK correspondence office is located at 44 Southampton Buildings, London, WC2A 1AP.

### Group structure

The following diagram depicts the organisational structure of the Group.



\*External companies holding shares in Tharisa Minerals

The Company is the holding company of the Group. The only material operating subsidiaries are Tharisa Minerals, Arxo Metals, Arxo Logistics and Arxo Resources. All other companies shown in the diagram above, are either intermediate holding companies, administrative companies, dormant entities or have limited trading activity.

<b>Company name:</b>	<b>Tharisa Minerals Proprietary Limited</b>
<b>Registered office:</b>	Eland House, The Braes 3 Eaton Avenue, Bryanston Johannesburg 2191, South Africa
<b>Date of registration:</b>	29 March 2006
<b>Place of incorporation, registration number</b>	South Africa, 2006/009544/07
<b>Principal activity:</b>	Exploration, exploitation of metals and dimension stones; mining of chrome concentrate and platinum group metals.
<b>Status:</b>	Trading
<b>Members of the board of directors:</b>	Phoevos Pouroulis, Michael Gifford Jones, Michelle Louise Taylor, Hans Jurie Van Wyk, Thabang Gabriel Maluke, John David Salter, Moira June Jaquet Briner, Sizakele Renee Ngwenya, Alternate: Gugu Yvonne Yolandi Ditodi as alternate director for Moira June Jaquet Briner
<b>Authorised share capital:</b>	1 000 ordinary shares of ZAR1.00 each 5 000 Redeemable cumulative preference shares of ZAR0.01 each
<b>Issued share capital</b>	500 Ordinary shares of ZAR1.00 each 2 632 Redeemable cumulative preference shares of ZAR0.01 each
<b>Shareholders:</b>	Tharisa plc: 370 ordinary shares of ZAR1.00 each (74%) Thari Resources: 100 ordinary shares of ZAR1.00 each (20%) Community Trust: 30 ordinary shares of ZAR1.00 each (6%)
<b>Company name:</b>	<b>Arxo Resources Limited</b>
<b>Registered office:</b>	Office 108-110 S.Pittokopitis Business Centre 17 Neophytou Nicolaides & Kilkis Street 8011 Paphos, Cyprus
<b>Date of registration:</b>	1 February 2008

**Place of incorporation, registration number** Cyprus, HE221459

**Principal activity:** Marketing and sales Sales and distribution

**Status:** Trading

**Members of the board of directors:** Phoevos Pouroulis, Michael Gifford Jones, Marios Tavros

**Authorised share capital:** 1 000 ordinary shares of Euro 1.00 each

**Issued share capital:** 1 ordinary share of Euro 1.00 each

**Shareholders:** Tharisa plc: 1 ordinary share of Euro 1.00 each (100%)

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**Company name:** **Arxo Metals Proprietary Limited**

**Registered office:** Eland House, The Braes  
3 Eaton Avenue, Bryanston  
Johannesburg 2191, South Africa

**Date of registration:** 7 December 2011

**Place of incorporation, registration number** South Africa, 2011/143342/07

**Principal activity:** Processing and beneficiation of minerals

**Status:** Trading

**Members of the board of directors:** Phoevos Pouroulis, Michael Gifford Jones

**Authorised share capital:** 1 000 Ordinary shares of no par value

**Issued share capital:** 120 Ordinary shares of no par value

**Shareholders:** Arxo Resources (100% subsidiary of the Company): 120 ordinary shares of no par value (100%)

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**Company name:** **Arxo Logistics Proprietary Limited**

**Registered office:** Eland House, The Braes  
3 Eaton Avenue, Bryanston  
Johannesburg 2191, South Africa

**Date of registration:** 2 April 2009

**Place of incorporation, registration number** South Africa, 2009/006720/07

**Principal activity:** Logistics

**Status:** Trading

**Members of the board of directors:** Phoevos Pouroulis, Michael Gifford Jones, Elizabeth Catharina Groesbeek

<b>Authorised share capital:</b>	1 000 Ordinary shares of ZAR1.00 each
<b>Issued share capital:</b>	170 Ordinary shares of ZAR1.00 each
<b>Shareholders:</b>	Tharisa plc: 170 ordinary shares of ZAR1.00 each (100%)

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**Intermediate holding companies, administrative companies and companies conducting limited/non-material trading activities:**

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<b>Company name:</b>	<b>Tharisa Administration Services Limited</b>
<b>Registered office:</b>	Office 108-110 S.Pittokopitis Business Centre 17 Neophytou Nicolaides & Kilkis Street 8011 Paphos, Cyprus
<b>Date of registration:</b>	31 May 2011
<b>Place of incorporation, registration number</b>	Cyprus, HE287964
<b>Principal activity:</b>	Provision of management and administrative services to the Group
<b>Status:</b>	Trading
<b>Members of the board of directors:</b>	Phoevos Pouroulis, Michael Gifford Jones, Marios Tavros
<b>Authorised share capital:</b>	3 000 ordinary shares of US\$1.00 each
<b>Issued share capital</b>	1 100 Ordinary shares of US\$1.00 each
<b>Shareholders:</b>	Tharisa plc: 1 100 ordinary shares of US\$1.00 each (100%)

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<b>Company name:</b>	<b>Tharisa Investments Limited</b>
<b>Registered office:</b>	Office 108-110 S.Pittokopitis Business Centre 17 Neophytou Nicolaides & Kilkis Street 8011 Paphos, Cyprus
<b>Date of registration:</b>	2 November 2010
<b>Place of incorporation, registration number</b>	Cyprus, HE276151
<b>Principal activity:</b>	Investment holding company
<b>Status:</b>	Active
<b>Members of the board of directors:</b>	Phoevos Pouroulis, Michael Gifford Jones, Michelle Louise Taylor, Marios Tavros
<b>Authorised Share capital:</b>	1 500 000 Class A shares of US\$0.01 each
<b>Issued share capital:</b>	15 025 Class A shares of US\$0.01 each

<b>Shareholders:</b>	Tharisa plc: 15 025 class A ordinary shares of US\$0.01 each (100%)
<hr/>	
<b>Company name:</b>	<b>Dinami Limited</b>
<b>Registered office:</b>	Trafalgar Court, 2nd floor, East Wing, Admiral Park, St Peter Port, Guernsey, GY1 3EL
<b>Date of registration:</b>	30 May 2013
<b>Place of incorporation, registration number</b>	Guernsey, 56730
<b>Principal activity:</b>	Provision of trading services
<b>Status:</b>	Trading
<b>Members of the board of directors:</b>	Artemis Corporate Services Limited
<b>Authorised share capital:</b>	1 000 Ordinary shares of STG1.00 each
<b>Issued share capital:</b>	1 000 Ordinary shares of STG1.00 each
<b>Shareholders:</b>	Tharisa plc: 1 000 ordinary shares of STG1.00 each (100%)
<hr/>	
<b>Company name:</b>	<b>Braeston Corporate Consulting Services Proprietary Limited</b>
<b>Registered office:</b>	Eland House, The Braes 3 Eaton Avenue, Bryanston Johannesburg 2191, South Africa
<b>Date of registration:</b>	15 August 2007
<b>Place of incorporation, registration number</b>	South Africa, 2007/022755/07
<b>Principal activity:</b>	Provision of management and consulting services
<b>Status:</b>	Trading
<b>Members of the board of directors:</b>	Phoevos Pouroulis, Michael Gifford Jones
<b>Authorised share capital:</b>	1 000 Ordinary shares of ZAR1.00 each
<b>Issued share capital:</b>	100 Ordinary shares of ZAR1.00 each
<b>Shareholders:</b>	Tharisa Administration Services Limited: 100 ordinary shares of ZAR1.00 each (100% subsidiary of the Company)
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## THE BUSINESS

### Business Overview

*This summary contains the salient features of the Group and should be read as part of the Prospectus in its entirety for a complete understanding thereof.*

### Mission statement

To maximise Shareholder returns through innovative exploitation of Mineral Resources in a responsible manner.

### Introduction to the Group

The Company is domiciled, incorporated and registered in Cyprus as a public company limited by shares. The Group is an integrated resources group incorporating mining, processing, beneficiation, marketing, sales and logistics of PGMs and chrome concentrates through its 74% interest in Tharisa Minerals and its wholly owned subsidiaries including Arxo Metals, Arxo Logistics and Arxo Resources (see section “Group Structure” for detailed information).

Tharisa’s objective is to become a leading natural resources group focused on originating, developing and operating mines in the PGM, chrome and steel raw material sectors to service growing global demand through integrated mining, processing, marketing, sales and logistics operations. The Company’s strategy is to focus on growth through value accretive acquisitions, development and operation of large-scale and low cost projects that are in or close to production.

The Group is led by a strong management team with significant sector expertise and a track record in the successful origination, development and operation of mining projects.

### Key highlights

The Company provides direct access to a PGM and chrome concentrate co-producer with an integrated marketing, sales and logistics platform:

- shallow and large (828 Mt resource) mechanised open pit operation with approximately 20 years’ life of open pit and approximately 40 year life underground extension;
- located in the lowest cost quartile of the PGM and chrome concentrate cost curves;
- operationally de-risked:
  - Tharisa Mine was cash generative in the FY 2015;
  - capital investment programme substantially completed (mine and infrastructure development for the Tharisa Mine and processing plants);
  - mining, environmental and water use permits and licenses have been granted and are valid;
  - processing, marketing, sales and logistics platform is fully operational;
  - processing flexibility provided through the Voyager and Genesis standalone concentrator plants which are independently operated by Tharisa Minerals;
  - concentrate off-take agreement with Impala Platinum for the sale of PGM concentrate; and
  - 50 ktpm chrome concentrate marketing agreement with Noble;
- global marketing and sales of chrome concentrate to an established customer base;

- established marketing and sales platform with direct access to market and price discovery which provides a channel for future growth;
- in-house, cost effective mine to customer logistics solution;
- stable labour and community relations; and
- comparatively small and skilled contractor labour force.

The Group is well positioned to benefit from projected growth in demand for both PGMs and chrome concentrates. Rising income per capita in emerging markets will drive commodity demand as consumers purchase more. As income per capita increases, the structure of the economy moves away from agriculture towards industry, which increases commodity demand. Supply is likely to be constrained due to rising costs and capacity reductions at underground mines in South Africa.

### ***Competitive strengths***

The Group is uniquely positioned through:

- commitment to health, safety and environmental management;
- stable labour and community relations;
- shallow and large scale PGM and chrome resource, one of the world's single largest chrome resources, enabling Tharisa Minerals to be a large scale supplier of consistent products over several decades;
- mining of 5 MG Chromitite Layers which allows for the co-production of PGM and chrome concentrates;
- located in the lowest cost quartile of the PGM and chrome concentrate cost curves underpinned by low risk mining and beneficiation processes;
- mechanised and skilled labour force;
- independent processing plants providing operational flexibility;
- capacity to produce metallurgical, chemical and foundry grade concentrates for different markets;
- direct relationships with its South African and international customers;
- integrated marketing, sales and logistics platform;
- extensive industry and management experience with a successful track record of identifying, developing and operating open pit and underground mining operations; and
- pioneering, innovative and unique approach to viable mineral extraction and beneficiation.

### ***Strategy***

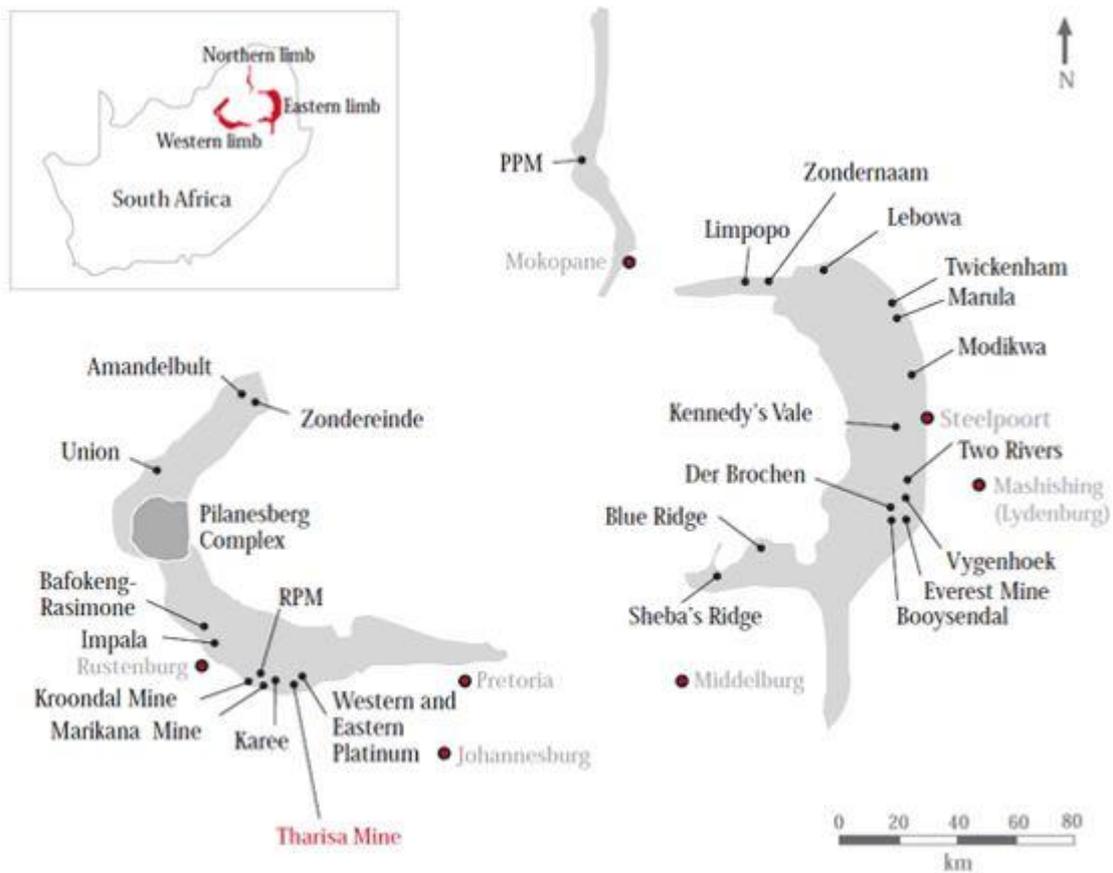
The Group's strategy for future growth through:

- focus on originating, developing and operating mines in the PGM, chrome and steel raw material sectors to service growing global demand through integrated mining, processing, marketing, sales and logistics operation, through value accretive acquisitions, development and operation of large-scale and low cost projects that are in or close to production;
- innovative research and development projects;

- implementation of the optimisation initiatives to maximise value extraction; and
- leveraging off the established marketing, sales and logistics platform for expansion into multi-commodities with geographic diversity.

### Tharisa Minerals

Tharisa Minerals, a 74% subsidiary of the Company, owns and operates the Tharisa Mine, located 95 km north west of Johannesburg in the south western region of the Bushveld Complex, the world’s leading source of platinum and chrome, and within close proximity to the town of Rustenburg, South Africa:



Source: Tharisa

Tharisa Minerals holds the Mining Right granted on 19 September 2008 for a period of 30 years over various portions of the farm 342 JQ and over the whole of the farm Rooikoppies 297 JQ in respect of PGMs, gold, nickel, copper, silver and chrome contained within the MG Chromitite Layers and the UG1 Chromitite Layer.

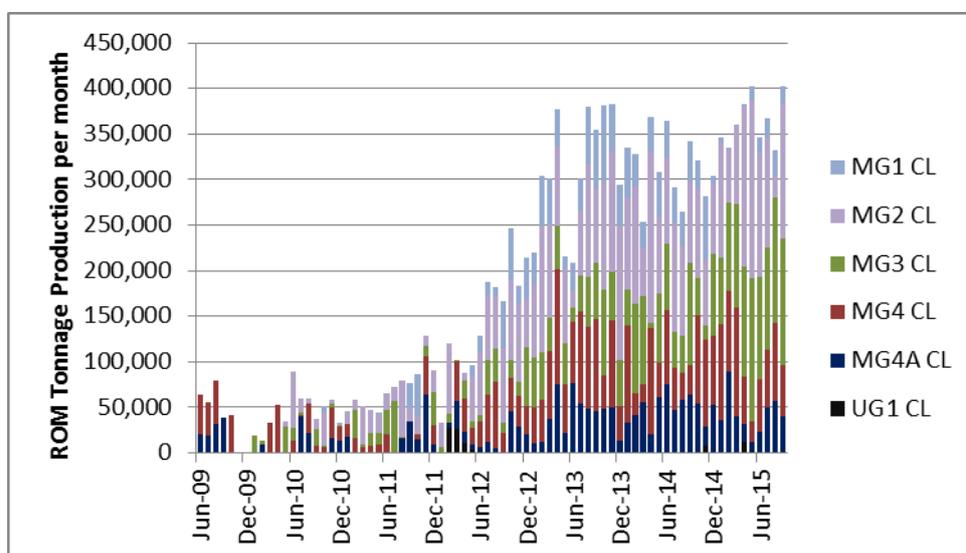
The Mining Right in respect of the Tharisa Mine covers an area of approximately 5 475 hectares and the MG Chromitite Layers outcrop on the property over a strike length of approximately 5 km (see section “Additional Information”, “Material Contracts”, “Mining Right” for further information).

## Mining

The mining operation is divided into the east pit and west pit, located on either side of the Sterkstroom River that runs north-south through the Tharisa Mine property. The east pit extends to the eastern boundary of the Mining Right while the west pit extends to where the Mineral Resource is defined on the far western portion of the mine.

The Tharisa Mine produces largely fresh material from 5 groups of the MG Chromitite Layers, namely, MG4A, MG4, MG3, MG2 and MG1. Some mining occurred on the UG1 Chromitite Layer in the past. The shallow MG1 Chromitite Layer was mined underground, by the previous mining right holder, to a limited extent on the eastern boundary of the property. Currently, no mining is conducted on the MGO reef horizon.

These layers vary in thickness, competence, chromite, and PGM grades.



*Historical mining production from the UG1 and MG Chromitite Layers (CL)*

MCC, provides services to the Tharisa Mine covering open pit mining requirements, including drilling, blasting, loading, hauling and rehabilitation. MCC has one of the largest fleets of mining equipment in Southern Africa and provides contract mining services at a number of coal, nickel and PGM mines in South Africa.

Tharisa Minerals has had a business relationship with MCC since 2008. MCC was appointed as an independent contractor for the open pit mining operations at the Tharisa Mine for an initial period of six years with effect from 21 May 2011. The contract with MCC has since been renegotiated and will continue until 6 October 2020. MCC is required to provide all necessary plant, materials, temporary works, labour and transport that is required for the mining operations and is paid on a monthly basis by reference to the volume of material mined.

Tharisa Minerals determines the mining programme, which outlines MCC's responsibilities, as described in the paragraph above, in consultation with MCC. Tharisa Minerals manages the mining programme.

The mining schedule is co-ordinated to match the capacity of the processing facility. At steady state Tharisa will mine and process 5.0 Mtpa of ROM ore.

The open pit operations maintain planned production levels until 2030, then transitions to underground bord and pillar mining. The last open pit tonnage is scheduled to be mined in 2036. The open pit design and schedule including the mine design and scheduling of the future underground operation, was undertaken by Ukwazi.

### *Processing*

The processing facilities at the Tharisa Mine are designed to treat the MG Chromitite Layers. Tharisa Minerals is currently processing the ROM ore and thereby confirmed the economic viability of mining and processing these ores for the recovery of both the PGM and chrome concentrates.

The Tharisa Mine processing facilities have been developed in a phased manner as described below:

- The first phase of the processing development involved the production of chrome concentrate only from a pilot plant. Trial production commenced in March 2009. This pilot plant was later adapted to provide early revenue and from November 2009 the plant treated ROM ore at a throughput rate of 38 ktpm.
- The second phase of the processing development involved the expansion of the mining operation and first phase processing facility to mine and treat 100 ktpm of ROM ore. In addition, the processing facility was expanded to incorporate both a PGM recovery circuit and a secondary chrome recovery section. This combined complex is currently known as the Genesis Plant. Commissioning of the Genesis Plant was completed in February 2012.
- The third phase of processing development increased the mining and processing rate by a further 300 ktpm. This was achieved through the construction of a new standalone concentrator which operates in parallel to the Genesis Plant. The newer 300 ktpm concentrator, known as the Voyager Plant, recovers a primary chrome concentrate, a PGM concentrate from the primary chrome tailings and a secondary chrome concentrate from the PGM tailings. Commissioning of the Voyager Plant was completed in December 2012.

The combined Genesis and Voyager Plants have been operated as production units since December 2012. The ore that has been processed to date is from near surface and can be described as mixed rather than fresh ore. This means that the ore is partially oxidised which has a negative impact on the flotation recovery of the PGMs. As the mine pit deepens, the ROM ore will increasingly become “fresh” (non-oxidised) with a resultant improvement in PGM recovery.

The chemical and foundry grade chrome recovery circuits owned and operated by Arxo Metals and integrated into the feed circuit of the Genesis Plant, known as the Challenger Plant, was commissioned in July 2013 and production of these higher grade concentrates has continued since.

The actual production data for the Financial Years 2013 to 2015, together with the planned metallurgical performance, is presented in the table below:

<b>Description</b>		<b>2013*</b>	<b>2014*</b>	<b>2015*</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Tonnes milled	kt	3 866	3 913	4 400	4 659	5 086	5 035
ROM chromite grade	%Cr <sub>2</sub> O <sub>3</sub>	20.7	19.4	18.3	19.5	19.6	19.3
<b>Foundry grade chrome concentrate</b>							
Concentrate tonnes	kt	4.0	13.4	5.0	16.6	24.3	23.4

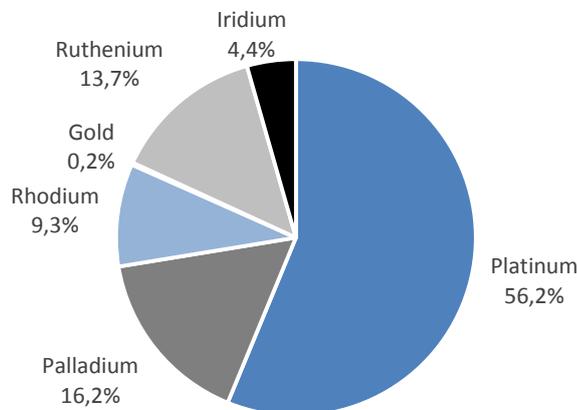
Chemical grade chrome concentrate							
Concentrate tonnes	kt	58.4	134.9	107.8	263.1	315.9	312.2
Metallurgical grade chrome concentrate							
Concentrate tonnes	kt	1 130	937	1 009	1 061	1 099	1 079
Total chrome concentrate							
Concentrate tonnes	kt	1 193	1 085	1 122	1 341	1 439	1 415
Chromite yield	%	30.9	27.7	25.5	28.8	28.6	28.1
Chromite recovery	%	59.3	59.4	58.0	62.7	62.1	62.1
PGM concentrator section							
PGM concentrator feed	kt	2 894	3 060	3 446	3 454	3 626	3 624
PGM feed grade	g/t	1.41	1.63	1.62	1.68	1.75	1.76
PGMs in concentrate	koz	57.4	78.2	118.0	123.1	151.0	149.1
PGM recovery	%	43.7	48.8	65.8	65.9	73.9	72.7
*Actual production							

Source: Competent Persons Report and Tharisa and excludes optimisation

The Tharisa Mine operation produces the following products:

**PGM concentrate:** PGM concentrate is produced from both processing facilities. The concentrate produced from the Voyager Plant is a higher grade than the concentrate from the Genesis Plant due to the different chromitite reefs treated by the respective plants. The concentrate grade of the Genesis Plant varies from 40 g/t 6E PGMs to 100 g/t 6E PGMs with the average product grade increasing from 56 g/t 6E in 2014 to 78 g/t 6E in 2015. The concentrate grade of the Voyager Plant varies from 104 g/t 6E PGMs to 167 g/t 6E PGMs with the average product grade increasing from 129 g/t 6E in 2014 to 139 g/t 6E in 2015. The major component of the PGMs is platinum, followed by palladium and ruthenium. The concentrates are blended if required to ensure a consistent final concentrate product leaving the Tharisa Mine.

Prill split by mass for the Financial Year ended 30 September 2015:



The following chrome products are produced at the Tharisa Mine:

**Metallurgical grade chrome concentrate:** The typical metallurgical grade produced by Tharisa is 41.0% to 42.0% chrome (as  $\text{Cr}_2\text{O}_3$ ) with the silica ( $\text{SiO}_2$ ) lower than 5.0%.

**Chemical grade chrome concentrate:** The typical chemical grade produced by Tharisa is 44.0% to 46.0%  $\text{Cr}_2\text{O}_3$  with the  $\text{SiO}_2$  lower than 1.0%. This is a higher value chromite product than the metallurgical grade chrome concentrate.

**Foundry grade chrome concentrate:** The typical foundry grade produced by Tharisa is 44.0% to 46.0%  $\text{Cr}_2\text{O}_3$  with the  $\text{SiO}_2$  lower than 1.0%. The American Foundryman Society Grain Fineness Number (AFS Number) is managed between 45.0 and 50.0. As with the chemical grade chromite, this is a higher value chrome concentrate than the metallurgical grade chrome concentrate.

*Resources and Reserves*

**Mineral Resource Statement for the Tharisa Mine (31 December 2015)**

**MG4A CHROMITITE LAYER**

	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Au	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	6.234	1.43	3.69	24.82	0.40	0.15	0.12	0.003	0.26	0.04	0.05	0.67	59:22:18:0	1.02	39:15:12:0:25:4:5	1.12	204	760
<b>Indicated</b>	15.885	1.59	3.70	24.29	0.40	0.15	0.13	0.003	0.25	0.04	0.05	0.68	59:23:18:1	1.03	39:15:12:0:25:4:5	1.10	525	762
<b>Inferred</b>	68.476	1.43	3.70	25.18	0.39	0.14	0.13	0.004	0.26	0.05	0.05	0.67	59:21:19:1	1.03	38:14:12:0:26:4:5	1.11	2 263	763

**MG4 and MG4(0) CHROMITITE LAYER Package**

	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Au	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	17.920	4.09	3.74	26.39	0.69	0.19	0.17	0.003	0.32	0.06	0.08	1.06	66:18:16:0	1.51	46:13:11:0:21:4:5	1.17	872	781
<b>Indicated</b>	29.790	2.99	3.65	24.75	1.08	0.22	0.21	0.003	0.36	0.08	0.11	1.51	71:15:14:0	2.06	52:11:10:0:18:4:6	1.20	1 972	730
<b>Inferred</b>	170.678	3.70	3.62	22.60	0.99	0.19	0.19	0.003	0.34	0.07	0.10	1.36	72:14:14:0	1.88	53:10:10:0:18:4:6	1.15	10 313	697

**MG3 CHROMITITE LAYER**

	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Au	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	10.417	3.73	3.26	13.22	0.60	0.35	0.15	0.005	0.22	0.04	0.06	1.11	54:32:14:0	1.43	42:25:11:0:15:3:4	0.99	479	482
<b>Indicated</b>	23.412	4.28	3.22	17.99	0.75	0.44	0.19	0.005	0.27	0.05	0.08	1.39	54:32:14:0	1.79	42:25:11:0:15:3:4	1.08	1 347	603
<b>Inferred</b>	67.415	3.21	3.20	25.65	1.01	0.58	0.26	0.005	0.38	0.08	0.10	1.86	54:31:14:0	2.42	42:24:11:0:16:3:4	1.13	5 245	785

**MG2 CHROMITITE LAYER**

	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Au	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	13.092	3.96	3.62	19.33	1.07	0.28	0.15	0.004	0.26	0.05	0.08	1.50	71:18:10:0	1.89	56:15:8:0:14:3:4	0.97	796	730
<b>Indicated</b>	42.716	4.37	3.67	17.80	0.98	0.28	0.15	0.004	0.24	0.05	0.07	1.42	69:20:10:0	1.78	55:16:8:0:14:3:4	0.92	2 388	733
<b>Inferred</b>	286.164	6.68	3.62	13.26	0.70	0.21	0.11	0.004	0.19	0.04	0.05	1.02	69:20:11:0	1.30	54:16:8:0:15:3:4	0.75	11 975	674

**MG1 CHROMITITE LAYER**

	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru	6PGE+Au (g/t)	Pt :Pd :Rh :Au :Ru :Os :Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>																	-	
<b>Indicated</b>	14.041	1.24	3.91	33.44	0.34	0.22	0.11	0.004	0.48	0.08	0.08	0.67	50:32:17:1	1.30	26:17:9:0:37:6:6	1.34	589	811
<b>Inferred</b>	57.245	1.23	3.89	32.26	0.33	0.20	0.11	0.003	0.45	0.08	0.07	0.64	51:31:17:1	1.24	26:16:9:0:36:6:6	1.29	2 276	803

**MG0 CHROMITITE LAYER**

	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru	6PGE+Au (g/t)	Pt :Pd :Rh :Au :Ru :Os :Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	1.801	0.50	3.74	26.07	0.57	0.18	0.16	0.004	0.30	0.05	0.07	0.92	62:19:18:0	1.33	43:13:12:0:22:4:5	1.19	77	747
<b>Indicated</b>	3.188	0.71	3.75	27.08	0.61	0.19	0.17	0.004	0.32	0.06	0.07	0.98	62:20:17:0	1.44	43:14:12:0:22:4:5	1.22	147	752
<b>Inferred</b>	0.011	0.17	3.73	23.76	0.45	0.17	0.15	0.006	0.24	0.04	0.05	0.77	58:22:19:1	1.11	41:15:13:1:22:4:5	1.11	0.40	711

**UG1 CHROMITITE LAYER**

	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru	6PGE+Au (g/t)	Pt :Pd :Rh :Au :Ru :Os :Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>																		
<b>Indicated</b>	1.500	2.17	3.75	23.68	0.36	0.28	0.14	0.030	0.21			0.82	44:35:17:4			1.12	39	
<b>Inferred</b>																		

**TOTAL MINERAL RESOURCE**

	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru	6PGE+Au (g/t)	Pt :Pd :Rh :Au :Ru :Os :Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	49.464	2.68	3.73	21.51	0.73	0.24	0.16	0.004	0.28	0.05	0.07	1.13	64:21:14:0	1.53	48:16:10:0:18:3:5	1.09	2 428	699
<b>Indicated</b>	128.033	2.45	3.67	22.22	0.80	0.27	0.16	0.004	0.31	0.06	0.08	1.24	65:22:13:0	1.69	48:16:10:0:18:3:5	1.10	7 007	713
<b>Inferred</b>	651.488	3.11	3.74	19.88	0.74	0.23	0.15	0.004	0.28	0.05	0.07	1.13	66:21:13:0	1.53	49:15:10:0:18:4:5	1.00	32 072	712

<b>Total</b>	<b>828.984</b>	<b>2.95</b>	<b>3.73</b>	<b>20.38</b>	<b>0.75</b>	<b>0.24</b>	<b>0.15</b>	<b>0.004</b>	<b>0.28</b>	<b>0.05</b>	<b>0.07</b>	<b>1.15</b>	<b>66:21:13:0</b>	<b>1.56</b>	<b>48:15:10:0:18:4:5</b>	<b>1.02</b>	<b>41 507</b>	<b>712</b>
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Note: The Mineral Resource is declared to a depth of 750m below surface.

The consideration of realistic eventual extraction necessitates that the Mineral Resource considers the MG Chromitite Layer to be a geological unit and that all platinumiferous and chromiumiferous horizons will be mined and all PGM, Cu, Ni and Cr<sub>2</sub>O<sub>3</sub> recovered.

The UG1 Chromitite Layer is declared for the part that falls within the current proposed open pit

The Mineral Resource is reported inclusive of the Mineral Reserve

Total Mine: Mineral Reserve Statement								
(31 December 2015)								
Reserve Category	Tonnes (Mt)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	3PGE+Au (g/t)	5PGE+Au (g/t)	Cr <sub>2</sub> O <sub>3</sub> (%)
Proved	41.4	0.74	0.25	0.15	0.004	1.14	1.45	17.8
Probable	65.0	0.71	0.25	0.14	0.003	1.11	1.45	19.2
<b>Total Reserve</b>	<b>106.4</b>	<b>0.72</b>	<b>0.25</b>	<b>0.15</b>	<b>0.004</b>	<b>1.12</b>	<b>1.45</b>	<b>18.6</b>
<p><i>The reserve does not report Os as it typically not included in the revenue generated from the sale of PGMs.</i></p> <p><i>5PGE = Pt+Ir+Ru+Rh+Pd</i></p>								

## **Arxo Metals**

Arxo Metals, an indirectly wholly-owned subsidiary of Tharisa, is the producing, beneficiation, research and development company of the Group.

Arxo Metals conducts extensive research into and development of various technologies and further downstream beneficiation opportunities in order to improve yields and recoveries at the Tharisa Mine, and to create greater value PGM and chrome products and to expand and optimise the Group's processing operations. Different energy efficient technologies are being tested with the objective of producing cost effective PGM and chrome alloys.

The Group expended ZAR11.7 million, ZAR3.2 million and ZAR18.4 million during the Financial Years 2013, 2014 and 2015 respectively on research and development. Research and development has included pre-feasibility studies, testwork and equipment to improve process efficiencies and recoveries.

In addition to research and development, Arxo Metals produces higher value chemical and foundry grade chrome concentrates at its Challenger Plant, which is capable of producing approximately 8 ktpm of foundry and chemical grade chrome concentrates, for which it has an off-take agreement with Rand York.

## **Arxo Resources**

International sales and marketing of Tharisa Minerals' metallurgical grade chrome concentrates are conducted by Arxo Resources, a wholly-owned subsidiary. Arxo Resources has the exclusive right to sell metallurgical chrome concentrate produced by Tharisa Minerals, to customers in China and other international markets. Arxo Resources has established a strong platform with global customers in China including stainless steel and ferrochrome producers as well as global commodity traders. The scale of the operations allows for direct access to market and price discovery. It opens channels with customers, thus providing an excellent platform for generating revenue through the sales of third party products in the future.

Arxo Resources has a marketing agreement with Noble, a global commodities trading company listed on the Singapore Stock Exchange, for Noble to act as an agent for the marketing of 50 ktpm of metallurgical grade chrome concentrate produced by Tharisa Minerals.

## **Arxo Logistics**

Arxo Logistics, a wholly-owned subsidiary of Tharisa, provides an integrated logistics platform to mitigate logistics risks. Arxo Logistics manages the road transportation of PGM concentrates to Impala Platinum. Arxo Logistics also manages the transportation of chrome concentrates produced by the Group to international customers through bulk and container vessels via the RBDBT and the Durban port. Arxo Logistics has access to the necessary road and rail transport capacity, warehousing facilities and port facilities at RBDBT and the Durban port to handle the steady state production levels of 1.5 Mtpa of chrome concentrates to be produced by Tharisa Minerals.

Arxo Logistics provides a platform to service third party customers in the future.

## **Competitive strengths**

### ***Commitment to health, safety and environmental management***

The Group safety management system is implemented under the guidance of a safety expert with over 35 years of experience and the Group has adopted a policy of zero tolerance to unsafe conditions and

as a result, Tharisa Mine has amongst the lowest LTIFR in its peer group. As at 31 March 2016 the Group has a LTIFR of 0.3 per 200 000 man-hours worked.

The Group is committed to the health of its employees and has implemented a number of programmes to facilitate the same, including a wellness programme, awareness days, HIV, tuberculosis and peer counselling.

The Group has obtained the environmental approvals and authorisations required for the operation of the Tharisa Mine, including an integrated water use license issued under the NWA, an Environmental Impact Assessment and an Environmental Management Programme as required in terms of the MPRDA. Moreover, the Group employs a system of continuous monitoring of the impact of its operations on the environment and is committed to the implementation of the Equator Principles.

#### ***Stable labour and community relations***

The Group proactively engages with its employees to maintain good relations. Ongoing communications has helped the Group avoid industrial action by its labour force and to date it has not lost any days of production due to the labour disputes or strike action. In February 2013, the Group entered into a recognition agreement with the NUM, which represents the majority of the eligible workforce of Tharisa Minerals, in terms of which the NUM has the right to negotiate on behalf of its members. In July 2015, the Group entered into a collective agreement with the NUM whereby increases to remuneration over the three-year period to 30 June 2018 were agreed.

The Group is committed to corporate social responsibility and sustainable development within the community in which it operates. Approximately one-third of employees at Tharisa Minerals and the mining contractors are from the local community. Tharisa Minerals has demonstrated a pro-active approach towards the community residing in the vicinity of the Tharisa Mine and relocated approximately 850 families who were previously residing in the mining footprint, to an area of land purchased by Tharisa Minerals and identified by management for this purpose. Following the relocation, the living conditions of these communities have been considerably improved via the construction of housing and the provision of water, sewerage facilities and roads. Tharisa Minerals has established an engagement forum which liaises with the steering committee for the local community neighbouring the Tharisa Mine and will continue its commitment to community initiatives through its social and labour plan, to address job creation, poverty alleviation, basic infrastructure and education and development needs. Consistent with its corporate and social responsibility, the Group established the Community Trust, which holds an unencumbered 6% equity interest in Tharisa Minerals, for the benefit of members of the local community in which the Tharisa Mine is located. The Directors believe that the Tharisa Mine's good relationship with the local community has helped it to avoid disruption to its operations.

#### ***Shallow and large-scale PGM and chrome resource, one of the world's single largest chrome resources, enabling Tharisa to be a large scale supplier of consistent products over several decades***

The large resource size of 828 Mt and strike length of approximately 5 km allows for open pit mining, positioning the Tharisa Mine amongst the world's largest single chrome resources. The multiple MG Chromitite Layers provide process flexibility and through blending allows Tharisa Minerals to maintain consistency in product quality and stable supply over several decades.

***Mining of the different MG Chromitite Layers allows for the co-production of PGM and chrome concentrates***

The average PGM grade for the open pit mine reserve is 1.44g/t on a 6E basis and the average chrome content for the open pit mine reserve of 18.5% allow Tharisa Minerals to pursue a co-product development strategy and to derive revenues from both PGM and chrome concentrates, thereby increasing total revenues derived from every tonne of ore mined. The ability to co-produce PGM and chrome concentrates differentiates the Tharisa Mine from other PGM and chrome mines in South Africa and enhances its cost efficiency through the sharing of common mining, production and overhead costs.

***Located in the lowest cost quartile of the PGM and chrome concentrates cost curves underpinned by low risk mining and beneficiation processes***

The mining of the different MG Chromitite Layers allows for optimum extraction of PGMs and chrome as opposed to mining a single reef for either PGM or chrome. Extracting and recovering both PGMs and chrome reduces the unit costs of production of each, positioning Tharisa in the lowest cost quartile of operating costs in South Africa for both. Based on current revenues, for the Financial Year ended 30 September 2015 Tharisa assigned 50% of shared mining, production and overhead costs to PGM concentrate production and 50% of such costs to chrome concentrate production in accordance with IFRS guidelines.

***Mechanised and skilled labour force***

As a result of the mechanised mining and processing operations at the Tharisa Mine, Tharisa Minerals has a comparatively small and skilled labour force comprising 469 direct employees and 1 535 contractor employees as at the Last Practical Date. The mechanised nature of the mining and processing activities at the Tharisa Mine necessitates skilled labour and Tharisa Minerals has embarked on training and development programmes, apprenticeships, internships, artisan programmes, mentorships and bursaries to procure and sustain the required skills.

***Independent processing plants provide operational flexibility***

The two independent processing plants provide processing flexibility and production stability.

***Capacity to produce metallurgical, chemical and foundry grade concentrates for different markets***

The Group has the flexibility to produce metallurgical, chemical and foundry grade chrome concentrates, and taking into account the metallurgical properties of the reef being processed, is able to produce increased quantities of chemical grade chrome concentrate should market demand and prices warrant. The production of the diversified products lends towards a geographically diversified customer base which the Group has been able to establish.

***Direct relationships with its South African and international customers***

Tharisa Minerals has secured a long-term off-take agreement for its PGM concentrate production with Impala Platinum and Arxo Metals has secured a long term off-take agreement for all of its foundry and chemical grade chrome concentrates production from the Challenger Plant with Rand York. Arxo Resources has also entered into a marketing agreement with Noble for a total of 50 ktpm of metallurgical grade chrome concentrate, with the balance of its chrome concentrate produced at the Tharisa Mine being marketed directly. All PGM and chrome concentrates are sold by reference to prevailing market prices. The Directors believe that the Group's marketing and off-take arrangements will help to secure long-term demand for its PGM and chrome concentrate products from high quality

and creditworthy customers. In terms of its direct market sales of metallurgical grade chrome concentrate, the Group markets such product to global stainless steel and ferrochrome producers located mainly in China. Premium chemical and foundry grade chrome concentrates produced by Tharisa Minerals and Arxo Metals are sold to customers in South Africa and internationally.

***Integrated marketing, sales and logistics platform***

The Group benefits from an integrated marketing, sales and logistics platform that ensures direct contact with the local and international customer base. The direct access to the market ensures that the Group has current information, enabling direct price discovery and mitigates the costs that an intermediary or trader would introduce in the value chain. The information flow from customers and potential customers can also be used in the research and development that the Group undertakes. The integrated platform also provides a basis to service third party customers in the future.

***Extensive industry and management experience with a successful track record of identifying, developing and operating open pit and underground mining operations***

The Directors and senior management team have a track record of identifying, developing and operating open pit and underground mining projects together with broad commercial expertise and extensive industry experience in PGM and chrome mining and metallurgy.

The senior management team has supplemented its core competencies and further consolidated its technical know-how with recruited expertise, including specialists experienced in PGM and chrome mining, extraction and processing, marketing, sales and logistics. The culture of the management team is entrepreneurial, and the Group has implemented a flat management structure which allows for flexible and efficient decision-making within each of the Group's primary business areas.

***Pioneering, innovative and unique approach to viable mineral extraction and beneficiation***

Tharisa Minerals is the first company to economically extract both PGMs and chrome from the different MG Chromitite Layers on a co-product basis. The Group identified, consolidated and obtained a Mining Right over more than 100 properties, comprising approximately 5 475 hectares to create one of the world's largest single chrome resource mines with significant PGM reserves.

The Group has constructed and commissioned the independent Genesis and Voyager Plants which comprise fully integrated PGM and chrome processing circuits, and the higher value chrome concentrate Challenger Plant.

The Group is also committed to research and development through Arxo Metals.

**Strategy**

The Group's core strategy is to become a leading natural resources group focused on originating, developing and operating mines in the PGM, chrome and steel raw material sectors to service growing global demand through integrated mining, processing, marketing, sales and logistics operations. The strategy is to focus on growth through value accretive acquisitions, development and operation of large-scale, low cost projects that are in or close to production.

This will be achieved through:

***Innovative research and development projects***

The Group seeks to grow and expand its business by investing in new projects which demonstrate opportunities for value accretion. The Group will proactively seek out investment or acquisition

opportunities in the PGM and chrome industries and the steel supply chain that meet its stringent investment criteria, and in which management can employ their core skills in addition to commercial considerations.

The Group's experience in evaluating mining opportunities, and taking them through development to operation provides it with the ability to move quickly with a high degree of familiarity to take advantage of favourable opportunities that may arise, whilst discounting opportunities that do not meet the Group's investment criteria. The Group's focus will be on large-scale, low cost investment opportunities that are in or close to production with particular emphasis on the PGM industry and the steel raw material supply sector, including chrome, manganese, iron ore and coking coal, as it believes these sectors provide exposure to attractive market fundamentals whilst taking advantage of the Group's core competencies.

#### ***Implementation of the optimisation initiatives to maximise value extraction***

The Directors expect that the Group's implementation of its mining, processing and optimisation initiatives will result in increased efficiencies, optimised mineral recoveries and significantly increased production volumes of PGM and chrome concentrates.

Such optimisation initiatives include process optimisation strategies for both PGM concentrate recoveries and chrome concentrate yields. To recover additional PGMs, a high energy flotation circuit has been installed at the Voyager Plant to recover the fine PGM particles, thereby increasing recoveries from 61% to over 70%. In addition, an ultra-fine grind circuit is being evaluated which is expected to increase PGM recoveries to over 75%. Production scale high intensity magnetic separation is being evaluated to improve recoveries of chrome concentrate from 65%. In-house research on recovering additional chrome concentrate from the tailings at the Tharisa Mine is ongoing and currently being tested. Opportunities to use the technology on third party tailings is also being evaluated.

#### ***Leveraging off the established marketing, sales and logistics platform for expansion into multi-commodities with geographic diversity***

Expansion of marketing and sales capabilities will allow the Group to capture additional margins by leveraging its existing know-how, experience and relationships through third party sales. The Group's logistics platform will also provide increased scalability to secure more efficient logistics arrangements and deliver a greater quantity and range of products to customers. Moreover, such in house capabilities will enable the Group to strengthen its management of logistics risks, while increasing its interface with customers and other participants in the market. The Group believes that it can effectively compete with other commodity traders on the basis of its tailored and high-quality service offering, local market knowledge and competitive pricing. Through Arxo Resources, the Group is exploring opportunities to act as an off-taker or agent for third parties allowing it to benefit from scalability, and to broaden its contact base with the market.

The Group will consider concluding additional strategic partnerships with third parties including established commodities trading houses and Chinese ferrochrome producers to secure off-take and sale agency arrangements for the Group's chrome concentrates, diversify the Group's customer base and broaden the Group's exposure to the Chinese and other Asian markets. The Group's target strategic partners are established commodities trading houses and stainless steel and ferrochrome producers.

The Group's in-house logistics capabilities will support its marketing and sales functions, leveraging its expertise in procuring optimal transportation arrangements from a diverse range of third party operators. The Group has positioned itself to service third parties in providing logistics arrangements

primarily between South Africa and China. Expansion of the Group's logistics capabilities will allow it to capitalise on volumes and reduce its own transportation costs.

### Key events in the Group's history

AI 5.1.5

Key events in the Group's history are summarised below.

Date	Event
Feb-06 and Mar-07	Prospecting Rights for minerals, including PGMs and chrome, over various portions of the farm 342 JQ and the whole of the farm Rooikoppies 297 JQ are granted to Thari Resources by the DMR.
Mar-06	Tharisa Minerals is incorporated as a wholly-owned subsidiary of Thari Resources.
Mar-07	Coffey commences a drilling and exploration study for the Tharisa Mine.
Nov-07	Thari Resources sells its Prospecting Rights to Tharisa Minerals.
Feb-08	The Company is incorporated.
Mar-08	A Mining Right for chrome over portions 96 and 183 of 342 JQ is purchased by Tharisa Minerals from Beneficiators of Chrome Ore Proprietary Limited.
Apr-08	Consent for the Company to acquire a 74% shareholding in Tharisa Minerals is obtained from the DMR.
Sep-08	A Mining Right for certain minerals, including PGM and chrome, over various portions of 342 JQ and the whole of Rooikoppies 297 JQ is granted to Tharisa Minerals by the DMR.
Oct-08	Trial mining commences at the Tharisa Mine.
Dec-08	Seed capital raising of US\$65 million.
Feb-09 and Mar-09	The Company acquires a 74% stake in Tharisa Minerals following the consent granted in April 2008.
Mar-09	A trial plant is constructed at the Tharisa Mine and trial production of chrome concentrate commences.
Nov-09	The pilot-scale plant with a ROM processing capacity of 38 ktpm is commissioned and production of chrome concentrate commences on a commercial basis.
Jan-11	US\$95 million raised through the issue of Ordinary Shares to Fujian Wuhang and HeYi Mining.
Apr-11	Capital raising of US\$150 million from the issue of the convertible preference shares of the Issuer.
Aug-11	The Community Trust is registered. The processing capacity is increased to 100 ktpm, establishing the Genesis Plant.
Nov-11	The Community Trust acquires 6% of Tharisa Minerals from Thari Resources, funded by the Company.
Dec-11	The PGM concentrator at the Genesis Plant is commissioned.

- Feb-12 Tharisa Minerals enters into a ZAR1 billion senior debt facility pursuant to the CTA.
- May-12 First bulk rail shipment to RBDBT previously shipment by road.
- Jul-12 Improved PGM off-take agreement entered into with Impala Platinum (first agreement dated September 2011)  
Tharisa Minerals integrated water use licence is granted.
- Dec-12 300 ktpm Voyager Plant is commissioned.
- Jul-13 Challenger Plant is commissioned for the production of foundry and chemical grade concentrates.
- April-14 Arxo Resources enters into a 50 ktpm chrome concentrate marketing agreement with Noble.
- April-14 The Company listed on the JSE raising US\$47.9 million.
- Sept-14 Commissioning of the high energy PGM flotation circuit.
- Mar -15 Record monthly production of PGM concentrate achieved of 12.9 koz.
- Oct-15 Tharisa Minerals enters into a new five year mining contract with MCC.
- March-16 Tharisa Minerals achieved annualised steady state production levels of reef mining, mill throughput and PGM production.

#### **Anti-corruption policies**

Due to the nature of the industry sector and the regions in which the Group operates, the Group is potentially exposed to accusations of poor practice when it comes to the requirements under applicable bribery and anti-corruption legislation. Violations of such legislation may result in a criminal case against the Company, members of the Group and/or the Group's employees, leading to reputational damage, possible imprisonment and fines. The Group believes that through its internal controls, Audit Committee and Whistle-blower Policy, see section "*DIRECTORS, SENIOR MANAGEMENT AND CORPORATE GOVERNANCE*", "*Corporate Governance*", it has appropriate procedures in place to mitigate the risk of bribery and that all employees, agents and other associated persons are made fully aware of the Group's policies and procedures with regard to ethical behaviour, business conduct and transparency.

A detailed bribery risk assessment has been performed and reviewed by the Board with measures to mitigate the risks identified and implemented.

#### **Health, safety and the environment**

The safety of the Group's employees and contractors is critical to its operations. The Group has developed processes and procedures as well as a Health Safety Environment training programme. A Safety, Health and Environment Committee has been established to ensure health and safety practices are of the highest standard.

#### **Competition**

The Directors believe that the primary competitors of the Group are other PGM and chrome concentrate production companies, particularly operating in South Africa. While the Group, along with

its partners, has exclusive access to the Tharisa Mine, the Group faces competition for local personnel, services and infrastructure from other companies operating in South Africa.

### Insurance

The Group's operations are subject to numerous operating risks typically associated with exploration and production activities. The Directors believe that its existing insurance coverage is reasonable to cover all general material risks associated with the Group's operations (and that of the operators of assets in which it has an interest).

### Employees

During the past three Financial Years, the Group has employed, on average, the following numbers of people:

<b>Category of activity</b>	<b>As at the date of the Prospectus</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>
Office and management	52	60	63	63
Technical and operational	469	446	425	429
<b>Total</b>	<b>521</b>	<b>506</b>	<b>488</b>	<b>492</b>

The following table shows the breakdown of the employees of the Group per geographical region:

<b>Country of activity</b>	<b>As at the date of the Prospectus</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>
Cyprus	4	4	4	3
South Africa	517	494	475	479
China	-	8	9	10
<b>Total</b>	<b>521</b>	<b>506</b>	<b>488</b>	<b>492</b>

### Dividend policy

The dividend policy of the Company is to pay an annual dividend of 10% of consolidated net profit after tax. However, notwithstanding that the Group reported a consolidated net profit after tax for the Financial Year ended 30 September 2015, in view of the decline in global commodity consumption and global economic uncertainty, the Board did not recommend the payment of any dividend in respect of the Financial Year ended 30 September 2015. The Company did not declare any dividends on the Ordinary Shares for the Financial Years 2013, 2014 or 2015.

## DIRECTORS, SENIOR MANAGEMENT AND CORPORATE GOVERNANCE

Set out below is a summary of relevant information concerning the Board, senior management as well as a brief summary of certain significant provisions of Cypriot Companies Law, the Issuer's Articles of Association and particular issues from the corporate governance codes in respect of the Board.

### Directors

The following table lists the names, positions and ages of the Directors and the date of appointment:

Name	Age	Position	Address	Date of Appointment
Loucas Christos Pouroulis	77	Executive Chairman	Office 108 – 110 S. Pittokopitis Business Centre 17 Neophytou Nicolaides and Kilkis Streets 8011 Paphos Cyprus	27 October 2010
Phoevos Pouroulis	41	Chief Executive Officer	Office 108 – 110 S. Pittokopitis Business Centre 17 Neophytou Nicolaides and Kilkis Streets 8011 Paphos Cyprus	27 October 2010
Michael Gifford Jones	53	Chief Finance Officer	Eland House The Braes 3 Eaton Avenue Bryanston 2191 Johannesburg South Africa	30 January 2013
John David Salter	57	Lead Independent, Non-Executive director	Office 108 – 110 S. Pittokopitis Business Centre 17 Neophytou Nicolaides and Kilkis Streets 8011 Paphos Cyprus	27 October 2010

Antonios Djakouris	69	Independent, Non-Executive director	16 Alkistis Street 4th floor Flat/Office 401 Strovolos 2007 Nicosia Cyprus	11 October 2011
Omar Marwan Kamal	43	Independent, Non-Executive director	16 Fairbourne Cobham Surrey KT11 2BT United Kingdom	11 June 2014
Brian Chi Ming Cheng	33	Non-Independent, Non-Executive director	22/F Argenta 63 Seymour Road Mid Levels West Hong Kong	19 December 2014
Carol Bell	57	Independent, Non-Executive director	194 Bickenhall Mansions Bickenhall Street London W1U 6BX United Kingdom	22 March 2016
Joanna Ka Ki Cheng	49	Alternate Non-Independent, Non-Executive director for Brian Chi Ming Cheng	22/F Argenta 63 Seymour Road Mid Levels West Hong Kong	25 September 2015

As of 25 February 2016, Mr. Ioannis Drapaniotis is no longer a director, as he did not offer himself for re-election.

Subject to the Articles of the Issuer, if and for so long as the Ordinary Shares of the Company are listed on the JSE, the Board shall comprise at least four directors, and there shall be no limitation as to the maximum number.

At each annual General Meeting one third of the elected directors for the time being, or if their number is not three or a multiple of three, the number nearest to one third, but not less than one third, shall retire from office, provided that if an elected director is appointed as managing director or as an employee of the company in any other capacity, he or she shall not, while he or she continues to hold that position or office, be subject to retirement by rotation and he or she shall not, in such case, be taken into account in determining the rotation or retirement of directors. In determining which elected directors are to retire, the longest serving from the date of the election shall retire.

No person other than a Director retiring at the meeting shall unless recommended by the Directors be eligible for election to the office of Director at any General Meeting unless not less than three nor more than 21 days before the date appointed for the meeting there shall have been left at the registered office of the company notice in writing, signed by a member duly qualified to attend and vote at the

meeting for which such notice is given, of his intention to propose such person for election, and also notice in writing signed by that person of his willingness to be elected.

**Loucas Christos Pouroulis (Executive Chairman)**

*Mining and Metallurgical Engineering (Hons), National Technical University, Athens, Greece*

Loucas Pouroulis is the Executive Chairman of the Group, with responsibility for the development of strategy and the identification of new opportunities for the Group. He began his career in Cyprus in 1962, and his initial post-graduate training took place in Germany, Sweden and Cyprus. Loucas is trained as a mining and metallurgical engineer and has more than 50 years' experience in mining exploration, project management, financing and production in open pit and underground mining operations, including PGM and gold mines. He immigrated to South Africa in 1964 and joined Anglo American, where he rose rapidly through the management ranks and received extensive training and experience. In 1971, Loucas began to pursue his own mining interests, initially focusing on gold mining opportunities considered uneconomical by the majors. By the 1990s, he had established Petra Diamonds Limited and, since 2000, has established amongst others, Eland Platinum Holdings Limited, Tharisa Minerals, Kameni Proprietary Limited, TransAfrika Resources Limited and Keaton Energy Holdings Limited.

**Phoevos Pouroulis (Chief Executive Officer)**

*Bachelor of Science and Business Administration, Boston University, USA*

Phoevos Pouroulis is the Chief Executive Officer of the Group, with responsibility for overall strategy and management. Phoevos has held various senior managerial and operational positions in his career spanning more than 15 years. He has extensive experience in project management, mining design, commissioning and mining operations, including chrome and PGM mines, having been involved in South Africa's mining industry since 2003. He has served as Commercial Director for Chromex Mining plc and was a founding member of Keaton Energy Holdings Limited. He is currently a non-executive director of Keaton Energy Holdings Limited. Phoevos is on the Council of the International Chrome Development Association.

**Michael Gifford Jones (Chief Finance Officer)**

*Bachelor of Accounting, (University of Kwa-Zulu Natal (Pietermaritzburg), South Africa), CA(SA); Member, South African Institute of Chartered Accountants*

Michael Jones is the Chief Finance Officer of the Group and is responsible for the overall financial operation and the financial reporting management of the Group. Michael has six years' executive financial management experience in the mining sector. In addition, he has 18 years' experience in investment banking, focusing on mergers and acquisitions and capital raisings of both equity and debt.

**John David Salter (Lead Independent, Non-Executive director)**

*Bachelor of Science (Hons), Ph.D. in Mineral Technology (Imperial College, London), FSAIMM*

David Salter has more than 30 years' experience in the development and management of mining companies, including both open pit and underground PGM mining operations. David was the managing director of Eland Platinum Holdings Limited until its sale to Xstrata in 2007. He is the non-executive Chairman of Keaton Energy Holdings Limited and a non-executive director of a number of unlisted mining companies.

**Antonios Djakouris (Independent, Non-Executive director)**

*Chartered Accountant and Fellow of the Institute of Chartered Accountants in England and Wales*

Antonios Djakouris is a qualified Chartered Accountant and has experience as a manager and director, having served in a number of posts with the Bank of Cyprus Public Company Limited, including internal audit, credit review and retail banking, and as group general manager in charge of operations. From 2003 to 2009, he directed the Bank of Cyprus Public Company Limited group's overseas operations, including banks in the UK, Australia, Russia, Romania and Ukraine. Antonios currently serves in an honorary capacity on the board and executive committee of the Cyprus Anti-Cancer Society, one of the largest charities in Cyprus.

**Omar Marwan Kamal (Independent, Non-Executive director)**

*Bachelor in Economics and Political Science, Ph.D. in Management (Banking and Finance)*

Omar Kamal has more than 20 years' experience in the field of finance and investment. He has a broad spectrum of knowledge and experience gained through his academic background, lecturing at university, serving as a key executive at two prominent Middle Eastern regional banks as well as having been the partner in charge of Islamic Financial Services Advisory Group at Ernst and Young LLP. He has served in many senior managerial positions throughout his career.

**Brian Chi Ming Cheng (Non-Independent, Non-Executive director)**

*Bachelor of Science (Babson College in Massachusetts, USA)*

Brian Cheng is an executive director of NWS Holdings Limited, a Hong Kong Stock Exchange listed company, a subsidiary of which holds 15.85% of Tharisa's issued share capital. He is responsible for overseeing NWS Holdings Limited's infrastructure business and merger and acquisition affairs. He is also a non-executive director of five other companies listed on the Hong Kong Stock Exchange. Before joining NWS Holdings Limited, Brian Cheng worked as a research analyst in the Infrastructure and Conglomerates sector for CLSA Group Asia-Pacific Markets.

**Carol Bell (Independent, Non-Executive director)**

*MA Natural Sciences (University of Cambridge), PhD Archaeology (University College London)*

Carol Bell has more than 35 years' experience in the energy and allied industries including a successful career as a Managing Director of Chase Manhattan Bank's Global Oil & Gas Group, Head of European Equity Research at JP Morgan and several years as an equity research analyst in the oil and gas sector at Credit Suisse First Boston and UBS Phillips & Drew. Carol began her career in corporate planning and business development at Charterhouse Petroleum plc and RTZ Oil and Gas.

Carol has broad public company experience and currently sits on the Boards of Ophir Energy plc, Petroleum Geo-Services ASA, Bonheur ASA and Ganger Rolf ASA. She is also a non-executive Director of the BlackRock Commodities Income Investment Trust plc and sits on the board of Finance Wales, the venture capital arm of the Welsh government.

Carol is a trustee of the Renewable Energy Foundation (a UK think tank) the National Museum of Wales, The Wales Millennium Centre, The British School at Athens, and the Institute for Archaeometallurgical studies. She is also a member of the S4C Authority and the Council of Cardiff University.

**Joanna Ka Ki Cheng (Alternate Non Independent, Non-executive director for Brian Chi Ming Cheng)**

*Bachelor of Arts (Economics) (York University, Ontario, Canada)*

Joanna Cheng, a Canadian national, is a Chartered Accountant and a member of the Institute of Chartered Accountants of Ontario, Canada. She has more than 15 years' experience in business development, investment and management and is the General Manager (Energy) of NWS Infrastructure Management Limited, a wholly-owned subsidiary of NWS Holdings Limited. Before joining NWS Infrastructure Management Limited, Joanna worked at audit firms in Canada and Hong Kong.

### Senior Managers

The Company's current Senior Managers, in addition to the Directors listed above, are as follows:

<b>Name</b>	<b>Age</b>	<b>Position</b>	<b>Appointed to current position</b>
Michelle Louise Taylor	49	Chief Operating Officer and Managing Director of Tharisa Minerals	1 October 2015
Raymond Charles Lewis Kantor	58	Executive Legal Counsel	1 November 2010
Gregory Paul Taurog	43	Executive Sales and Marketing	1 July 2014

The address for all of the senior managers is Eland House The Braes, 3 Eaton Avenue, Bryanston, Johannesburg 2191, South Africa

#### **Michelle Louise Taylor (*Chief Operating Officer and Managing Director of Tharisa Minerals*)**

*ACIS Associate member of the Institute of Chartered Secretaries and Administrators*

Michelle Taylor is the Chief Operating Officer of the Group and Managing Director of Tharisa Minerals. She joined the Group in January 2008 and is responsible for oversight of the day-to-day operations of the Group. Michelle has been involved with the Pouroulis family's businesses for over nine years and is familiar with their operating and reporting procedures and management structure. Prior to working in the Group, Michelle was a partner and head of corporate governance at Routledge Modise Inc. (later Eversheds South Africa) from 1999 to 2008, and advised a number of listed companies including Eland Platinum Holdings Limited, Barplats Investments Limited, Keaton Energy Holdings Limited and Dimension Data Holdings Limited. From 2006 to 2008, she was the group company secretary of Dimension Data Holdings plc, a company that was listed on the JSE and London Stock Exchange.

#### **Raymond Charles Lewis Kantor (*Executive Legal Counsel*)**

*Bachelor of Commerce, Bachelor of Law (Rhodes University, South Africa): Notary Public, South Africa*

Charles Kantor has been the Executive Legal Counsel of the Group since November 2010 and is responsible for overseeing all legal matters and all matters relating to transactions and risk management for the Group. Charles has a total of 11 years experience in the mining industry and has worked on various IPOs, mergers and acquisitions since 1999. From 1999 to 2009, he was a partner at Routledge Modise Inc. (later Eversheds South Africa), where he worked on various mining deals including the listing and sale of Eland Platinum Holdings Limited, and was appointed as head of Eversheds international mining law industry sector in 2008. From 1992 to 1999, Charles was legal counsel at Datakor Holdings Limited, subsequently Dimension Data Holdings plc. From 1986 to 1992,

Charles was an associate and partner at Cliff Dekker and Todd in Johannesburg, specialising in commercial and corporate law.

**Gregory Paul Taurog (*Executive Sales and Marketing*)**

*Bachelor of Accounting Science (UNISA, South Africa)*

Gregory Taurog has been Executive Sales since 2014 and is responsible for all chrome marketing activities of the Group. Gregory has 20 years' experience in international trade, cross-border relations and South African sales having held various managerial positions and directorships with prominent companies in the industry since 1994. From 1994 to 1997 he worked at Macsteel International Holdings BV where he was the Manager of the Raw Materials Department which he co-founded. Gregory was also stationed at Far East Commodities and Trading (FECAT Limited), which is Macsteel's affiliate company in Hong Kong. From 1997 to 2008 Greg joined Glencore plc and was responsible for their Metals and Minerals desk in Southern Africa. Prior to joining Tharisa, Gregory worked at Metalmin & Co (UK) Limited, which is a boutique trading company active in chrome and other bulk ores.

## Directorships of Directors and Senior Managers

Details of the names of companies and partnerships (excluding directorships in the Group) of which the Directors and Senior Managers are or have been members of the administrative, management or supervisory bodies or partners at any time in the five years preceding the date of this Prospectus are set out below:

Name	Current directorships/partnerships	Past directorships/partnerships
<b>Directors</b>		
Loucas Christos Pouroulis	<p>Friedshelf 1421 Proprietary Limited</p> <p>Goudini Platinum Proprietary Limited</p> <p>Salene Management Services Proprietary Limited</p> <p>Salene Mining Proprietary Limited</p> <p>Salene Technologies Proprietary Limited</p> <p>TransAfrika Resources Limited</p>	<p>Kameni Proprietary Limited</p> <p>Lanner Minerals Proprietary Limited</p>
Phoevos Pouroulis	<p>Hazenov Investments Proprietary Limited</p> <p>Keaton Energy Holdings Limited</p> <p>Salene Mining Proprietary Limited</p> <p>Spitfire Music SA Proprietary Limited</p> <p>Friedshelf 1525 (RF) Proprietary Limited</p>	-
Michael Gifford Jones	-	<p>Kameni Proprietary Limited</p> <p>Kameni Management Services Proprietary Limited</p> <p>San Lameer Villa 3129 Proprietary Limited</p> <p>Sinvent Investments 155 Proprietary Limited</p>

		Tamboti Platinum Proprietary Limited
John David Salter	Goudini Platinum Proprietary Limited Keaton Energy Holdings Limited Rowad Properties Proprietary Limited TransAfrika Resources Limited	Kameni Proprietary Limited Tamboti Platinum Proprietary Limited Streatham Management Services Proprietary Limited Nabera Mining Proprietary Limited
Antonios Djakouris	CNP Cyprus Insurance Holdings Limited	
Omar Marwan Kamal Brian Chi Ming Cheng (As Brian Chi Ming Cheng is a director in a number of companies, where it is applicable, only his directorship in the holding company is shown in this table)	Arab Bank (Switzerland) Limited New Territories Environmental Services Limited Goshawk Management Holdings (Cayman) Limited Goshawk Aviation Limited ATL Logistics Centre Hong Kong Limited ATL Logistics Centre Yantian (Shenzhen) Limited ATL Logistics Centre Yantian Limited Joy Fortune Investments Limited Tricor Global Limited Tricor Holdings Limited Tricor Strath Group Limited GHK Hospital Limited China United International Rail Containers Co., Limited Widfaith Group Limited Chongqing Silian Optoelectronics Science & Technology Co. Ltd Guodian Chengdu Jintang Power	Petra Diamonds Champion Auto (Hong Kong) Limited Champion Auto (Hong Kong) Limited New World First Bus Services Limited Widfaith Group Limited Guangzhou Oriental Power Co., Ltd Guang Zhou Pearl River Power Company Limited

Generation Co. Ltd.  
 Chongqing Suyu Business  
 Development Company Limited  
 Sino-French Holdings (Hong  
 Kong) Limited  
 Far East Landfill Technologies  
 Limited  
 Beijing-Zhuhai Expressway  
 Guangzhou-Zhuhai Section  
 Company Limited  
 Guangzhou Huanlong  
 Expressway Limited  
 NWS Holdings Limited (HK Stock:  
 0659)  
 Beijing Capital International  
 Airport Co., Ltd.  
 Haitong International Securities  
 Group Limited (HK Stock: 0665)  
 Integrated Waste Solutions  
 Group Holdings Limited (HK  
 Stock: 0923)  
 Newton Resources Ltd (HK Stock:  
 1231)  
 Wai Kee Holdings Limited (HK  
 Stock: 0610)

Carol Bell

Petroleum Geo-services ASA  
 Bonheur ASA  
 Ganger Rolf plc  
 Blackrock Commodities Income  
 Investment Trust plc  
 Ophir Energy plc  
 Caracal Energy Inc  
 Salamander Energy plc  
 Det norske oljeselskap ASA

Joanna Ka Ki Cheng  
 (As Joanna Ka Ki Cheng is a  
 director in a number of  
 companies, where it is  
 applicable, only her

Sino-French Holdings (Hong  
 Kong) Limited  
 SITA Waste Services Limited  
 NWS Holdings Limited  
 Guangzhou Development Nansha  
 Power Co., Ltd

directorship in the holding company is shown in this table)

Guangzhou Development Group Incorporated  
China Guodian Corporation

### Senior Managers

Michelle Louise Taylor

Rocasize Proprietary Limited  
Streatham Management Services Proprietary Limited  
Western Crown Properties 83 Proprietary Limited  
Dartingo Trading 152 Proprietary Limited  
Dartingo Trading 160 Proprietary Limited

Raymond Charles Lewis Kantor

Queens Road Security (NPC)

Gregory Paul Taurog

Herbert Agencies Proprietary Limited

### Other information on the members of the Board and on the Senior Managers

1. As at the Last Practical Date, none of the Directors or Senior Managers for at least the previous five years:
  - (a) has any convictions in relation to fraudulent offences; or
  - (b) has been associated with any bankruptcy, receivership or liquidation, or similar proceedings while acting in the capacity of a member of the administrative, management or supervisory body or of a senior manager of any company; or
  - (c) has been subject to any official public incrimination and/or sanctions by any statutory or regulatory authority (including designated professional bodies); or
  - (d) has ever been disqualified by a court from acting as a director of a company or from acting as a member of the administrative, management or supervisory bodies of a company or from acting in the management or conduct of the affairs of any company.
2. Save for Loucas Christos Pouroulis being the father of Phoevos Pouroulis, there are no family relationships between the Directors/Senior Managers.
3. There are no potential or actual conflicts of interest between any duties owed by the Directors and the Senior Managers to the Group and their private interests and/or other duties, save for their interest as holders of securities in the Company.

4. There are no arrangements or understandings with major shareholders of the Issuer, customers, suppliers or others pursuant to which any member of the Board of Directors or of the Senior Manager was selected or appointed.
5. There are no restrictions agreed by either the Directors or the Senior Managers on the disposal within a certain period of time of their holding's in the Issuer's Ordinary Shares.

#### Directors', Senior Managers' and others' interests

As at the Last Practical Date, the interests (all of which are beneficial unless otherwise stated) of the Directors and Senior Managers in the share capital are as follows:

Director/Senior Manager	Number of Ordinary Shares				Total Number Ordinary Shares	Percentage of the Issued share capital (%)
	Beneficial		Non-beneficial			
	Direct	Indirect	Direct	Indirect		
Loucas Christos Pouroulis <sup>1</sup>	53 684	-	-	10 000	63 684	0.02%
Phoevos Pouroulis <sup>2</sup>	44 737	6 918 432	-	-	6 963 169	2.72%
Michael Gifford Jones	40 263	-	-	-	40 263	0.02%
John David Salter	-	-	-	-	-	-
Antonios Djakouris	-	-	-	-	-	-
Omar Marwan Kamal	-	-	-	-	-	-
Brian Chi Ming Cheng	-	-	-	-	-	-
Carol Bell	-	-	-	-	-	-
Michelle Louise Taylor <sup>3</sup>	35 564	-	-	3 830	39 394	0.02%
Raymond Charles Lewis Kantor <sup>4</sup>	38 539	-	-	5 450	43 989	0.02%
Gregory Paul Taurog	8 518	-	-	-	8 518	0.00%
Total	221 305	6 918 432	0	19 280	7 159 017	2.80%

Included in the table above are the direct and indirect interests held by associates of Directors as follows:

<sup>1</sup> Loucas Christos Pouroulis indirect non-beneficial participation is derived from his spouse who currently holds 10 000 Ordinary Shares, representing 0.004% of the issued share capital of the Company.

<sup>2</sup> Phoevos Pouroulis indirect beneficial participation is derived from Friedshelf 1525 Proprietary Limited that holds 6 664 157 Ordinary Shares and Phax Trust that holds 254 275 Ordinary Shares, representing 2.6% and 0.1% of the issued share capital of the Company respectively. Phoevos Pouroulis is a director and shareholder in Friedshelf 1525 Proprietary Limited and a trustee and beneficiary of the Phax Trust.

<sup>3</sup> Michelle Louise Taylor indirect non-beneficial participation is derived from her spouse who currently holds 3 830 Ordinary Shares, representing 0.001% of the issued share capital of the Company.

<sup>4</sup> Raymond Charles Lewis Kantor indirect non-beneficial participation is derived from his spouse who currently holds 5 540 Ordinary Shares, representing 0.002% of the issued share capital of the Company.

As at 30 September 2015, the Executive Directors (Non-Executive Directors are not entitled to participate in the Group's Share Award Plan) and Senior Managers have the following Conditional Awards and Appreciation Rights under the Share Award Plan:

<b>Director/Senior Manager</b>	<b>Total Number of Conditional Awards (after vested and forfeited)</b>	<b>Total Number of Appreciation Rights (after vested and forfeited)</b>
Loucas Christos Pouroulis	318 548	119 455
Phoevos Pouroulis	265 456	99 545
Michael Gifford Jones	238 911	89 591
Michelle Louise Taylor	212 366	79 637
Raymond Charles Lewis Kantor	212 366	79 637
Gregory Paul Taurog	51 631	90 354
<b>Total</b>	<b>1 299 2278</b>	<b>558 219</b>

### **Remuneration and Terms of Service Contracts**

In addition to the Share Award Plan, certain of the Directors and Senior Managers have other entitlements (including on termination of their employment) as set out in their respective service agreement or letter of appointment.

The service agreements/letters of appointment of the Directors and Senior Managers are set out below:

#### **Executive directors**

##### **Loucas Christos Pouroulis**

Loucas Pouroulis was appointed to the Board on 27 October 2010 as Executive Chairman of the Group. The terms and conditions of Loucas' employment are set out in a service agreement dated 16 April 2014 between Loucas and Braeston. The service agreement may be terminated by either party on six months' notice, subject to the South African Labour Relations Act.

##### **Phoevos Pouroulis**

Phoevos Pouroulis was appointed to the Board on 27 October 2010 as Chief Executive Officer of the Group. The terms and conditions of Phoevos' employment are set out in a service agreement dated 14 March 2014 between Phoevos and Braeston. The service agreement may be terminated by either party on six months' notice, subject to the South African Labour Relations Act.

##### **Michael Gifford Jones**

Michael Jones was appointed to the Board on 30 January 2013 as Chief Finance Officer of the Group. The terms and conditions of Michael's employment are set out in a service agreement dated 17 March

2014 between Michael and Braeston. The service agreement may be terminated by either party on six months' notice, subject to the South African Labour Relations Act.

#### **Non-executive directors**

##### **John David Salter**

David Salter was initially appointed to the Board on 27 October 2010 as an Independent Non-Executive director and then entered into a letter of appointment with the Company dated 25 February 2013 to act as the Lead Independent Non-Executive director of the Company.

##### **Antonios Djakouris**

Antonios Djakouris was appointed to the Board on 11 October 2011 which was confirmed with a letter of appointment from the Company dated 25 February 2013 to act as an Independent Non-Executive director of the Company.

##### **Omar Marwan Kamal**

Omar Kamal was appointed to the Board on 11 June 2014 which was confirmed with a letter of appointment from the Company on the same date to act as a Non-Executive director of the Company.

##### **Brian Chi Ming Cheng**

Brian Chi Ming Cheng was appointed to the Board on 19 December 2014 which was confirmed with a letter of appointment from the Company dated 14 January 2015 to act as a Non-Executive director of the Company.

##### **Carol Bell**

Carol Bell was appointed to the Board on 22 March 2016 which was confirmed with a letter of appointment from the Company dated 30 March 2016 to act as an Independent Non-Executive director of the Company.

#### **Senior Managers**

##### **Michelle Louise Taylor**

Michelle Taylor is employed by Tharisa Minerals, to act as Group Chief Operating Officer of the Group, the terms and conditions of which are set out in an agreement dated 16 April 2014. Subsequently she was also appointed the Managing Director of Tharisa Minerals with effect from 1 October 2015. The service agreement may be terminated by either party on six months' notice, subject to the South African Labour Relations Act.

##### **Raymond Charles Lewis Kantor**

Charles Kantor is employed by Braeston, to act as Executive Legal Counsel of the Group, the terms and conditions of which are set out in an agreement dated 17 March 2014. The service agreement may be terminated by either party on six months' notice, subject to the South African Labour Relations Act.

##### **Gregory Paul Taurog**

Gregory Taurog is employed by Braeston, to act as Sales and Marketing Executive of the Group, the terms and conditions of which are set out in an agreement dated 17 March 2014. The service agreement may be terminated by either party on six months' notice, subject to the South African Labour Relations Act.

Save as disclosed above, there are no existing or proposed service agreements between any of the Directors and the Group providing for benefits upon termination of employment.

Executive Directors and Senior Managers do not have any indemnity arrangements with the Issuer. Nevertheless, the Company is required to indemnify the Non-Executive Directors to the fullest extent possible according to the relevant law.

In addition, the Group has purchased a directors and officers' liability insurance policy.

### Summary of remuneration and benefits

The remuneration of the members of the Board will be determined by the Board, upon Remuneration Committee recommendation. Such remuneration shall correspond to the scope of tasks and responsibilities of the relevant member of the Board and be proportionate to the size of the Company's business and reasonable in relation to its financial results. The objective of the Group's remuneration policy is to provide a compensation program allowing for the attraction, retention and motivation of members of the Board who have the character traits, skills and background to successfully lead and manage the Company.

A summary of the amount of remuneration paid by the Group to the Directors and Senior Managers (including any contingent or deferred compensation) and benefits in kind for the Financial Year ended 30 September 2015 for their services, in all capabilities, to the Group is set out below:

US\$ '000	Directors Fees	Salary	Expense Allowance	Other Material Benefits	Pension Scheme	Total
Loucas Christos Pouroulis	-	512	-	28	-	540
Phoevos Pouroulis	-	393	10	24	24	451
Michael Gifford Jones	-	325	-	21	59	405
John David Salter	188	-	-	-	-	188
Antonios Djakouris	129	-	-	-	-	129
Omar Marwan Kamal	58	-	-	-	-	58
Brian Chi Ming Cheng	32	-	-	-	-	32
Michelle Taylor	-	307	16	19	19	361
Charles Kantor	-	280	12	19	50	361
Greg Taurog	-	223	4	4	40	278
<b>TOTAL</b>	<b>407</b>	<b>2 040</b>	<b>42</b>	<b>115</b>	<b>192</b>	<b>2 803</b>

## **Corporate governance**

### **The Board**

The Board currently comprises three executive directors and five non-executive directors. Four of the five non-executive directors are independent of management as determined under applicable South African securities legislation.

The Directors endorse and accept full responsibility for the application of the principles necessary to ensure that effective corporate governance is practiced consistently throughout the Group. In discharging this responsibility, the Company strives to comply with the requirements of the South African Code of Corporate Practices and Conduct as set out in the King Code in both letter and spirit. The Company's approach to corporate governance strives to be stakeholder inclusive, based on good communication and integrated into every aspect of the Group's business.

The Company has implemented policies evidencing a clear balance of power and authority at the Board level, to ensure no one Director has unfettered power of decision-making.

The Company has adopted a Board Charter setting out roles, functions, obligations, rights, responsibilities and powers of the Board and the policies and practices of the Board in respect of its duties, functions and responsibilities. The Company has also adopted terms of reference for each of its committees. The Board is of the opinion that the Company is compliant with the JSE Listings Requirements and the King Code in all material respects, other than having an executive chairman and not having an independent internal audit function. The former has been mitigated by the appointment of a Lead independent non-executive director and the latter by the employment of an international auditing firm to provide internal auditing services.

The Board is ultimately responsible for the day-to-day management of the Company's business, its strategy and key policies. The Board is also responsible for approving the Company's financial objectives and targets.

Members of the Board are appointed by the Shareholders. The Board also has the power to appoint additional directors, subject to such appointment being approved by Shareholders. Pursuant to the terms of the Board Charter, appointments to the Board are made on the recommendation of the Nomination Committee. A formal policy detailing the procedures for appointment to the Board has been adopted by the Company. A brief curriculum vitae of each director standing for election or re-election is to be provided in the notice of each general meeting at which the appointment of such Director is considered.

The Directors who are also members of the executive committee of the Company are involved in the day-to-day business activities of the Company and are responsible for ensuring that the decisions of the executive committee as approved by the Board are implemented in accordance with the mandate given by the Board and executive committee. The Board is satisfied as to the appropriateness of the expertise of the Company Secretaries and considers and satisfies itself, on an annual basis, of the qualifications, experience and arms-length relationship of the Company Secretaries with the Board. As noted above, a Board Charter has been adopted where the terms of reference of the Board are set out.

Board meetings are held on a regular basis, at least quarterly, and all Directors participate in the key areas of decision-making.

There is no agreed formal procedure for the Directors to seek independent professional advice, but pursuant to the terms of reference of the Board, the Directors may, where appropriate, take independent professional advice at the Company's expense.

### **Committees**

The Company's Board committees are constituted as follows:

	<b>Chairman</b>	<b>Members</b>
<b>Audit Committee</b>	Antonios Djakouris	John David Salter Omar Marwan Kamal Carol Bell
<b>Risk Committee</b>	Antonios Djakouris	Loucas Christos Pouroulis Phoevos Pouroulis Michael Gifford Jones John David Salter Omar Marwan Kamal Brian Chi Ming Cheng Carol Bell
<b>Nomination Committee</b>	John David Salter	Loucas Christos Pouroulis Antonios Djakouris
<b>Remuneration Committee</b>	Antonios Djakouris	John David Salter Carol Bell
<b>Safety, Health and Environment Committee</b>	John David Salter	Antonios Djakouris Carol Bell

The deliberations of the various committees referred to above, do not reduce the individual and collective responsibilities of Board members in regard to their fiduciary duties and responsibilities, and they must continue to exercise due care and judgement in accordance with their statutory obligations.

These terms of reference are subject to the provisions of the Articles of Association and any other applicable law or regulatory provision in force in Cyprus, and the JSE Listings Requirements.

### **Audit Committee**

The Audit Committee provides the Board with additional assurance regarding the quality and reliability of financial information used by the Board and the financial statements of the Group. In addition, the Audit Committee reviews the internal control systems, the financial control systems, the accounting systems and reporting and the internal audit functions. It also liaises with the Group's external auditors and monitors compliance with legal requirements, ensures management addresses any identified internal control weakness, assesses the performance of financial management, approves external audit fees, budgets, plans and performance, and establishes a policy regarding non-audit services provided by the external auditors. In addition, the Audit Committee oversees the integrated reporting process, risk

management systems, information technology risks (as they relate to financial reporting), and the Group's whistle blowing arrangements and policies and procedures for preventing corrupt behaviour and detecting fraud and bribery.

The Audit Committee, which must comprise at least three independent non-executive directors, is chaired by Antonios Djakouris, an independent non-executive director. Other members of the Audit Committee are David Salter, Omar Kamal and Carol Bell. The Group's independent external auditors, Chief Executive Officer and the Chief Finance Officer attend committee meetings by invitation. The Audit Committee meets at least twice per annum.

The Audit Committee is satisfied as to the appropriateness of the expertise of Michael Jones and considers and satisfies itself of the appropriateness of the expertise and experience of the Chief Finance Officer, on an annual basis.

### **Risk Committee**

The Risk Committee reviews management reports on the adequacy and effectiveness of the Group's risk management functions, ensures compliance with the Group's risk management policies and reviews the adequacy of the Group's insurance coverage.

The Risk Committee, which must comprise at least three members which includes executive and non-executive directors, comprises the entire board and is chaired by Antonios Djakouris, an independent non-executive director. Other members of the Risk Committee are independent non-executive directors David Salter, Omar Kamal, Carol Bell, the non-executive director Brian Cheng, Executive Chairman Loucas Pouroulis, the Chief Executive Officer Phoevos Pouroulis and the Chief Finance Officer Michael Jones. The Risk Committee meets at least twice per annum.

### **Nomination Committee**

The Nomination Committee ensures that the procedures for appointments to the Board are formal and transparent by making recommendations to the Board on all new board appointments in accordance with the Company's policy for Board appointments. It does so by regularly evaluating the Board performance, undertaking performance appraisals of the Chairman and Directors, evaluating the effectiveness of Board committees and making recommendations to the Board. The Nomination Committee also determines the Board succession plans.

The Nomination Committee is chaired by David Salter, the Lead independent director. Other members of the committee are Antonios Djakouris, an independent non-executive director, and Loucas Pouroulis, the Executive Chairman. Loucas Pouroulis is entitled to participate and contribute to the Nomination Committee, but is not entitled to vote on any matter before the Nomination Committee. In the event of a tied vote, David Salter has a casting vote. The Nomination Committee meets at least twice per annum.

### **Remuneration Committee**

The Remuneration Committee considers the remuneration framework of the Chairman, Chief Executive Officer, Chief Finance Officer, other executive directors of the Company, the Company Secretary and other members of the executive management of the Company and its Subsidiaries, with the assistance and guidance of independent experts. The Remuneration Committee also considers bonuses, which are discretionary and based upon general economic variables, the performance of the Company and each individual's performance, share options and certain other employee benefits and schemes. No remuneration of any nature shall be paid, increased or varied to any director without the prior approval

of the Remuneration Committee. The Remuneration Committee also produces an annual remuneration report to be approved by Shareholders at the Company's Annual General Meeting.

The Remuneration Committee, comprises only of members of the Board, all of whom are independent non-executive directors and is chaired by Antonios Djakouris. Other members of the Remuneration Committee are John David Salter and Carol Bell, independent non-executive directors. The Remuneration Committee meets at least twice per annum.

#### **Safety, Health and Environment Committee**

The Safety, Health and Environment Committee develops and reviews the Group's framework, policies and guidelines on safety, health and environmental management, monitor key indicators on accidents and incidents within the Group's operations and considers developments in relevant safety, health and environmental practices and regulations.

The Safety, Health and Environmental Committee is chaired by David Salter, an independent non-executive director. The other members of the Safety, Health and Environmental Committee are Antonios Djakouris and Carol Bell, independent non-executive directors. The Safety, Health and Environmental Committee meets at least twice per annum.

#### **Whistle-blower Policy**

This policy has been established for the receipt, retention, and treatment of complaints received by the Company regarding accounting, internal accounting controls, auditing matters or violations to the Group's Code of Business Conduct and Ethics, safety related matters and other corporate governance policies and the submission by employees of the Group, on a confidential and anonymous basis, of concerns regarding questionable accounting, auditing matters or violations to the Group's code of business conduct and ethics. It is the duty of the Audit Committee to ensure that arrangements are in place for the appropriate and independent investigation of such matters and follow-up action.

#### **Internal control systems**

To meet the Company's responsibility to provide reliable financial information, the Group maintains financial and operational systems of internal control. These controls are designed to provide reasonable assurance that transactions are concluded in accordance with management's authority, that the assets are adequately protected against material losses, unauthorised acquisition, use or disposal, and that transactions are properly authorised and recorded.

The systems include a documented organisational structure and division of responsibility, established policies and procedures which are communicated throughout the Group, and the careful selection, training and development of people.

The Company monitors the operation of the internal control systems in order to determine if there are deficiencies. Corrective actions are taken to address control deficiencies as they are identified. The Board, operating through the Audit Committee, oversees the financial reporting process and internal control systems.

The Group does not have an in-house independent internal audit function. The Audit Committee reviews, on an annual basis, whether there is a need for an in-house internal audit function and makes the necessary recommendation to the Board. The Audit Committee believes that the Group has appropriate internal control systems for a group of its size and stage of development and that an in-house internal audit function is not justified. It is still of the opinion that the appointment of an

independent international auditing firm as internal auditors for the Group sufficiently mitigates the risk of not having an in-house internal audit function.

There are inherent limitations on the effectiveness of any system of internal control, including the possibility of human error and the circumvention or overriding of controls. Accordingly, an effective internal control system can provide only reasonable assurance with respect to financial statement preparation and the safeguarding of assets.

#### **Share Dealing Policy**

The Company has adopted a share dealing policy requiring all Directors of the Company and of major subsidiaries, and senior executives to obtain prior written clearance from either the Chairman or the Chief Executive Officer to deal in Ordinary Shares. The Chairman requires prior written clearance from the chairman of the Audit Committee. Closed periods (as defined in the JSE Listing Requirements) are observed as required by the JSE Listing Requirements. During these periods, the Company's directors, executives and inside employees are not permitted to deal in Ordinary Shares. Additional closed periods are enforced should the Company be subject to any corporate activity where a cautionary announcement (as defined in the JSE Listing Requirements) is published.

#### **Corporate governance regimes**

##### **Cypriot corporate governance**

Since the Company is incorporated in Cyprus, it has to comply with Cypriot law, as well as with provisions relating to corporate governance issues prescribed in the Company's Articles of Association and the Cyprus Companies Law. However, the Company is not subject to any of the rules or corporate governance requirements of its country of incorporation, including the Cypriot Code on Corporate Governance, as it is not listed on the Cyprus Stock Exchange.

##### **South African corporate governance**

A summary of the key South African corporate governance requirements that the Company must comply with as a result of its JSE listing are contained in section "COMPLIANCE WITH THE LONDON STOCK EXCHANGE", "Listing on the JSE" of this Prospectus.

##### **UK corporate governance**

As a consequence of the Ordinary Shares being admitted to trading on the standard segment of the Official List, the UK Corporate Governance Code published by the Financial Reporting Council will not apply to the Company. However, the Board recognises the importance of good corporate governance and will consider the principles and recommendations set out in the UK Corporate Governance Code.

## SELECTED HISTORICAL FINANCIAL INFORMATION

### Selected Historical Financial Information

The table below sets out selected historical financial information of the Group for the financial years ended 30 September 2013, 2014 and 2015.

The selected financial information for the Financial Years ended 30 September 2013, 2014 and 2015 set out below has been derived from and should be read in conjunction with the audited Consolidated Financial Statements of the Issuer prepared in accordance with IFRS for the aforementioned years including the accompanying notes thereto, which are included elsewhere in this Prospectus.

Additionally, this section should be also read in conjunction with section “OPERATING AND FINANCIAL REVIEW” of this Prospectus.

*Selected consolidated statement of profit and loss and other comprehensive income*

	<u>Years ended 30 September</u>		
	<u>2015</u>	<u>2014</u>	<u>2013</u>
	<u>US\$'000</u>	<u>US\$'000</u>	<u>US\$'000</u>
Revenue	246 782	240 731	215 455
Cost of sales	<u>(203 692)</u>	<u>(208 119)</u>	<u>(189 570)</u>
<b>Gross profit</b>	<b>43 090</b>	<b>32 612</b>	<b>25 885</b>
Other income	42	149	48
Administrative expenses	<u>(24 777)</u>	<u>(26 908)</u>	<u>(26 596)</u>
<b>Results from operating activities</b>	<b><u>18 355</u></b>	<b><u>5 853</u></b>	<b><u>(663)</u></b>
<b>Net finance costs</b>	<b><u>(8 723)</u></b>	<b><u>(46 178)</u></b>	<b><u>(62 305)</u></b>
<b>Profit/(loss) before tax</b>	<b>9 632</b>	<b>(40 325)</b>	<b>(62 968)</b>
Tax	<u>(3 617)</u>	<u>(14 548)</u>	<u>15 525</u>
<b>Profit/(loss) for the year</b>	<b><u>6 015</u></b>	<b><u>(54 873)</u></b>	<b><u>(47 443)</u></b>
<b>Total comprehensive income for the year</b>	<b><u>(33 384)</u></b>	<b><u>(76 035)</u></b>	<b><u>(86 224)</u></b>
<b>Profit/(loss) for the year attributable to:</b>			
Owners of the Company	<u>4 623</u>	<u>(48 997)</u>	<u>(48 347)</u>
Non-controlling interests	<u>1 392</u>	<u>(5 876)</u>	<u>904</u>
	<b><u>6 015</u></b>	<b><u>(54 873)</u></b>	<b><u>(47 443)</u></b>
<b>Total comprehensive income for the year attributable to:</b>			
Owners of the Company	<u>(24 721)</u>	<u>(66 188)</u>	<u>(75 989)</u>
Non-controlling interests	<u>(8 663)</u>	<u>(9 847)</u>	<u>(10 235)</u>
	<b><u>(33 384)</u></b>	<b><u>(76 035)</u></b>	<b><u>(86 224)</u></b>
<b>Earnings per share</b>			
Basic and diluted earnings per share (US\$ cents)	<u>2</u>	<u>(20)</u>	<u>(20)</u>

*Selected consolidated statement of financial position*

	<b>As at 30 September</b>		
	<b><u>2015</u></b>	<b><u>2014</u></b>	<b><u>2013</u></b>
	<b>US\$'000</b>	<b>US\$'000</b>	<b>US\$'000</b>
<b>Assets</b>			
Non-current assets	<u>229 683</u>	<u>280 024</u>	<u>302 662</u>
Current assets	<u>71 394</u>	<u>67 156</u>	<u>81 494</u>
<b>Total assets</b>	<b><u>301 077</u></b>	<b><u>347 180</u></b>	<b><u>384 156</u></b>
<b>Equity</b>			
Equity attributable to owners of the Company	<u>216 742</u>	<u>235 906</u>	<u>(37 436)</u>
<b>Non-controlling interests</b>	<u>(37 794)</u>	<u>(26 052)</u>	<u>(16 205)</u>
<b>Total equity</b>	<b><u>178 948</u></b>	<b><u>209 854</u></b>	<b><u>(53 641)</u></b>
<b>Liabilities</b>			
Non-current liabilities	<u>40 430</u>	<u>68 695</u>	<u>97 550</u>
Current liabilities	<u>81 699</u>	<u>68 631</u>	<u>340 247</u>
<b>Total liabilities</b>	<b><u>122 129</u></b>	<b><u>137 326</u></b>	<b><u>437 797</u></b>
<b>Total equity and liabilities</b>	<b><u>301 077</u></b>	<b><u>347 180</u></b>	<b><u>384 156</u></b>

*Selected consolidated statement of cash flows*

	<b>Years ended 30 September</b>		
	<b><u>2015</u></b>	<b><u>2014</u></b>	<b><u>2013</u></b>
	<b>US\$'000</b>	<b>US\$'000</b>	<b>US\$'000</b>
<b>Net cash flows from/(used in) operating activities</b>	<u>41 404</u>	<u>22 356</u>	<u>(2 956)</u>
<b>Net cash flows used in investing activities</b>	<u>(21 217)</u>	<u>(25 159)</u>	<u>(24 613)</u>
<b>Net cash flows from/(used in) financing activities</b>	<u>(18 365)</u>	<u>(1 318)</u>	<u>7 749</u>
<b>Net increase/(decrease) in cash and cash equivalents</b>	<b><u>1 822</u></b>	<b><u>(4 121)</u></b>	<b><u>(19 820)</u></b>
<b>Cash and cash equivalents at the beginning of the year</b>	<u>19 629</u>	<u>28 017</u>	<u>52 805</u>
<b>Effect of exchange rate fluctuations on cash held</b>	<u>2 814</u>	<u>(4 267)</u>	<u>(4 968)</u>
<b>Cash and cash equivalents at the end of the year</b>	<b><u>24 265</u></b>	<b><u>19 629</u></b>	<b><u>28 017</u></b>

**Statutory Auditors**

KPMG Limited - independent auditors of the Issuer, a member of the Institute of Certified Public Accountants of Cyprus, with their address at 14 Esperidon Street, P.O. Box 21121, 1087 Nicosia, Cyprus, have audited the financial statements for the financial years ended 30 September 2013, 2014 and 2015, for the Issuer which have been prepared in accordance with the International Financial Reporting Standards.

The Auditor's report for the Financial Years 2013, 2014 and 2015 do not include a qualified opinion from KPMG Limited.

For the Financial Year 2015, the Auditor's Report included the following "emphasis of matter" which states the following:

*“We draw attention to note 2(d) of the consolidated financial statements which indicated that notwithstanding that the Group made a profit of US\$6 015 thousand for the year ended 30 September 2015, as at that date its current liabilities exceeded its current assets by US\$10 305 thousand. The note indicates that subsequent to year end, global commodity prices have weakened significantly to the extent that short term cash flows reflect a shortfall in cash. In the event that the weakened commodity prices persist, forecast production is not achieved and the Group is unable to raise further funding, a material uncertainty will exist which may cast significant doubt on the ability of the Group to continue as a going concern. Our opinion is not qualified in respect of this matter.”*

Additionally, note 2(d) of the audited consolidated financial statements of the Company for the year ended 30 September 2015, states the following:

*“Based on the commodity prices prevailing at the financial year end, the short term cash flow forecasts of the Group reflect a positive cash flow position sufficient to meet the operational cash flows, the approved capital expenditure and the debt repayments. However, subsequent to the financial year end, global commodity prices weakened significantly and the weakening of the South African Rand against the US\$ has been insufficient to off-set the weakened commodity prices. Based on current commodity spot prices and US\$ exchange rate, the short term cash flows forecasts reflect a shortfall in cash. Should the current depressed commodity persist beyond the near term and/or should forecast production not be achieved, the Group will need to source additional cash to fund its operations. The operations are, in part, funded through chrome pre-pay transactions and it is the intention of the Group to continue with these arrangements. In addition, the Group may secure a further working capital facility or the Company may undertake a placement of shares to provide this funding should this be required. In addition, the Group is reviewing its cost structure in order to reduce operating costs.*

*The financial statements however continue to be prepared on the going concern basis. In the event that the weakened commodity prices persist, forecast production is not achieved and the Group is unable to raise further funding, a material uncertainty will exist which may cast significant doubt on the ability of the Group to continue as a going concern and, therefore, it may be unable to realise its assets and settle its liabilities in the normal course of business.”*

For the Financial Year 2014, the Auditor’s Report included the following “emphasis of matter” which states the following:

*“We draw attention to note 2(d) of the consolidated financial statements which indicates that the Group incurred a loss of US\$54 873 thousand for the year ended 30 September 2014 and, as at that date its current liabilities exceeded its current assets by US\$1 475 thousand. The note states that should the forecast production not be achieved and/or South African Rand commodity prices weaken, a material uncertainty exists which may cast doubt on the Group’s ability to continue as a going concern. Our opinion is not qualified in respect of this matter.”*

Additionally, note 2(d) of the audited consolidated financial statements of the Company for the year ended 30 September 2014, states the following:

*“The Group incurred a loss for the year ended 30 September 2014 of US\$54 873 thousand (2013:US\$47 443 thousand) and, as at that date its current liabilities exceeded its current assets by US\$1 475 thousand (2013: US\$258 753 thousand).*

*The short term cash flow forecasts of the Group reflect a positive cash flow position sufficient to meet the operational cash flows, the approved capital expenditure and the debt repayments. Achievement of the short term cash flow forecast is dependent on the planned production levels being achieved and/or*

*no weakening in future South African Rand commodity price. Should forecast production not be achieved and/or South African Rand commodity prices weaken, this may result in a shortfall in cash. Certain capital expenditure can be postponed in such event and alternative funding options are being evaluated including the release of the environmental rehabilitation guarantee collateral included in "other financial assets" in note 15 which would then be available for operational cash requirements.*

*During the financial year, insufficient correct reef layers were exposed as a result of waste and interburden stripping being below plan because of contractor mining equipment availability being below industry norms. Following a strategic review, an additional mining contractor has been appointed to undertake the more specialised blasting and extraction of the reef layers and removal of interburden. The existing mining contractor will focus on bulk waste removal.*

*The Group experienced ramp-up problems typical of large complex concentrators coupled with mechanical failure of certain key equipment. De-bottlenecking and process optimisation together with equipment re-engineering have overcome these problems. Initiatives to improve recoveries and yields are ongoing.*

*The senior debt providers have waived certain facility covenants relating to the debt service cover ration as at 30 September 2014 and have extended the date for completion of the technical completion tests to 28 November 2015.*

*Should the forecast production not be achieved and/or the South African Rand commodity prices weaken, a material uncertainty exists which may cast doubt on the ability of the Group to continue as a going concern and it may be unable to realise its assets and settle its liabilities in the normal course of business without additional fund raising.*

*The financial statement however continue to be prepared on the going concern basis."*

For the Financial Year 2013, the Auditor's Report included the following "emphasis of matter" which states the following:

*"We draw attention to note 2(c) to the consolidated financial statements which indicates that at 30 September 2013 the Group's current liabilities exceeded current assets by US\$266,710 thousand and its total liabilities exceeded total assets by US\$53,641 thousand. These conditions, along with the matters as set forth in note 2(c), indicate that in an event of a no listing scenario and/or should there be a different interpretation to the Board of Directors' opinion as to the legal obligation of the Group to redeem the convertible redeemable preference shares, which will result in full redemption of the convertible redeemable preference shares, payable within 10 business days from a redemption notice, the Group may not have the necessary liquid funds required to redeem its convertible redeemable preference shares and continue as a going concern. Our opinion is not qualified in respect of this matter."*

Additionally, note 2(c) of the audited consolidated financial statements of the Company for the year ended 30 September 2013, states the following:

*"At 30 September 2013, the Group's current liabilities exceeded current assets by US\$266,710 thousand and its total liabilities exceeded total assets by US\$53,641 thousand. A significant portion of the Group's current and total liabilities relates to convertible redeemable preference shares, Class B preference shares and loan from Langa Trust, the carrying amounts of which at 30 September 2013 amounted to US\$260,291 thousand, US\$12,171 thousand and US\$2,870 thousand respectively. According to the terms of these instruments, which are set out in notes 17(a), 17(b) and 25 respectively, the convertible*

*redeemable preference shares are, inter alia, convertible into ordinary shares upon listing of the Company's ordinary shares on any stock exchange acceptable to the holders of the majority of the convertible redeemable preference shares, while Class B preference shares and loan from Langa Trust are expected to be repaid from the proceeds of such listing, on the assumption that the Company will raise adequate proceeds.*

*During the year, the Company prepared itself to undertake an Initial Public Offering ("IPO") on the Alternative Investment Market of The London Stock Exchange Plc ("AIM"), and the process was expected to be completed in March 2013. However, the severe sovereign debt crisis experienced in Cyprus in March 2013, created an adverse impact on the Company's IPO, as it significantly and adversely impacted investor confidence and sentiment, demand for the Company's ordinary shares and ultimately the overall valuation of the Group. As a result of these conditions, the Board of Directors of the Company, in consultation with its Nominated Advisor to the IPO, invoked the material adverse change clause of the Articles of Association of the Company and deferred the IPO by a maximum of a year to 14 April 2014. This position of the Board of Director was also agreed by the holders of a majority of the Company's convertible redeemable preference shares.*

*The Board of Directors of the Company, following the obtaining of South African exchange control approval, has initiated the process for a primary inward listing on the Johannesburg Stock Exchange Limited ("JSE"). With a successful listing on the JSE, the Company's convertible redeemable preference shares will be converted into fully paid ordinary shares and in addition the Group expects to raise adequate proceeds to repay its Class B preference shares and loan from Langa Trust.*

*In an event of a no listing scenario, according to the terms of the convertible redeemable preference shares, as set out in note 17(a), the Company within 10 business days from a redemption notice is required to redeem these shares for a consideration equal to the subscription price of each share with a return by applying an Internal Rate of Return ("IRR") of 25%. However, the Board of Directors is of the opinion that, according to the Articles of Association of the Company and the terms governing the issuance of the convertible redeemable preference shares, the Company is required to redeem only those convertible redeemable preference shares for which it has received a redemption notice, and only to the extent that it has sufficient distributable reserves, with the remainder of the redemption amount to be paid upon the Company being able to pay the redemption amount.*

*Should the aforesaid listing not be achieved within the required time frame, and should the Company receives a redemption notice and there is a different interpretation of the legal obligation of the Company, then the Group may not have the necessary liquid funds required to redeem the convertible redeemable preference shares and also finance its working capital requirements. In such case the Group may not be able to continue as a going concern which is the basis of preparation of these consolidated financial statements and necessary adjustments will have to be made to bring the assets to their net realizable value and provide for any further liabilities which may arise. Furthermore, non-current assets will have to be reclassified as current assets and non-current liabilities as current liabilities accordingly. These consolidated financial statements do not include any adjustments that might be necessary should the Group not be able to continue as a going concern."*

**Presentation of financial information**

The financial information presented in this Prospectus includes audited consolidated financial statements for the Group as at and for the years ended 30 September 2013, 2014 and 2015.

The Annual Financial Statements are prepared in accordance with the International Financial Reporting Standards, the JSE Listings Requirements and the requirements of the Cyprus Companies Law Cap.113. Unless otherwise indicated, the financial information presented in this Prospectus has been prepared in accordance with the above as applicable.

**Non-financial information operating data**

The non-financial operating data included in this Prospectus has not been audited and has been extracted from the management records of the Group.

## OPERATING AND FINANCIAL REVIEW

*The following review of the Group's results of operations and financial position covers the years ended 30 September 2013, 2014 and 2015. The financial information presented in this review has been extracted or derived from the consolidated financial statements and should be read together with such consolidated financial statements and related notes included elsewhere in this Prospectus.*

*Some of the information and statements contained in the following operating and financial review, including information with respect to the Group's plans and strategies for its business and expected sources of financing, constitute forward-looking statements that involve risk, uncertainties and assumptions. See the section "Important Information", "Forward-looking Statements" of this Prospectus. The Group's actual results may differ materially from those anticipated in these forward-looking statements as a result of a number of factors, including those set out in section "Risk Factors" of this Prospectus.*

### Overview

Following first production of chrome concentrates in 2009 and PGM concentrates in 2011, Tharisa Minerals has been steadily ramping up production and is now approaching steady state production at the Tharisa Mine. Steady state production guidance is 144 koz of contained PGMs on a 6E basis and 1.5 Mt of chrome concentrates per annum. During FY2015, the Group produced PGM concentrates containing 118.0 koz of contained PGMs on a 6E basis and 1.1 Mt of chrome concentrates (including production of chemical and foundry grade chrome concentrates produced by Arxo Metals).

### Critical accounting judgments in applying the Group's accounting policies

The preparation of the Group's financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and reported amounts of assets, liabilities, income and expenses.

The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgments about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis.

Judgments made by management in the application of IFRS that have a significant effect on the financial statements and major sources of estimation uncertainty are as follows:

#### **(a) Basis of consolidation**

The following accounting policies have been applied during the preparation of the Group's financials:

##### *Business combinations*

The Group accounts for business combinations using the acquisition method when control is transferred to the Group.

Goodwill represents the excess of:

- (i) The aggregate of the fair value of the consideration transferred, the amount of any non controlling interest in the acquiree and the fair value of the Group's previously held equity interest in the acquiree; over

- (ii) The net fair value of the acquiree's identifiable assets and liabilities measured as at the acquisition date.

When (ii) is greater than (i), then this excess is recognised immediately in profit or loss as a gain on a bargain purchase.

Goodwill is stated at cost less accumulated impairment losses. Goodwill arising on a business combination is allocated to each CGU, or groups of CGUs, that is expected to benefit from the synergies of the combination and is tested annually for impairment.

On disposal of a CGU during the year, any attributable amount of purchased goodwill is included in the calculation of the profit or loss on disposal.

#### *Subsidiaries and non controlling interests*

Subsidiaries are entities controlled by the Group. Control exists when the Group has the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities. In assessing control, potential voting rights that currently are exercisable are taken into account. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

Non-controlling interests represent the equity in a subsidiary not attributable directly or indirectly to the Company, and in respect of which the Group has not agreed any additional terms with the holders of those interests which would result in the Group as a whole having a contractual obligation in respect of those interests that meets the definition of a financial liability. For each business combination, the Group can elect to measure any non-controlling interests either at fair value or at their proportionate share of the subsidiary's net identifiable assets.

Non-controlling interests are presented in the consolidated statement of financial position within equity, separately from equity attributable to the owners of the Company. Non-controlling interests in the results of the Group are presented on the face of the consolidated statement of profit or loss and other comprehensive income as an allocation of the total profit or loss and total comprehensive income for the year between non-controlling interests and the owners of the Company.

Changes in the Group's interests in a subsidiary that do not result in a loss of control are accounted for as equity transactions, whereby adjustments are made to the amounts of controlling and non-controlling interests within consolidated equity to reflect the change in relative interests, but no adjustments are made to goodwill and no gain or loss is recognised.

When the Group loses control of a subsidiary, it is accounted for as a disposal of the entire interest in that subsidiary, with a resulting gain or loss being recognised in profit or loss. Any interest retained in that former subsidiary at the date when control is lost is recognised at fair value and this amount is regarded as the fair value on initial recognition of a financial asset.

#### *Transactions eliminated on consolidation*

Intra-group balances and transactions and any unrealised income and expenses arising from intra Group transactions are eliminated in preparing the consolidated financial statements. Unrealised losses resulting from intra-group transactions are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment.

### *Foreign operations*

The assets and liabilities of foreign operations including goodwill and fair value adjustments arising on acquisition, are translated to the presentation currency at exchange rates at the end of each reporting period. The income and expenses of foreign operations are translated to the presentation currency using the average rate for the year. Foreign currency differences are recognised in other comprehensive income and presented in the foreign currency translation reserve in equity. When a foreign operation is disposed of, the cumulative amount of the exchange differences relating to that foreign operation are transferred to profit or loss as part of the profit or loss on disposal.

### **(b) Revenue**

Revenue is measured at the fair value of the consideration received or receivable. Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Group and the revenue can be reliably measured. The following specific recognition criteria must also be met before revenue is recognised:

#### *Sale of chrome concentrates*

The Group enters into contracts for the sale of chrome concentrates. Revenue arising from chrome sales under these contracts is recognised when the price is determinable, the product has been delivered in accordance with the terms of the contract, the significant risks and rewards of ownership have been transferred to the customer, collection of the sale price is probable and associated costs can be reliably estimated. These criteria may vary per contract. As sales from chrome contracts are subject to a customer survey adjustment with regards to quality, sales are initially recorded on a provisional basis using management's best estimate of the chrome quality. Subsequent adjustments are recorded in revenue to take into account final adjustments, if different from the initial estimates.

#### *Sale of PGM concentrate*

Revenue from the sale of PGM concentrate is initially recognised at the estimated fair value of the consideration receivable at the date of delivery. Adjustments to the sale price occur based on movements in the metal market price and currency up to the date of final pricing. Final pricing is based on the monthly average market price in the month of settlement. The period between initial recognition and final pricing is typically four months. The revenue adjustment mechanism embedded within the sale arrangement has the characteristics of a commodity derivative. Accordingly the fair value of the final sales price adjustment is re estimated continuously and changes in fair value are recognised as a re-estimated adjustment to revenue in profit or loss and trade receivables in the statement of financial position.

### **(c) Other income**

#### *Rental income*

Rental income is recognised in profit and loss on a straight line basis over the term of the lease. Lease incentives granted are recognised as an integral part of the total rental income, over the term of the lease.

### **(d) Segmental reporting**

Operating segments, and the amounts of each segment item reported in the consolidated financial statements, are identified from the financial information provided regularly to the Group's management for the purposes of allocating resources to, and assessing the performance of, the Group's

various lines of business and geographical locations. The Group had two operating segments during the FY2015 reporting period, the PGM segment and the chrome segment.

**(e) Lease payments**

Payments under leases which do not transfer substantially all the risks and rewards of ownership to the Group are classified as operating leases. Operating lease payments are recognised in profit or loss on a straight line basis over the term of the lease. Lease incentives received are recognised as an integral part of the total lease expense, over the term of the lease.

**(f) Foreign currency transactions**

Transactions in foreign currencies are translated to the respective functional currencies of Group entities at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated to the functional currency at the foreign exchange rate at that date. The foreign currency gain or loss on monetary items is the difference between amortised cost in the functional currency at the beginning of the year, adjusted for effective interest and payments during the year, and the amortised cost in foreign currency translated at the exchange rate at the end of the year.

Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currency at the exchange rate at the date that the fair value was determined. Non-monetary items in a foreign currency that are measured in terms of historical cost are translated using the exchange rate at the date of the transaction. Foreign currency differences arising on retranslation are recognised in profit or loss.

**(g) Finance income and finance costs**

Finance income comprises interest income on funds invested, changes in fair value of financial assets at fair value through profit or loss and net foreign currency gains. Interest income is recognised in profit or loss as it accrues using the effective interest method.

Finance costs comprise interest expense on borrowings, bank charges, unwinding of the discount on provisions, impairment losses recognised on financial assets (other than trade receivables) and net foreign currency losses. Borrowing costs that are not directly attributable to the acquisition, construction or production of a qualifying asset (see note 3(l)) are recognised in profit or loss using the effective interest method.

Foreign currency gains and losses are reported on a net basis.

**(h) Employee benefits**

Provident funds

The Group's salaried employees in South Africa are members of defined contribution retirement benefit plans. The contributions to the plans range from a minimum of 3% to a maximum of 15% of staff's pensionable salary. Contributions to the plans vest immediately. Contributions are accrued in the year in which the associated services are rendered by employees.

The Group's employees in Cyprus and China do not participate in retirement benefit plans.

## Share based payment transactions

Equity settled share based payments to employees and others providing similar services are measured at the fair value of the equity instruments at the grant date. Details regarding the determination of the fair value of equity settled share based transactions are set out in the supporting notes.

The fair value determined at the grant date of the equity settled share based payments is expensed on a straight line basis over the vesting period, based on the company's estimate of equity instruments that will eventually vest, with a corresponding increase in the equity. At the end of each reporting period, the company revises its estimate of the number of equity instruments expected to vest. The amount recognized as an expense is adjusted to reflect the revision of the original estimate.

Equity settled share based payment transactions with parties other than the employees are measured at fair value of the goods and services received, except where that fair value cannot be estimated reliably, in which case they are measured at the fair value of the equity instruments granted, measured at the date the entity obtains the goods or the counterparty renders the service.

Where the Company has the right to elect settlement either equity settled or cash settled, the share based payment transactions will be treated as equity settled share based payments.

## Short term benefits

Liabilities for employee benefits for wages, salaries and annual leave that are expected to be settled within 12 months from the reporting date are calculated at undiscounted amounts based on remuneration rates that the Group expects to pay as at the reporting date including related costs, such as workers compensation insurance and payroll tax. Non-accumulating monetary benefits such as medical aid contribution are expensed as the benefits are taken by the employees.

## Termination benefits

Termination benefits are expensed at the earlier of when the Group can no longer withdraw the offer of those benefits and when the Group recognises costs for a restructuring. If benefits are not expected to be settled wholly within 12 months of the reporting date, then they are discounted.

## **(i) Tax**

Income tax comprises current and deferred taxes. Income tax is recognised in profit or loss except to the extent that it relates to items recognised in other comprehensive income or directly in equity, in which case it is recognised in other comprehensive income or directly in equity, respectively.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustments to tax payable in respect of previous years.

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the reporting date.

Apart from certain limited exceptions, all deferred tax liabilities and all deferred tax assets, to the extent that it is probable that future taxable profits will be available against which the asset can be utilised, are recognised. Future taxable profits that may support the recognition of deferred tax assets arising from deductible temporary differences include those that will arise from the reversal of existing taxable temporary differences, provided those differences relate to the same taxation authority and the

same taxable entity, and are expected to reverse either in the same period as the expected reversal of the deductible temporary difference or in periods into which a tax loss arising from the deferred tax asset can be carried back or forward. The same criteria are adopted when determining whether existing taxable temporary differences support the recognition of deferred tax assets arising from unused tax losses and credits, that is, those differences are taken into account if they relate to the same taxation authority and the same taxable entity, and are expected to reverse in a period, or periods, in which the tax loss or credit can be utilised.

The limited exceptions to recognition of deferred tax assets and liabilities are those temporary differences arising from goodwill not deductible for tax purposes, the initial recognition of assets or liabilities that affect neither accounting nor taxable profit (provided they are not part of a business combination), and temporary differences relating to investments in subsidiaries to the extent that, in the case of taxable differences, the Group controls the timing of the reversal and it is probable that the differences will not reverse in the foreseeable future, or in the case of deductible differences, unless it is probable that they will reverse in the future.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but which they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realised simultaneously.

A deferred tax asset is recognised for unused tax losses, tax credits and deductible temporary differences, to the extent that it is probable that future taxable profits will be available against which they can be utilised. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

Additional income taxes that arise from the distribution of dividends are recognised at the same time as the liability to pay the related dividend is established.

In determining the amount of current and deferred tax, the Group takes into account the impact of uncertain tax positions and whether additional taxes and interest may be due. This assessment relies on estimates and assumptions and may involve a series of judgements about future events. New information may become available that causes the Group to change its judgement regarding the adequacy of existing tax liabilities; such changes to tax liabilities will impact tax expense in the period that such a determination is made.

#### ***(j) Earnings per share***

The Group presents basic and diluted earnings per share data for its ordinary shares. Basic earnings per share is calculated by dividing the profit or loss attributable to ordinary shareholders of the Company by the weighted average number of ordinary shares outstanding during the period. Diluted earnings per share is determined by adjusting the profit or loss attributable to ordinary shareholders and the weighted average number of ordinary shares outstanding for the effects of all dilutive potential ordinary shares, which comprise instruments convertible into ordinary shares and share options granted to employees. The Group also presents headline earnings per share according to the JSE requirements, by adjusting the earnings as determined in International Accounting Standard 33, excluding separate identifiable re measurements, net of related tax (current and deferred) and related non controlling interests other than re measurements specifically included in headline earnings ("included re measurements").

If the number of ordinary or potential ordinary shares outstanding increases as a result of capitalisation, a bonus issue or a share split, or decreases as a result of a reverse share split before the consolidated financial statements are authorised for issue, the calculation of basic and diluted earnings per share for all periods presented are adjusted retrospectively, as if such changes to share capital had been effective since the beginning of the earliest period presented.

**(k) Dividends**

Dividends are recognised as a liability in the period they are declared according to International Accounting Standard 10.

**(l) Property, plant and equipment**

Mining assets and infrastructure

Mining assets and infrastructure typically include those costs incurred for the development of the mine, including the design of the mine plan, constructing and commissioning the facilities and preparation of the mine and necessary infrastructure for production. The mine development phase generally begins after completion of a feasibility study and ends upon the commencement of commercial production. Mining assets are measured at cost less accumulated depreciation and less any accumulated impairment losses. Expenditure, including evaluation costs, incurred to establish or expand productive capacity, to support and maintain that productive capacity prior to the commencement of commercial levels of production, are capitalised to assets under construction and transferred to mining plant and infrastructure when the mining venture reaches commercial production. Maintenance costs incurred to maintain current production are expensed.

The remaining useful life of mine and infrastructure is currently estimated to be 21 years.

Deferred stripping costs

All stripping costs incurred (costs incurred in removing overburden to expose the reef) during the production phase of a mine are treated as variable production costs and as a result are included in the cost of inventory during the period in which the stripping costs are incurred. However, any costs of overburden stripping in excess of the expected open pit life average stripping ratio are deferred. Any costs deferred are capitalised to property, plant and equipment. This asset is depreciated using the units of production method over the expected useful life of the identified component of the ore body that becomes more accessible as a result of the stripping activity.

General

General assets are initially measured at cost and are subsequently measured at cost less accumulated depreciation and less any accumulated impairment losses. The cost of self constructed assets includes the cost of materials, direct labour and an appropriate portion of normal production overheads. Directly attributable expenses relating to major capital projects and site preparation are capitalised until the asset is brought to a working condition for its intended use. These costs include dismantling and site restoration costs. Administrative and other general overhead costs are expensed as incurred. Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

Borrowing costs directly attributable to the construction or acquisition of qualifying assets are capitalised directly to the cost of the qualifying asset. To the extent that funds are borrowed specifically for the purpose of obtaining a qualifying asset, these borrowing costs shall be determined as the actual borrowing costs incurred on that borrowing.

To the extent that funds are borrowed generally and used for the purpose of obtaining a qualifying asset, the amount of borrowing costs shall be determined by applying a capitalisation rate to the expenditure on that asset. Borrowing costs specifically to finance the establishment of qualifying mining assets are capitalised until commercial levels of production are achieved. Otherwise, capitalisation of borrowing costs ceases when the asset is substantially complete.

Where an item of property, plant and equipment comprises major components with different useful lives, the components are accounted for as separate items of property, plant and equipment.

Expenditure incurred to replace a component of an item of property, plant and equipment that is accounted for separately, including major inspection and overhaul expenditure, is capitalised when the costs can be reliably measured and if it is probable that the future economic benefits embodied within the component will flow to the Group. The carrying amount of the replaced component, if any, are derecognised.

Maintenance and day to day servicing and repairs, which neither materially add to the value of assets nor appreciably prolong their useful lives, are recognised in profit or loss.

Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of the item and are recognised in profit or loss.

#### Government grants

Government grants are recognised as a deduction in the carrying amount of the item of property, plant and equipment they relate to, when there is reasonable assurance that they will be received, and the Group will comply with the conditions associated with the grant.

#### Depreciation

Depreciation of mining assets and infrastructure is calculated using the units of production method based on estimated economically recoverable Proved and Probable Mineral Reserves. Proved and Probable Reserves reflect estimated quantities of economically recoverable resources which can be recovered in the future from known mineral deposits. Depreciation is first charged on mining assets and infrastructure from the date on which they are available for use.

For other property, plant and equipment, depreciation is recognised in profit or loss on a straight line basis at rates that will reduce the carrying amounts to estimated residual values over the estimated useful lives of the assets. Leasehold improvements on premises occupied under operating leases are expensed over the shorter of the lease term and the useful lives.

Depreciation, unless otherwise stated, is calculated as follows:

- buildings at 10% per annum
- motor vehicles at 20% per annum
- computer equipment and software at 33.3% per annum
- office equipment between 10% and 33.3% per annum
- furniture at 20% per annum

No depreciation is provided on freehold land and mine development assets under construction.

Depreciation methods, residual values and useful lives are reviewed at least annually, and adjusted if appropriate, at each reporting date.

### **(m) Mineral Reserves**

The estimation of reserves impacts the amortisation of property, plant and equipment, the recoverable amount of property, plant and equipment and the timing of rehabilitation expenditure.

Factors impacting the determination of Proved and Probable Reserves:

- commodity prices;
- the grade of Mineral Reserves;
- unforeseen operational issues at the mine; and
- the reliability of the measurement of the fair value or cost of the asset.

### **(n) Inventories**

Inventories comprising PGM and chrome concentrates, ore stockpiled, in process metal contained in ore and consumable items are measured at the lower of cost and net realisable value. The cost is determined using the weighted average method and includes direct mining expenditure and an appropriate portion of overhead expenditure. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and costs to sell. Obsolete, redundant and slow moving inventories are identified and written down to net realisable value.

### **(o) Financial instruments**

Non-derivative financial assets

The Group initially recognises loans and receivables and deposits on the date that they are originated. All other financial assets (including assets designated at fair value through profit or loss) are recognised initially on the trade date, which is the date that the Group becomes a party to the contractual provisions of the instrument.

The Group derecognises a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows on the financial asset in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred. Any interest in transferred financial assets that is created or retained by the Group is recognised as a separate asset or liability.

On derecognition, the difference between the carrying amount of the financial asset and proceeds receivable and any prior adjustment to reflect fair value that had been reported in other comprehensive income and accumulated in equity are included in profit or loss for the period.

The Group's non-derivative financial assets include the following:

- Financial assets at fair value through profit or loss  
A financial asset is classified at fair value through profit or loss if it is classified as held for trading or is designated as such upon initial recognition. Financial assets are designated as at fair value through profit or loss if the Group manages such investments and makes purchase and sale decisions based on their fair value in accordance with the Group's documented risk management or investment strategy. Attributable transaction costs are recognised in profit or loss as incurred. Financial assets at fair value through profit or loss are measured at fair value and changes therein are recognised in profit or loss.
- Held to maturity investments

Held to maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturities that the Group's management has the positive intention and ability to hold to maturity and are included in non current assets, except for those with maturities within 12 months from the reporting date which are classified as current assets. Held to maturity investments are stated at amortised cost less impairment losses.

- Loans receivable

Loans receivable are initially measured at fair value plus any directly attributable transaction costs. Subsequent to initial recognition, the loans receivable are measured at amortised cost using the effective interest rate method. Unless otherwise stated, these balances have no fixed terms of repayment and are therefore deemed repayable on demand and deemed to have carrying values equal to their fair values.

- Trade and other receivables

Trade and other receivables originated by the Group are stated at their amortised cost less impairment losses, except where the receivables are interest free loans made to related parties without any fixed repayment terms or the effect of discounting would be immaterial. Appropriate allowances for estimated irrecoverable amounts are recognised in profit or loss when there is objective evidence that the asset is impaired. The allowance recognised is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the effective interest rate computed at initial recognition. Due to the short term nature of the Group's trade and other receivables, amortised cost approximates fair value.

#### Non-derivative financial liabilities

The Group initially recognises debt securities issued on the date that they are originated. All other financial liabilities are recognised initially on the trade date, which is the date that the Group becomes a party to the contractual provisions of the instrument.

The Group derecognises a financial liability when its contractual obligations are discharged, cancelled or expire. On derecognition, the difference between the carrying amount of the financial liability, including related unamortised costs, and the amount paid for it is included in profit or loss.

Non-derivative financial liabilities are recognised initially at fair value less any directly attributable transaction costs. Subsequent to initial recognition, these financial liabilities are measured at amortised cost using the effective interest rate method.

The Group's non-derivative financial liabilities include the following:

#### Trade and other payables

Trade and other payables are stated at amortised cost. Due to the short term nature of the Group's trade and other payables, amortised cost approximates fair value.

#### Interest bearing borrowings

Interest bearing borrowings are stated at amortised cost, using the effective interest rate method, with any difference between cost and redemption value being recognised in profit or loss over the period of the borrowings on an effective interest rate basis.

#### Redeemable preference shares

Redeemable preference shares are classified as a liability if they are redeemable on a specific date or at the option of the preference shareholders, or if dividend payments are not discretionary. The liability is recognised in accordance with the Group's policy for interest bearing borrowings. Dividends on redeemable preference shares are recognised as a liability and recognised as an interest expense using the effective interest rate method.

Financial liabilities at fair value through profit or loss:

The Group's financial liabilities at fair value through profit or loss include the following:

#### Hybrid financial liabilities

A hybrid financial liability includes a non-derivative host contract and one or more embedded derivatives with the effect that some of the cash flows of the instrument vary in a way similar to a stand alone derivative. The Group designates the entire hybrid liability as a financial liability at fair value through profit or loss unless:

- (a) the embedded derivative(s) does not significantly modify the cash flows that otherwise would be required by the contract; or
- (b) it is clear with little or no analysis when a similar hybrid instrument is first considered that separation of the embedded derivative(s) is prohibited, such as a prepayment option embedded in a loan that permits the holder to pre-pay the loan for approximately its amortised cost.

Hybrid financial liabilities are recognised initially at fair value. Transaction costs that relate to the issue of the liabilities are recognised immediately in profit or loss. At the end of each reporting period the fair value is re measured. The gain or loss on re measurement to fair value is recognised immediately in profit or loss.

#### Derivative financial instruments

Derivative financial instruments are recognised initially at fair value and any attributable transaction costs are recognised in profit or loss. At the end of each reporting period the fair value is remeasured. The gain or loss on remeasurement to fair value is recognised immediately in profit or loss.

Financial assets and liabilities are offset and the net amount presented in the statement of financial position when, and only when, the Group has a legal right to offset the amounts and intends either to settle on a net basis or to realise the asset and settle the liability simultaneously.

The fair value of financial instruments traded on an organised financial market is measured at the applicable quoted prices. The fair value of financial instruments not traded on an organised financial market is determined using a variety of methods and assumptions that are based on market conditions and risks existing at the reporting date, including independent appraisals and discounted cash flow methods.

#### **(p) Impairment**

##### Financial assets

Financial assets are assessed at each reporting date to determine whether there is any objective evidence that they are impaired. A financial asset is considered to be impaired if objective evidence indicates that a loss event has occurred after the initial recognition and the loss event had a negative effect on the estimated future cash flows of that asset, that can be estimated reliably.

Objective evidence of impairment includes observable data that comes to the attention of the Group about one or more of the following loss events:

- significant financial difficulty of the debtor;
- a breach of contract, such as a default or delinquency in interest or principal payments;
- its becoming probable that the debtor will enter bankruptcy or other financial reorganisation;
- significant changes in the technological, market, economic or legal environment that have an adverse effect on the debtor; and
- a significant or prolonged decline in the fair value of an investment in an equity instrument below its cost.

If any such evidence exists, any impairment loss is determined and recognised as follows:

An impairment loss in respect of a financial asset measured at amortised cost is calculated as the difference between its carrying amount and the present value of the estimated future cash flows discounted at the original effective interest rate. Individually significant financial assets are tested for impairment on an individual basis. The remaining financial assets are assessed collectively in groups that share similar credit risk characteristics.

All impairment losses are recognised in profit or loss and reflected in an allowance account against such financial assets. An impairment loss is reversed if the reversal can be related objectively to an event occurring after the impairment loss was recognised. The reversal is recognised in profit or loss.

#### Non financial assets

The carrying amounts of the Group's non financial assets, other than inventories and deferred tax assets, are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable amount is estimated. For goodwill and intangible assets that have indefinite lives or are not yet available for use, the recoverable amount is estimated annually whether or not there is any indication of impairment. An impairment loss is recognised whenever the carrying amount of an asset or its related CGU exceeds its recoverable amount. A CGU is the smallest identifiable asset group that generates cash flows that are largely independent from other assets and groups. Impairment losses are recognised in profit or loss. Impairment losses recognised in respect of CGUs are allocated first to reduce the carrying amount of any goodwill allocated to the CGUs (group of units) and then, to reduce the carrying amount of the other assets in the CGU (group of units) on a pro rata basis.

The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre tax discount rate that reflects current market assessments of the time value of money and the risks specific to the assets. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash flows from continuing use that are largely independent of the cash inflows of the other assets of the CGU.

For the purposes of goodwill impairment testing, goodwill acquired in a business combination is allocated to groups of CGUs that are expected to benefit from the synergies of the combination.

An impairment loss in respect of goodwill is not reversed. In respect of other assets, impairment losses recognised in prior periods are assessed at each reporting date for any indication that the loss has

decreased or no longer exists. An impairment loss is reversed through profit or loss if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

**(q) Provisions**

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events where it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate of the amount of the obligation can be made. Provisions are determined by discounting the expected future cash flows at a pre tax rate that reflects current market assessments of the time value of money and the risks specific to the liability.

Long term environmental obligations are based on the Group's environmental management plans, in compliance with the current environmental and regulatory requirements.

Where it is not possible that an outflow of economic benefits will be required, or the amount cannot be estimated reliably, the obligation is disclosed as a contingent liability, unless the probability of outflow of economic benefits is remote. Possible obligations, whose existence will only be confirmed by the occurrence or non occurrence of one or more future events are disclosed as contingent liabilities unless the probability of outflow of economic benefits is remote.

**Rehabilitation costs**

The net present value of estimated future costs for mine closure and rehabilitation is recognised and provided for in the consolidated financial statements and capitalised within mining assets on initial recognition. Rehabilitation will generally occur on closure or after closure of a mine. Initial recognition of the provision is at the time that the disturbance occurs and thereafter as and when additional disturbances take place.

The estimates are reviewed bi-annually to take into account the effects of inflation and changes in estimates and are discounted using rates that reflect the time value of money. Bi-annual increases in the provision due to the passage of time are recognised in profit or loss as an unwinding of the value of the provision expense. The present value of additional disturbances and changes in the estimate of the rehabilitation liability are taken to inventory as a direct cost against an increase in the rehabilitation provision. The rehabilitation asset is depreciated as per the Group's accounting policy on depreciation. Rehabilitation projects undertaken, included in the estimates, are charged to the provision as incurred.

Costs for restoration and rehabilitation which are created on an ongoing basis during production of inventories are provided for at their net present values and included as part of inventory costs. Environmental liabilities, other than rehabilitation costs, which relate to liabilities arising from specific events, are recognised in the consolidated statement of financial position when they are known, probable and may be reasonably estimated.

Gains or losses from the expected disposal of assets are not taken into account when determining the provision.

**(r) Cash and cash equivalents**

Cash and cash equivalents comprise cash at bank and in hand, demand deposits with banks and other financial institutions, and short-term, highly liquid investments that are readily convertible into known amounts of cash and which are subject to an insignificant risk of changes in value, having been within three months of maturity at acquisition.

**(s) Long term deposits**

Long term deposits is cash and cash equivalents restricted and designated as a "debt service reserve account" as required in terms of the senior debt facility.

**(t) Share capital**

The share capital is stated at nominal value. The difference between the fair value of the consideration received by the Company and the nominal value of the share capital being issued is taken to the share premium account. Incremental costs directly attributable to the issue of ordinary shares are recognised as a deduction from equity, net of any tax effects.

**(u) Related party transactions**

For the purpose of these consolidated financial statements, a party is considered to be related to the Group if:

- i) The party has the ability, directly or indirectly through one or more intermediaries, to control the Group or exercise significant influence over the Group in making financial and operating policy decisions, or has joint control over the Group;
- ii) The Group and the party are subject to common control;
- iii) The party is an associate of the Group or a joint venture in which the Group is a venturer;
- iv) The party is a member of key management personnel of the Group or the Group's parent, or a close family member of such individual, or is an entity under the control, joint control or significant influence of such individuals;
- v) The party is a close family member of a party referred to in (i) or is an entity under the control, joint control or significant influence of such individuals; or
- vi) The party is a post employment benefit plan which is for the benefit of employees of the Group or of any entity that is a related party of the Group.

Close family members of an individual are those family members who may be expected to influence, or be influenced by, that individual in their dealings with the Group.

**(v) Comparatives**

Where necessary, comparative figures have been adjusted to conform to changes in presentation in the current year.

**(w) Events after the reporting period**

Assets and liabilities are adjusted for events that occurred during the period from the reporting date to the date of approval of the financial statements by the Board of Directors, when these events provide additional information for the valuation of amounts relating to events existing at the reporting date or imply that the going concern concept in relation to part or whole of the Group is not appropriate.

**Use of estimates**

The preparation of the consolidated financial statements in conformity with IFRS requires management to make judgements, estimates and assumptions that affect the application of accounting policies and reported amounts of assets, liabilities, income and expenses. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgements about carrying values of assets and liabilities that are not readily available from other sources. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an

ongoing basis. Revisions to accounting estimates are recognised in the period, in which the estimate is revised if the revision affects only that period, or in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Judgements made by management in the application of IFRS that have a significant effect on the consolidated financial statements and major sources of estimation uncertainty are as follows:

#### *Impairment of assets*

The recoverable amount of each non-financial asset or cash-generating unit ('CGU') is determined as the higher of the value-in-use and fair value less costs to sell, in accordance with the Group's accounting policies. Determination of the value-in-use of an asset or CGU based on a discounted cash flow model requires the use of estimates and assumptions, including the appropriate rate at which to discount the cash flows and expected life of the asset or CGU, exchange rates, commodity prices, ore reserves, future capital requirements and future operating performance. Changes in these estimates and assumptions impact the recoverable amount of the asset or the CGU and, accordingly, could result in an adjustment to the carrying amount of that asset or CGU.

#### *Mineral Reserves*

Economically recoverable ore reserves represent the estimated quantity of product in an area of interest that can be expected to be profitably extracted, processed and sold under current and foreseeable economic conditions. The determination of ore reserves includes estimates and assumptions about a range of geological, technical and economic factors, including quantities, grades, production techniques, recovery rates, production costs, transport costs, commodity demand, commodity prices and exchange rates. Changes in ore reserves impact the assessment of recoverability of exploration and evaluation of assets, property, plant and equipment, the carrying amount of assets depreciated on a units of production basis, provision for site rehabilitation and the recognition of deferred tax assets, including tax losses.

#### *Rehabilitation provision*

The Group's mining and exploration activities are subject to various laws and regulations governing the protection of the environment. The Group recognises management's best estimate for asset retirement obligations in the period in which they are incurred. Actual costs incurred in future periods can differ materially from these estimates. Additionally, future changes to environmental laws and regulations, life of mine estimates and discount rates can affect the carrying amount of the provision. The estimated long-term environmental provision, comprising rehabilitation and mine closure is based on the Group's environmental policy taking into account the current technological, environmental and regulatory requirements. The provision for future rehabilitation was determined using calculations which required the use of estimates.

#### *Inventories*

Net realisable value tests are performed at least annually based on the estimated future sales price of the products based on prevailing metal prices, less estimated costs to complete production and bring the product to sale. The nature of net realisable value test inherently limits the ability to precisely monitor recoverability levels and may result in additional write-downs of inventories in future periods.

## Summary of key financial risks

The activities of the Group expose it to a variety of financial risks including market, commodity prices, credit liquidity, counterparty credit, country, foreign exchange and interest rate risks. These risks are managed under charters developed by the Risk Committee and approved by the Board. The Risk Committee reviews management reports on the adequacy and effectiveness of the Group's risk management policies. The Group's principle financial instruments, other than trade receivables and trade payables arising directly from operations, comprise cash and short term deposits, loans and receivables, financial instruments at fair value through profit and loss, borrowings, other financial liabilities and other payables.

## Significant factors affecting results of operations

The Directors consider that the following factors are those which are most likely to impact the financial position and results from operations of the Group.

### *Commodity prices*

The prices that the Group receives for its PGM and chrome concentrates are an important driver of the business as the Group generates revenue almost exclusively from the sale of these products. As a result, changes in the market prices of PGM and chrome products have a direct impact on the results of the Group, primarily revenue and costs associated with royalty payments. The Group does not currently enter into any hedging arrangements with relation to chrome prices.

A summary of the average prices of the Group's PGM and chrome products for the financial years ended 30 September 2013, 2014 and 2015 and the six months ended 31 March 2016 is set out below.

		H1 2016*	2015	2014	2013
PGM contained metal basket price	US\$/oz	686	885	1 103	1 132
42% metallurgical grade chrome concentrate contract price	US\$/t CIF China	106	158	158	165

Source: Tharisa, \*Unaudited management accounts

While the auditor's reports on the consolidated financial statements of the Company for the years ended 30 September 2013, 2014 and 2015 do not contain any qualifications, shareholders' attention was drawn to the consolidated financial statements for the years ended 30 September 2014 and 2015, by way of emphasis of matter to the disclosure on "going concern", as a result of weakening global commodity prices and the ZAR against the US\$ exchange rate. For more information, refer to section "SELECTED HISTORICAL FINANCIAL INFORMATION", "Statutory Auditors".

Refer to section "PGM AND THE CHROME CONCENTRATE INDUSTRIES" for further information regarding the market for PGMs and chrome.

### *Production volumes*

The financial position and results of operations of the Group depend to a large degree on the level of production of PGM and chrome products from the Tharisa Mine. A number of factors may influence production volumes and cause deviance from the Group's forecasts and budgets; these include changes in mining rates, variations in the grade of ore mined and delivered to the processing plant when

compared with the mine plan, fluctuations in recovery rates, availability of the Genesis, Voyager and Challenger Plants and the availability of supplies including electricity.

A summary of the Group's PGM and chrome production for the financial years ended 30 September 2013, 2014 and 2015, and the six months to 31 March 2016 is set out below.

		<b>H1 2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>
PGM ounces produced	6E koz	60.0	118.0	78.2	57.4
Chrome concentrates produced	kt	604.4	1 122.2	1 085.2	1 192.8
Metallurgical grade	kt	498.6	1 009.4	937.0	1 130.3
Foundry and chemical grade	kt	105.8	112.8	148.2	62.5

Source: Tharisa, \*Unaudited Management Accounts

### *Operating costs*

The control of operating costs at the Tharisa Mine is one of the main drivers of the financial position and operating results of the Group. The key components of operating cost include the prices of inputs such as mining contractors, labour, electricity and fuel. The prices of each of these inputs are largely independent of each other and fluctuate as a response to different supply and demand drivers.

Unit operating costs are not only dependent on the costs of inputs but also on the overall productivity of mining and processing operations. Productivity levels can be influenced by availability of mining equipment, availability of the Genesis, Voyager and Challenger processing plants, factors influencing ore grade and recovery, and in particular adjustments that may need to be made to processing plant operations at times of electricity load shedding.

### *Capital expenditure*

The capital expenditure of the Group can be classified into either expenditure on investment projects or sustaining capital expenditure. The level of capital expenditure will have a direct impact on the results of the Group both on a cash flow basis as expenditure is made and on income as existing plant, property and equipment is depreciated. A number of variables will affect the level of depreciation including levels of capital expenditure and estimates of useful life of assets.

Capital expenditure on investment projects at the Tharisa Mine is largely complete except for expenditure relating to certain optimisation initiatives being evaluated by the Tharisa Mine.

### *Foreign exchange rates*

The Group sells its products in prices that are typically denominated in US\$, and as such the majority of the Group's revenues are earned in this currency. The functional currency of the Group is therefore the US\$, however a significant proportion of the Group's costs are incurred in ZAR.

Given that revenues and costs are largely denominated in different currencies any fluctuation in the foreign exchange rates of currencies in which the Group operates, but primarily the US\$ and ZAR, will have an impact, either positive or negative, on the Groups operating results. The Group also has exposure to foreign exchange risk given that it currently has net monetary liabilities denominated in

currencies other than its functional currency, primarily ZAR denominated senior secured bank borrowings.

A summary of the average ZAR to US\$ exchange rate for the financial years ended 30 September 2013, 2014 and 2015, the six months ended 31 March 2016 and as at the Last Practical Date is set out below.

		As at the Last Practical Date	H1 2016	2015	2014	2013
Average exchange rate	ZAR:US\$	15.8	15.0	12.0	10.6	9.2

Source: Tharisa

The following chart sets out the historical US\$:ZAR exchange rate from 1 October 2012 until the Last Practical Date:



Source: Factset

### Interest rates

The Group is affected by changes in interest rates, in particular fluctuations in JIBAR, which has a direct impact on the cost of servicing the Group's senior secured bank borrowings. A summary of the JIBAR rates at the stated dates is set out below.

	31 March 2016	30 September 2015	30 September 2014	30 September 2013
JIBAR (3 month)	7.2	6.3	6.1	5.1

Source: Johannesburg Stock Exchange

### Disclosure about market risk

#### Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates, will affect the Group's income and the values of its financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return.

### Currency risk

Currency risk is the risk that the value of the financial instruments will fluctuate due to changes in foreign exchange rates. Currency risk arises when future commercial transactions and recognised assets and liabilities are denominated in a currency that is not the Group's financial currency.

The Group is exposed to currency risk on transactions that are denominated in a currency other than the respective functional currency of the Group entities. These currency risk exposures arise primarily from exchange rate movements in ZAR, Euro, British Sterling and US\$.

Management is aware of the above risk. Currency risk arising from currency fluctuations is monitored on a regular basis and management is taking steps deemed necessary to manage the corresponding risk. Financial risk management may not be possible for instance where weakened commodity prices persist, forecast production is not achieved and further funding is not raised, which circumstances may create a material uncertainty in relation to the going concern of the Group.

The following table details the Group's exposure as at 30 September 2015 and 2014 at the end of each reporting period to currency risk arising from the recognised assets and liabilities denominated in a currency other than the functional currency of the entity to which they relate. Exposures in US\$ relate to recognised assets and liabilities denominated in US\$ of entities of the Group that have a functional currency other than US\$. For presentation purposes, the amounts of the exposure are shown in US\$, translated using the spot rate at the reporting date. The spot rate used at the reporting date against the US\$ are a) US\$:ZAR14.03 (2014: 11.26); b) US\$:EUR0.89 (2014: 0.79) and c) US\$:STG0.66 (2014: 0.62). Differences resulting from the translation of the financial statements of foreign operations into the Group's presentation currency are excluded.

At the reporting date, the Group's exposure to currency risk was as follows:

Amounts in US\$'000	30 September 2015				30 September 2014			
	US\$	ZAR	EUR	STG	US\$	ZAR	EUR	STG
Other financial assets	-	-	55	-	-	-	86	-
Trade and other receivables	753	5	108	2	-	12	91	-
Cash and cash equivalents	11 994	14	27	4	4 226	2 726	67	2
Trade and other payables	(1 314)	(119)	(323)	(14)	-	(35)	(355)	(1)
Current taxation	-	-	38	-	-	-	(371)	-
	11 433	(100)	(95)	(8)	4 226	2 703	(482)	1

A 10% strengthening of the US\$ against the above currencies at the reporting date would have changed profits/(losses) and equity by the amount shown below. This analysis assumes that all other variables, and in particular interest rates, remain constant. The analysis has been performed on the same basis for each reporting date.

Amounts in US\$ '000	30 September 2015	30 September 2014
	Increase/(decrease) in profit for the year and accumulated losses	(Decrease)/increase in loss for the year and accumulated losses
ZAR	9	(246)
EUR	9	44
US\$	(748)	(488)
STG	1	-

A 10% weakening of the US\$ against the above currencies at each reporting date would have had an equal but opposite effect to the amounts shown above, on the basis that all other variables remain constant.

*Interest rate risk*

Interest rate risk is the Group's exposure to adverse movements in interest rates. It arises as a result of timing differences on the repricing of assets and liabilities. Management is aware of the above risk. Interest rate risk is monitored on a regular basis and management is taking steps deemed necessary to manage the corresponding risk.

As at 30 September 2014 and 2015, the interest rate profile of the Group was as follows:

	Financial Years ended 30 September			
	2015 %	2014 %	2015 US\$ '000	2014 US\$ '000
Variable rate financial assets				
Investments in cash funds and income funds	3.5%	3.5%	1 632	4 969
Cash and cash equivalents	5.5% - 5.7%	4.6% - 5.3%	18 525	7 828
			20 157	12 797
Variable rate financial liabilities				
Secured bank borrowings	JIBAR + 4.9%	JIBAR + 3.9%	50 675	81 232
Other borrowings – loan payable to third party	ZAR prime	ZAR prime	-	1 985
Other borrowings – bank credit and other facility	US libor + 1.5% - 2.5%	US libor + 1.5% - 2.5%	17 298	9 775
Other borrowings – loans payable to related parties	ZAR prime + 2%	ZAR prime + 2%	1 884	2 217
Interest bearing – accrued dividends	ZAR prime + 2%	ZAR prime + 2%	4 568	5 433
Other borrowings – obligation under new loan	7.92%		164	-
			74 589	100 642

A change of 100 basis points in interest rates at each reporting date would have changed the profits/(losses) and equity by the amounts shown below. This analysis assumes that all other variables, and in particular foreign currency rates, remain constant. The analysis has been performed on the same basis as at 30 September 2014 and 2015.

Amounts in US\$'000	30 September 2015	30 September 2014
	Increase/(decrease) in profit for the year and accumulated losses	Increase/ (decrease) in loss for the year and accumulated losses
Investments in cash funds and income funds	12	36
Cash and cash equivalents	133	64

Secured bank borrowings	(365)	(585)
Other borrowings – loan payable to third party	-	(14)
Other borrowings – bank credit and other facility	(151)	(86)
Other borrowings – loans payable to related parties	(14)	(16)
Interest bearing – accrued dividends	(33)	(39)
Other borrowings – obligation under new loan	(1)	-
	(419)	(640)

A decrease of 100 basis points in interest rates as at 30 September 2014 and 2015 would have had an equal but opposite effect to the amounts shown above, on the basis that all other variables remain constant.

### Current trading and prospects

The following table sets out the key operational parameters of the Tharisa Mine on a quarterly basis for the six months ended 31 March 2016.

		Quarter ended 31-Mar-16	Quarter ended 31-Dec-15	Half year ended 31-Mar-16
Reef mined	kt	1 234.2	1 124.4	2 358.6
Stripping ratio	m <sup>3</sup> waste / m <sup>3</sup> reef	7.1	6.4	6.8
Reef milled	kt	1 199.6	997.4	2 197.0
PGM flotation feed tonnes	kt	942.3	765.8	1 708.1
PGM rougher feed grade	g/t	1.74	1.61	1.68
6E PGMs produced	koz	36.0	24.0	60.0
PGM recovery	%	68.5	60.4	65.0
Average PGM contained metal basket price	US\$/oz	685	687	686
Average PGM contained metal basket price	ZAR/oz	10 849	9 865	10 448
Cr <sub>2</sub> O <sub>3</sub> ROM grade	%	18.3	18.5	18.4
Chrome recovery	%	63.9	61.5	62.8
Chrome yield	%	27.7	27.3	27.5
Chrome concentrates produced	kt	332.3	272.1	604.4
Metallurgical grade	kt	259.9	238.7	498.6
Specialty grades	kt	72.4	33.4	105.8
Metallurgical grade chrome concentrate contract price	US\$/t CIF China	81	124	106
Metallurgical grade chrome concentrate contract price	ZAR/t CIF China	1 262	1 777	1 562
Average exchange rate	ZAR:US\$	15.8	14.2	15.0

Source: Tharisa

The quarter ended 31 March 2016 saw the Group record improvements in a number of key areas, including reef mined exceeding the steady state required run rate of 4.8 Mtpa, mill throughput

performing at nameplate design capacity of 400 ktpm and contained PGM production on a 6E basis meeting the steady state production level of 144 koz (all on an annualised basis).

This followed on from improvements in the quarter ended 31 December 2015, where despite the revision to a single mining contractor during the period and a number of safety related stoppages there were improvements in total reef mined. A number of section 54 instructions were issued by the DMR in the quarter resulting in a loss of approximately 42 weighted production shifts (approximately 15.1% of mill throughput).

A continuing focus on opening up access to the full mining strike length and benefits of maintaining the correct multi-reef layer profile are being realised in terms of mine costs and consistency of plant feed grades, resulting in improved recoveries. The improved reef mining has increased ROM stockpiles ahead of the mills and has allowed for improved reef layer blending and better feed grade consistency, resulting in improved plant recoveries and running times.

In the quarter ended 31 December 2015, the suspension of the mining operations following a fatality on 28 September 2015 resulted in the ROM stockpiles being substantially depleted. Accordingly, during that quarter a non-optimal blend of reef was fed into the plants, this has had a negative impact on production, which has now been rectified and is shown in increased production in the quarter ended 31 March 2016.

Production of PGMs on a 6E basis for the quarter ended 31 March 2016 (on an annualised basis) achieved steady state production of 144.0 koz per annum. The focus on improving the recoveries continues, with PGM production previously impacted by the planned processing of weathered ore extracted from the free dig Far West Pit and the opening up of the western section of the central pit. Recoveries are now returning to nearer the target recovery of 70% with the processing of unweathered ore in the quarter ended 31 March 2016.

The Voyager chrome processing circuit was modified to facilitate an increase in the production of higher value specialty grade chrome concentrates on the back of depressed metallurgical grade chrome concentrate prices. This flexibility has allowed chrome production to be distributed to more globally diversified markets. The circuit modification has resulted in improved chrome recoveries nearing the 65% target without impacting PGM recoveries.

### **Recent developments**

Subsequent to the end of FY 2015, US\$ global commodity prices continued to weaken significantly. The chrome concentrate contract price came under pressure during the first half of the FY2016, following the devaluation of the Renminbi against the US\$. This, coupled with the continued slowdown in the Chinese economy, resulted in not only reduced pricing but also product demand.

There was a marked decline in the average metallurgical grade chrome concentrate price achieved from an average of US\$158 per tonne in FY 2015 to US\$106 per tonne for the first half of FY 2016. Both chrome concentrate prices and demand have recorded a recovery during the third quarter of FY 2016 as demand returns to previous levels with current transaction prices at approximately US\$145 per tonne.

To mitigate the downward pricing pressure, the product mix of the Group was changed following the successful modification of the Voyager Plant chrome processing circuit to produce increased volumes of higher value add specialty chrome concentrates.

In regard to the CTA (see section “*ADDITIONAL INFORMATION*”, “*Material Contracts*”), the Facility Lenders extended the date by which the technical and economic completion tests need to be completed to 28 November 2016 and condoned the non-compliance by Tharisa Minerals of the required historic DSCR at 31 March 2016.

On 23 February 2016 the Group’s Hong Kong based bankers advised that no further utilisation of the US\$12.5 million packing credit facility (pre shipment finance), would be permitted past 29 February 2016. The Group’s bankers continue to provide post shipment finance and the Group continues to enter into appropriate chrome concentrate pre-pay arrangements.

### Revenue Analysis

For FY 2015, the processing plants performed well when they were fed with consistent ROM feed. Plant throughput in FY 2015 equated to 91.6% of combined nameplate capacity of the processing plants.

The overall performance across both plants saw a marked improvement in PGM recoveries of 65.8%, which demonstrate the benefits of the high energy flotation circuit, which was commissioned in September 2014. There was a slight decrease in chrome recoveries of 1.4% year on year. This decrease can mainly be attributable to lower and unstable chrome feed grades into the chrome plants as well as reprocessing of commissioning tails. The average chrome recovery across all plants was 58.0%, falling short of the planned 65%.

Chrome concentrate sales totalled 1.1 Mt, 95.9 kt of which was higher value-add chemical and foundry grade chrome concentrates with the bulk of the production being metallurgical grade chrome concentrate.

Chrome concentrate sales for FY 2015 were in line with those of the previous Financial Year (FY 2014) at 1.2 Mt.

The segmental contribution to revenue and gross profit from PGM and chrome concentrates for the year ended 30 September is summarised below:

US\$ millions	2015				2014				2013		
	PGMs	Chrome	Total	YoY% change	PGMs	Chrome	Total	YoY% change	PGMs	Chrome	Total
Revenue	83.1	163.7	246.8	3%	70.4	170.3	240.7	12%	54.3	161.2	215.5
Cost of sales*	63.9	139.8	203.7	-2%	53.5	154.6	208.1	10%	50.5	139.1	189.6
Gross profit	19.2	23.9	43.1	32%	16.9	15.7	32.6	26%	3.8	22.1	25.9
<i>Gross profit margin</i>	<i>23.1%</i>	<i>14.6%</i>	<i>17.5%</i>	<i>30%</i>	<i>24.0%</i>	<i>9.2%</i>	<i>13.5%</i>	<i>13%</i>	<i>7.0%</i>	<i>13.7%</i>	<i>12.0%</i>

\* The allocation of the shared costs of producing PGMs and chrome concentrates was, in accordance with the accounting policy, revised in FY 2015 to an equal sharing from the previous allocation of 40% to PGMs and 60% to chrome concentrates.

The following table sets out information about the geographical location of the Group’s revenue from external customers. The geographical location analysis of revenue from external customers is based on the country of establishment of each customer.

Revenue from external customers	Year ended 30 September				
	2015 US\$'000	YoY% change	2014 US\$'000	YoY% change	2013 US\$'000
China	65 432	-8%	71 136	-24%	93 509
South Africa	95 038	1%	94 187	71%	55 011
Singapore	7 927	-71%	27 220	-26%	36 820
Hong Kong	55 175	47%	37 653	34%	28 174
South Korea	10 673	-	-	-	-
Other countries	12 537	19%	10 535	443%	1 941
<b>Total</b>	<b>246 782</b>	<b>3%</b>	<b>240 731</b>	<b>12%</b>	<b>215 455</b>

### Results of operations

The following table summarises the audited consolidated operating results of the Group including the YoY and change in the period 2013 to 2014 and 2014 to 2015:

	Years ended 30 September				
	2015 US\$'000	YoY% change	2014 US\$'000	YoY% change	2013 US\$'000
Revenue	246 782	3%	240 731	12%	215 455
Cost of sales	(203 692)	-2%	(208 119)	10%	(189 570)
Gross Profit	43 090	32%	32 612	26%	25 885
Other Income	42	-72%	149	210%	48
Administrative expenses	(24 777)	-8%	(26 908)	1%	(26 596)
Results from operating activities	18 355	214%	5 853	-	(663)
Finance income	1 185	32%	897	4%	863
Finance costs	(11 855)	-15%	(13 996)	-5%	(14 744)
Changes in fair value of financial assets at fair value through profit or loss	(25)	-96%	(659)	-	0
Changes in fair value of financial liabilities at fair value through profit or loss	1 972	-	(32 420)	-33%	(48 424)
Net finance costs	(8 723)	-81%	(46 178)	-26%	(62 305)
Profit/(loss) before tax	9 632	-	(40 325)	-36%	(62 968)
Tax	(3 617)	-75%	(14 548)	-	15 525
Profit/(loss) after tax	6 015	-	(54 873)	16%	(47 443)

### **Financial Year ended 30 September 2015 compared to the Financial Year ended 30 September 2014**

The Group achieved a net profit after tax of US\$6.0 million for the year ended 30 September 2015 with the net profit margin amounting to 2.4%, from a loss of US\$54.9 million for the year ended 30 September 2014. The major items contributing to the increase in net profit are as follows:

#### *Revenue (increase of US\$6.1 million or 3%)*

Revenue increased from US\$240.7 million in FY 2014 to US\$246.8 million in FY 2015, an increase of US\$6.1 million. Revenue comprised US\$83.1 million from the sale of PGM concentrate and US\$163.7 million from the sale of chrome concentrates. The increase in revenue was largely due to increased PGM concentrate sales, notwithstanding a decrease in the average PGM basket price from US\$1 103/oz to US\$885/oz. PGM concentrate sales increased from 80.4 koz to 119.9 koz, an increase of 39.5 koz. Chrome concentrate sales were substantially unchanged year on year and the metallurgical grade chrome concentrate price remained at US\$158/tonne on average.

#### *Cost of sales (decrease of US\$4.4million or 2%)*

Cost of sales decreased from US\$208.1 million in FY 2014 to US\$203.7 million in FY 2015, a decrease of US\$4.4 million. The majority of the cost of sales (excluding the freight related selling expenses) are ZAR based costs. With the weakening of the ZAR against the US\$ (10.6 during FY2014 to 12.0 during FY2015), the Group benefited from an overall reduction in the cost base in US\$ terms. Importantly there was a significant reduction in the unit freight costs for bulk shipments of chrome concentrates with the transport cost of chrome concentrates on a CIF main ports China basis reducing from US\$65/tonne to US\$56/tonne.

#### *Administrative expenses (decrease of US\$2.1 million or 8%)*

Administrative expenses decreased from US\$26.9 million in FY 2014 to US\$24.8 million in FY 2015, a decrease of US\$2.1 million. Administrative expenses for the FY 2014 included a non-recurring cost of US\$2.6 million incurred for the listing of the Company on the JSE. Administrative expenses included the expenses incurred from share based payments arising from the conditional awards and appreciation rights awarded to employees of the Group and consultants.

#### *Net finance costs (decrease of US\$37.5 million)*

Net finance costs decreased by 81% from US\$46.2 million in FY 2014 to US\$8.7 million in FY 2015.

This was mainly attributed to item 'Changes in fair value of financial liabilities at fair value through profit or loss' which changed from a loss of US\$32.4 million to a gain of US\$2.0 million. Following the listing of the Company on the JSE, the preference share liability was converted into Ordinary Shares resulting in a substantial decrease in changes in fair value of financial liabilities at fair value through profit or loss, being a non-recurring finance cost.

### **Financial Year ended 30 September 2014 compared to the Financial Year ended 30 September 2013**

The net loss after tax of the Group in the year ended 30 September 2014 amounted to US\$54.9 million, in comparison to a loss of US\$47.4 million for the year ended 30 September 2013. The major items contributing to the variance are as follows.

#### *Revenue (increase of US\$25.2 million or 12%)*

Revenue increased from US\$215.5 million in FY 2013 to US\$240.7 million in FY 2014, an increase of US\$25.2 million. Revenue in FY 2014 comprised US\$70.4 million from the sale of PGM concentrate and

US\$170.3 million from the sale of chrome concentrates. The increase in revenue in FY 2014 was largely due to increased PGM sales. PGM sales increased from 56.9 koz to 80.4 koz, an increase of 23.5 koz. Increases in PGM sales volumes were partially offset by a decrease in the PGM basket price from US\$1 132/oz to US\$1 103/oz. Revenue also benefited from the increased sales of higher value chemical and foundry grade chrome concentrates.

*Cost of sales (increase of US\$18.5million or 10%)*

Cost of sales increased from US\$189.6 million in FY 2013 to US\$208.1 million in FY 2014, an increase of US\$18.5 million. Given the variable nature of a large proportion of the costs of sales, the increase in the cost of sales was largely in line with the increase in PGM production volumes.

*Net finance costs (decrease of US\$16.1 million)*

Net finance costs decreased by 26% from US\$62.3 million in FY2013 to US\$46.2 million in FY2014.

This was mainly attributed to item 'Changes in fair value of financial liabilities at fair value through profit or loss' which decreased from (US\$48.4 million) to (US\$32.4 million), a decrease of US\$16.0 million. This reduction is a consequence of the finance cost on the preference shares being for part of the year only following their conversion into Ordinary Shares on a listing of the Company.

### **Liquidity and capital resources**

For the Financial Year ended 30 September 2015 the Group made a profit of US\$6.0 million and generated net cash flow from operating activities of US\$41.4 million. The net current liabilities as at that date amounted to US\$10.3 million. Cash and cash equivalents amounted to US\$24.3 million. In addition, the Group held US\$10.7 million in a debt service reserve account.

Based on the unaudited management accounts of the Group, for the six months period ended 31 March 2016, the Group generated net cash from operations of US\$18.2 million, whilst cash in hand amounted to US\$11.1 million and in addition, the Group held US\$9.8 million in a debt service reserve account.

As at 31 March 2016 the Group had net current liabilities of US\$11.4 million. Included in current liabilities are trade and other payables of US\$44.6 million and borrowings due within the next twelve months of US\$18.5 million. Current assets include trade and other receivables of US\$25.5 million and inventories of US\$15.4 million. In addition, the total debt borrowings of the Group amounted to US\$46.3 million, resulting in a debt borrowings to total equity ratio of 26.6%. Offsetting the debt service reserve account amount of US\$9.8 million, resulted in a pro forma debt borrowings to equity ratio of 21.0%. The long-term targeted debt to equity ratio is 15%.

As at February 2016, the Group utilisation of its trade finance facilities to, in part fund its working capital requirements, amounted to US\$4.8 million, of which US\$1.6 million related to the packaging credit facility and US\$3.3 million to the post shipment finance facility. The packing credit facility is no longer available to the Group (described in section "OPERATING AND FINANCIAL REVIEW", "Recent developments").

The Group continues to discount its PGM receivables under the ZAR300 million Limited Recourse Disclosed Receivables Discounting Agreement (described in section "ADDITIONAL INFORMATION", "Material Contracts").

The Group's operations are, in part, funded through commodity pre-pay transactions and it is the intention of the Group to continue with these arrangements. Should commodity prices weaken

significantly and/or should forecast production not be achieved the Group has various options to access cash and other liquid resources including but not limited to:

- the securing of prepaid transactions in respect of the Group's chrome production;
- the availability of stockpile finance in respect of the Group's inventories of finished goods;
- the authority of the Company to issue shares for cash;
- the monitoring and re-evaluation of capital spend and the deferment of projects;
- the utilisation of the US\$10 million debt service reserve account to satisfy the Group's obligations in respect of the senior debt facility granted to Tharisa Minerals;
- the ability of the Group to conclude medium to long term off-take and agency agreements in respect of its uncommitted chrome concentrate production;
- the ability of the Group to stream royalties in respect of its chrome and PGM production thereby enhancing cash flows and a re-profiling of its senior debt facility;
- the ability of the Company to liquidate the Group's inventories to raise necessary cash; and
- the ability to introduce joint venture partners in Arxo Resources, Arxo Logistics and Arxo Metals should the need arise, thereby raising capital.

#### *Cash flow statement review*

The following table presents the Cash Flows from operating activities analysis of the Group for the years ended 30 September 2013, 2014 and 2015.

	Years ended 30 September				
	2015 US\$'000	YoY% change	2014 US\$'000	YoY% change	2013 US\$'000
Cash flows from operating activities:					
Profit and Loss for the year	6 015	-	(54 873)	-14%	(47 443)
Adjustments for:					
Depreciation of property, plant and equipment	10 256	-5%	10 764	16%	12 438
Amounts written off directly in profit and loss	0	-	0	-	81
Write off of property, plant and equipment	0	-	25	-	0
Impairment losses on property, plant and equipment	3	-	0	-	2 097
Impairment losses on goodwill	63	-13%	72	4%	75
Impairment losses on inventory	217	-82%	1 195	-	0
Changes in fair value of financial liabilities at fair value through profit or loss	(1 972)	-	32 420	49%	48 424
Impairment losses on other financial assets	27	-	0	-	0
Interest income	(777)	-13%	(897)	-32%	(607)
Changes in fair value of financial assets at fair value through profit or loss	25	-96%	659	-92%	54
Interest expense	11 754	-12%	13 400	7%	14 336
Tax	3 617	-75%	14 548	-207%	(15 525)

Equity-settled share based payments	3 157	712%	389	-	0
	<b>32 385</b>	<b>83%</b>	<b>17 702</b>	<b>-21%</b>	<b>13 930</b>
Changes in:					
Inventories	5 811	-29%	8 144	-48%	4 254
Trade and other receivables	(5 464)	61%	(3 392)	227%	(11 076)
Trade and other payables	10 296	934%	996	-	(4 384)
Provisions	(777)	411%	(152)	3189%	(5 000)
<b>Cash from/(used in) operations</b>	<b>42 251</b>	<b>81%</b>	<b>23 298</b>	<b>-</b>	<b>(2 276)</b>
Income tax paid	(847)	-10%	(942)	-28%	(680)
<b>Net cash flows from/(used in) operating activities</b>	<b>41 404</b>	<b>85%</b>	<b>22 356</b>	<b>-</b>	<b>(2 956)</b>

Net cashflows from operating activities increased from US\$22.4 million in FY 2014 to US\$41.4 million in FY 2015, an increase of US\$19.0 million or 85%. This increase is mainly attributed to the increased sale of PGM concentrates which is reflected in the increased net profit for the FY 2015 of US\$6.0 million. In addition, with the ramp up in production unit costs of production were reduced, impacting favourably on the profitability and therefore on the cash flow of the business. Working capital was optimised to improve the operating cash flows of the Group.

In FY 2013, net cashflows used in operating activities amounting to US\$3.0 million changed to net cashflows from operating activities in FY 2014 amounting to US\$22.4 million. As the chrome production level stabilised, there was a beneficial impact on the working capital requirements of the Group. PGM production increased but without a significant impact on the requirement for working capital. Additionally, the change in net cash flows from FY 2013 to FY 2014, was mainly attributed to the decrease in items 'Changes in fair value of financial liabilities at fair value through profit or loss' by 33% and a decrease in 'Trade and other receivables' from (US\$11.1 million) in FY 2013 to (US\$3.4 million) mainly due to the increase in third party trade receivables as well as the decrease in provisions from US\$5.0 million in FY 2013 to US\$0.2 million in FY 2014.

The following table presents the Cash Flows from investing activities analysis of the Group for the years ended 30 September 2013, 2014 and 2015:

	Years ended 30 September				
	2015 US\$'000	YoY% change	2014 US\$'000	YoY% change	2013 US\$'000
<b>Cash Flows from investing activities</b>					
Interest received	669	(4%)	699	75%	399
Acquisition of subsidiaries, net of cash acquired		-	0	-	154
Additions to property, plant and equipment	(24 591)	1%	(24 289)	(0 %)	(24 316)
Proceeds from disposal of property, plant and equipment	3	(92%)	37	-	0
Additions of other financial assets	2 702	(268%)	(1 606)	89%	(850)

**Net cash flows used in investing activities**      **(21 217)**      (16%)      **(25 159)**      2%      **(24 613)**

Net cashflows used in investing activities increased by 2% from FY 2013 to FY2014, i.e. from US\$24.6 million to US\$25.2 million and decrease by 16% to US\$21.2 million in FY 2015. The additions to property, plant and equipment amounted to approximately US\$24 million each year for the period 2013-2015 relating to the capital expenditure on mining assets and infrastructure.

The following table presents the Cash Flows from financing activities analysis of the Group for the years ended 30 September 2013, 2014 and 2015:

	Years ended 30 September				
	2015 US\$'000	YoY% change	2014 US\$'000	YoY% change	2013 US\$'000
Cash flows from financing activities					
Proceeds from issue of Ordinary Shares	0	-	47 860	-	0
Refund/(establishment) of long term deposits	2 367	-	(6 771)	(12%)	(7 708)
Proceeds from/(repayment of) bank credit and other facility borrowings	7 523	-	(2 835)	(118%)	16 073
Net proceeds from obligations under new loan	146	-	0	-	0
Repayment of secured bank borrowings and loan to third party	(27 267)	(12%)	(30 989)	8321%	(368)
Interest paid	(1 134)	225%	(349)	41%	(248)
Redemption of Class B preference shares	0	-	(6 818)	-	0
Share issue expenses capitalised to share premium	0	-	(1 416)	-	0
<b>Net cash flow from/(used in) financing activities</b>	<b>(18 365)</b>	<b>1293%</b>	<b>(1 318)</b>	<b>-</b>	<b>7 749</b>

Net cashflows used in financing activities increased from US\$1.3 million in FY 2014 to US\$18.4 million in FY 2015, an increase of cash outflow of US\$17.1 million. This can primarily be attributed to the issue of Ordinary Shares in the Financial Year 2014 raising an amount of US\$47.9 million, offset in part by the redemption of certain preference shares issued by a subsidiary from the share issue proceeds of US\$6.8 million and the costs associated with the listing of US\$1.4 million. No Ordinary Shares were issued for cash in the Financial Year 2015.

In FY 2013, net cashflows from financing activities amounted to US\$7.7 million. The cash inflow in FY 2013 was mainly due to proceeds from borrowings net of transaction costs amounting to US\$16.1 million.

The FY 2015 incurred a net increase in cash and cash equivalents amounting to US\$1.8 million whilst the FY 2014 and FY 2013 incurred a net decrease in cash and cash equivalents amounting to US\$4.1 million and US\$19.8 million respectively. As such, cash and cash equivalents at the end of the periods FY 2015, 2014 and 2013 amounted to US\$24.3 million, US\$19.6 million and US\$28.0 million respectively.

#### *Financing*

No new significant financings were undertaken by the Group during the period 2013 until the Last Practical Date other than the following:

- In May 2013, Tharisa Minerals entered into a limited recourse discounted receivables facility in the amount of ZAR300 million.
- On 10 April 2014, pursuant to the Company's listing on the JSE, subscriptions for US\$47.9 million (ZAR500 million) were received from qualifying investors in terms of the private placement of Ordinary Shares.
- The Group entered into certain short term pre-pay arrangements during the period thereby raising short term working capital for the Group.
- On 23 February 2016 the Group's Hong Kong based bankers advised that no further utilisation of the US\$12.5 million packing credit facility (pre shipment finance), would be permitted past 29 February 2016. The Group's bankers continue to provide post shipment finance and the Group continues to enter into appropriate chrome concentrate pre-pay arrangements.

#### *Future commitments and contingencies*

Capital commitments of the Group in respect of property, plant and equipment outstanding at 30 September 2015 not provided for in the consolidated financial statements were as follows:

	<u>30 September</u> <u>2015</u>	<u>30 September</u> <u>2014</u>
	US\$'000	US\$'000
Contracted for	1 421	4 411
Authorised but not contracted for	<u>10</u>	<u>-</u>
	<u><u>1 431</u></u>	<u><u>4 411</u></u>

The Company holds an indirect 100% equity interest in Tharisa Fujian Industrial Co. Ltd, the registered capital of which is US\$10 million. Up to 30 September 2015, US\$5.95 million has been paid up. The remaining US\$4.05 million needs to be paid up by 14 February 2021.

The Company issued a guarantee to ABSA Bank Limited which guarantees the payment of certain liabilities of Arxo Logistics to Transnet totalling ZAR19.4 million.

A guarantee was issued to Lombard Insurance Company Limited which guarantees the payment of certain liabilities of Arxo Logistics to Transnet totalling ZAR12.0 million.

The Company issued a guarantee to a third party customer of Arxo Resources for a maximum of US\$10.0 million as security for pre shipment advances made by the customer to Arxo Resources.

### *Operating leases*

The Group leases a number of office facilities under operating leases. The leases typically run for a period of two to three years. A portion of lease payments are increased every year to reflect market rentals. The amounts recognised as an expense in profit or loss in respect of operating leases for the years ended 30 September 2015 and 30 September 2014 are US\$0.4 million and US\$0.4 million respectively.

Since the property titles do not pass to the Group, the Group determined that the leased office facilities are operating leases. The rents paid to landlords are increased to market rents at regular intervals and the Group does not participate in the residual value of the buildings therefore it was determined that substantially all the risks and rewards of the buildings are with the landlords.

### **Property, Plant and Equipment**

The following table illustrates the property, plant and equipment of the Group as at 30 September 2013, 2014 and 2015:

	<b>As at 30 September</b>		
	<b>2015</b>	<b>2014</b>	<b>2013</b>
	<b>US\$ '000</b>	<b>US\$ '000</b>	<b>US\$ '000</b>
Freehold land and buildings	13 584	16 667	14 634
Mining assets and infrastructure	199 704	235 138	252 712
Leasehold improvements	8	30	28
Computer equipment and software	763	1 004	1 322
Motor vehicles	324	325	182
Office equipment and furniture, social community and site office improvements	135	192	252
<b>Total property, plant and equipment</b>	<b>214 518</b>	<b>253 356</b>	<b>269 130</b>

### *Encumbrances*

All of the Group's land is freehold and located on the farms 342 JQ and Elandsdrift 467 JQ, North West Province, Registration Division Johannesburg, South Africa.

As at 30 September 2015, an amount of US\$196.4 million (2014: US\$228.3 million) of the carrying amount of the Group's tangible property plant and equipment is pledged as security against bank and third party borrowing.

As at 30 September 2014, all of the property, plant and equipment of subsidiary company, Tharisa Minerals Proprietary Limited the carrying amount of which amounted to US\$249.1 million (2013:US\$264.4 million) was pledged as security against the secured bank borrowing.

As at 30 September 2014, all of the property, plant and equipment of subsidiary company, Arxo Metals Proprietary Limited, the carrying amount of which amounted to US\$3.8 million (2013:US\$4.2 million) was pledged as security against a third party borrowing.

### Capital Expenditure

The project related capital expenditure has been substantially expended, which included the expansion of the mining footprint, infrastructure and construction of the Genesis, Voyager and Challenger processing plants. The planned capital expenditure for 2016 comprises mainly sustaining capital. The following table presents the capital expenditure for the financial years ending 30 September 2013, 2014 and 2015.

	Financial Year ended 30 September		
	2015	2014	2013
	US\$ '000	US\$ '000	US\$ '000
Freehold land and buildings	340	1 618	1 363
Mining assets and infrastructure*	23 782	22 181	21 874
Leasehold improvements	-	2	2
Computer equipment and software	249	339	932
Motor vehicles	155	114	60
Office equipment and furniture, social community and site office improvements	65	35	85
<b>Total capital expenditure</b>	<b>24 591</b>	<b>24 289</b>	<b>24 316</b>

\*Including deferred stripping

### Dependency on patents, licences, industrial, commercial or financial contracts and manufacturing processes

The Group is dependent on the Mining Right, its integrated water use licence granted by the DWS on 16 July 2012 and such other regulatory and environmental licences as are required to conduct its business (as set out in section "South Africa and South African Regulatory Framework" of this Prospectus).

### Review of financial position

The discussion below summarises movements in the consolidated financial position of the Company as at 30 September 2013, 2014 and 2015.

	As at 30 September				
	2015	YoY%	2014	YoY%	2013
	US\$'000	change	US\$'000	change	US\$'000
<b>Assets</b>					
Property, plant and equipment	214 518	-15%	253 356	-6%	269 130
Goodwill	919	-24%	1 211	-15%	1 427
Other financial assets	1 636	-67%	5 008	33%	3 774
Long term deposits	10 656	-26%	14 479	88%	7 708
Deferred tax assets	1 954	-67%	5 970	-71%	20 623
<b>Non-current assets</b>	<b>229 683</b>	<b>-18%</b>	<b>280 024</b>	<b>-7%</b>	<b>302 662</b>

Inventories	8 951	-39%	14 567	-39%	24 043
Trade and other receivables	37 979	17%	32 515	12%	29 123
Other financial assets	55	-88%	442	42%	311
Current taxation	144	4700%	3	-	0
Cash and cash equivalents	24 265	24%	19 629	-30%	28 017
<b>Current assets</b>	<b>71 394</b>	<b>6%</b>	<b>67 156</b>	<b>-18%</b>	<b>81 494</b>
<b>Total assets</b>	<b>301 077</b>	<b>-13%</b>	<b>347 180</b>	<b>-10%</b>	<b>384 156</b>
<b>Equity</b>					
Share capital	256	0%	255	4150%	6
Share premium	452 512	0%	452 363	299%	113 342
Other reserve	47 245	0%	47 245	0%	47 245
Foreign currency translation reserve	(76 705)	62%	(47 361)	57%	(30 170)
Revenue reserve	(206 566)	-5%	(216 596)	29%	(167 859)
<b>Equity attributable to owners of the Company</b>	<b>216 742</b>	<b>-8%</b>	<b>235 906</b>	<b>-</b>	<b>(37 436)</b>
Non-controlling interests	(37 794)	45%	(26 052)	61%	(16 205)
<b>Total equity</b>	<b>178 948</b>	<b>-15%</b>	<b>209 854</b>	<b>-491%</b>	<b>(53 641)</b>
<b>Liabilities</b>					
Provisions	4 088	-8%	4 452	-6%	4 738
Borrowings	36 329	-43%	64 223	-31%	92 812
Deferred tax liabilities	13	-35%	20	-	0
<b>Non-current liabilities</b>	<b>40 430</b>	<b>-41%</b>	<b>68 695</b>	<b>-30%</b>	<b>97 550</b>
Borrowings	33 692	9%	30 986	-16%	36 688
Other financial liabilities	388	-	0	-	0
Current taxation	98	-77%	421	43%	294
Trade and other payables	47 521	28%	37 224	21%	30 803
Convertible redeemable preference shares	0	-	0	-	260 291
Class B preference shares	0	-	0	-	12 171
<b>Current liabilities</b>	<b>81 699</b>	<b>19%</b>	<b>68 631</b>	<b>-80%</b>	<b>340 247</b>
<b>Total Liabilities</b>	<b>122 129</b>	<b>-11%</b>	<b>137 326</b>	<b>-69%</b>	<b>437 797</b>
<b>Total equity and liabilities</b>	<b>301 077</b>	<b>-13%</b>	<b>347 180</b>	<b>-10%</b>	<b>384 156</b>

### **Financial Year ended 30 September 2015 compared to the Financial Year ended 30 September 2014**

#### *Non-current assets (decrease of US\$50.3 million or 18%)*

Non-current assets decreased by 18% from US\$280.0 million at end of FY 2014 to US\$229.7 million at end of FY 2015, a decrease of US\$50.3 million. The decrease is mainly due to the decrease in property, plant and equipment by US\$ 38.8 million. In particular, the Group recognised a depreciation charge of US\$10.3 million during the FY 2015 and following the weakening of the ZAR against the US\$, an exchange adjustment on translation of US\$53.2 million (after deducting depreciation exchange adjustment) was recognised reducing the total property, plant and equipment and further the decrease was partly offset by additions to property, plant and equipment totalling US\$24.6 million.

*Current assets (increase of US\$4.2 million or 6%)*

Current assets increased from US\$67.2 million at the end of FY 2014 to US\$71.4 million at the end of FY 2015, an increase of US\$4.2 million. The increase is mainly due to the increase in cash and cash equivalents from US\$19.6 million at the end of FY 2014 to US\$24.3 million at the end of FY 2015. Additionally, the decrease in inventories by US\$5.6 million (as a result of lower finished products and work-in-progress) is partly offset by the increase in trade and other receivables (mainly trade receivable by third parties) by US\$5.5 million from the end of the FY 2014 to the end of the FY 2015.

*Total liabilities (decrease of US\$15.2 million or 11%)*

Total liabilities decreased from US\$137.3 million at the end of FY 2014 to US\$122.1 million at the end of FY 2015. The Group continued to repay the secured bank borrowings resulting in a decrease in non-current borrowings from US\$64.2 million at the end of FY 2014 to US\$36.3 million at the end of FY 2015. The secured bank borrowings are ZAR denominated and the weakening of the currency contributed to a reduction in the US\$ debt for the Group. Nevertheless, the large decrease in borrowings was partly offset by an increase in trade and other payables by US\$10.3 million from the end of the FY 2014 to the end of the FY 2015.

**Financial Year ended 30 September 2014 compared to the Financial Year ended 30 September 2013**

*Non-current assets (decrease of US\$22.6 million or 7%)*

Non-current assets decreased from US\$302.7 million at the end of FY 2013 to US\$280.0 million at the end of FY 2014, a decrease of US\$22.6 million. The decrease is mainly due to a decrease in the deferred tax asset by US\$14.7 million at the end of FY 2014. A significant component of the deferred tax asset at 30 September 2013 related to unrealised foreign exchange losses on intergroup funding arrangements. Since the timing of settling such intergroup liabilities was uncertain, the Group derecognised a portion of the deferred tax asset during the FY 2014. Despite additions to property, plant and equipment by US\$24.3 million during the FY 2014, the total property, plant and equipment decreased by US\$15.8 million as at the end of FY 2014. The decrease is due to a depreciation charge of US\$10.8 million and a currency adjustment of US\$29.3 million during the FY 2014. Additionally, long term deposits increased from US\$7.7 million at the end of FY 2013 to US\$14.5 million at the end of FY 2014 as restrictions for a bank security guarantee as required by the CTA for the project financing of Tharisa Minerals.

*Current assets (decrease of US\$14.3 million or 18%)*

Current assets decreased from US\$81.5 million at the end of FY 2013 to US\$67.2 million at the end of FY 2014, a decrease of US\$14.3 million. The decrease is mainly attributable to a decrease in the inventories as at the end of FY 2014 by US\$ 9.5 million and a decrease in the cash and cash equivalents by US\$8.4 million. The cash and cash equivalents at the end of FY 2014 excludes US\$14.5 million (classified as a non-current assets) which serves as security for the secured bank borrowings.

*Total liabilities (decrease of US\$300.5 million or 69%)*

The total liabilities decreased from US\$437.8 million at the end of FY 2013 to US\$137.3 million at the end of FY 2014, a decrease of US\$300.5 million. Following the listing of the Company on the JSE on 10 April 2014, the redeemable convertible preference shares were converted to Ordinary Shares resulting in a decrease of US\$260.3 million from the end of the FY 2013. Repayment of the secured bank borrowings commenced during the year ended 30 September 2014 resulting in a further decrease in total liabilities from 30 September 2013.

**No significant change**

The significant changes of trading of the Group for the six months ended 31 March 2016 is set out in section "OPERATING AND FINANCIAL REVIEW", "Current trading and prospects"; other than that, there has been no significant change in the financial or trading position of the Issuer that had occurred between the last audited Consolidated Financial Statements for the financial year ended 30 September 2015 and the date of the Prospectus.

## CAPITALISATION AND INDEBTEDNESS

### Capital and Indebtedness

The following table presents the capitalisation and indebtedness of the Company as at 31 March 2016 on a consolidation basis derived from the Company's management accounts.

	<b>As at 31 March 2016</b> <b>US\$ millions</b>
<b>Current debt</b>	
Secured	13.6
Unsecured	9.3
<b>Total current debt</b>	<b>22.9</b>
<b>Non-current debt</b>	
Secured	27.2
Unsecured	0.6
<b>Total non-current debt</b>	<b>27.8</b>
<b>Total debt</b>	<b>50.7</b>
<b>Equity</b>	
Share capital	0.3
Share premium	452.5
Other reserves	47.2
Foreign currency translation reserve	(83.5)
Revenue reserve	(202.8)
<b>Equity attributable to the owners of the Company</b>	<b>213.7</b>
<b>Total capitalisation and indebtedness</b>	<b>264.4</b>

The following table shows the net indebtedness of the Group as at 31 March 2016:

	<b>As at 31 March 2016</b> <b>US\$ millions</b>
A. Cash	10.8
B. Cash equivalents (short-term deposits and restricted cash)	10.0

C. Trading Securities	0
<b>D. Total liquidity (A+B+C)</b>	<b>20.8</b>
<b>E. Current financial receivable</b>	<b>0</b>
<b>F. Current bank debt</b>	
Current portion of secured bank borrowings <sup>(1)</sup>	13.6
Other borrowings - bank credit and other facility <sup>(2)</sup>	1.8
Other borrowings - obligations under new loan <sup>(3)</sup>	1.4
Other borrowings - loan payable to related party	1.8
Interest bearing accrued dividends	4.3
<b>F. Total current bank debt</b>	<b>22.9</b>
<b>G. Current portion of non-current debt</b>	<b>0</b>
<b>H. Other current financial debt</b>	<b>0</b>
<b>I. Current financial debt (F)+(G)+(H)</b>	<b>22.9</b>
<b>J. Net Current Financial Indebtedness (I)-(E)-(D)</b>	<b>2.1</b>
K. Non-current Bank Loan (Secured Bank borrowings <sup>(1)</sup> )	27.2
L. Bonds issued	0
M. Other non-current loans –( obligations under new loan <sup>(3,4)</sup> )	0.6
<b>N. Non-current financial indebtedness (K)+(L)+(M)</b>	<b>27.8</b>
<b>O. Net financial indebtedness (J)+(N)</b>	<b>29.9</b>

(1) During the year ended 30 September 2012 the Group obtained financing of ZAR1 billion from a consortium of banks in South Africa, to finance the expansion projects of its mining and processing activities. The financing is for a period of seven years and is repayable in 22 equal quarterly instalments, with the first repayment date at 31 December 2013. The financing was obtained by Tharisa Minerals, a subsidiary of the Group (see section “Additional Information”, “Material Contracts”, “Common Terms Agreement”) for further information.

Repayments are subject to a cash sweep which will reduce the repayment period to a minimum of five years. Tharisa Minerals is required to maintain funds in a debt service reserve account and may utilise funds in this account, with the prior written consent of the Facility Lenders for the purpose of making a repayment in the event that Tharisa Minerals does not have the necessary funds available to make the debt repayment. The financing bears interest at three month JIBAR + 4.9% per annum. The financing is secured by the assets of the subsidiary and by the shares of the Company in the subsidiary and is also guaranteed by the Company.

The loan contains the following financial covenants:

- DSCR at a level greater than 1.4 times;

- Loan life cover ratio at a level greater than 1.6 times;
- Debt/equity ratio at a level greater than 1.5 times;
- Reserve tail ratio at a level of 30% or greater;

As at 30 September 2014, Tharisa Minerals complied with all covenant ratios, except for the historic DSCR which was calculated as 0.36. The DSCR is calculated as the cash flow available for repayment divided by the actual repayment for the six-month period preceding the covenant measurement date. The Facility Lenders granted a waiver on the requirement as at 30 September 2014. As at 30 September 2015 Tharisa Minerals complied with all covenant ratios.

As at 31 March 2016 Tharisa Minerals complied with all covenant ratios, except for the historic DSCR which was calculated at -0.56. The banks have condoned non-compliance with the DSCR and therefore there is no impact on the loan facility which has been fully drawn down and on the funding of the Group. The technical completion date was extended to 28 November 2016. Tharisa Minerals hedges a portion of the facility for interest rate risk via an interest rate cap.

The payment obligations have been discharged in full and on time.

(2) During the year ended 30 September 2013 the Group obtained a US\$12.5 million bank credit facility that allows the Group to receive a percentage of trade receivables on receipt of an acceptable letter of credit which results in shortening of the customer credit period. This facility has a tenor of up to 60 days and is secured by cash and cash equivalents of the Group of US\$2.5 million and is also guaranteed by the Company.

On 23 February 2016 the Group's Hong Kong based bankers advised that no further utilisation of the US\$12.5 million packing credit facility (pre shipment finance), would be permitted past 29 February 2016. The Group's bankers continue to provide post shipment finance and the Group continues to enter into appropriate chrome concentrate pre-pay arrangements.

The other facilities relate to the discounting of the letters of credit by the Group's banks following performance of the letter of credit conditions by the Group which results in funds being received in advance of the normal payment date. Interest on these facilities range from US Libor + 1.5% to 2.5%.

(3) During the year commencing 1 December 2015, Tharisa Minerals is required to pay a premium of ZAR13.4 million to Guardrisk in respect of an insurance policy issued by Guardrisk for the environmental rehabilitation guarantee issued by Guardrisk in favour of the DMR, which premium is payable in terms of a finance lease at an interest rate of 8.72% in equal monthly instalments. Such premium is guaranteed by the Company for an amount of ZAR14.0 million.

(4) During the year commencing 1 October 2015, Tharisa Minerals entered into an agreement with Electro Diesel Group Proprietary Limited for the purchase of vehicle and pedestrian electronic detection systems for use as a safety measure in its mining operations for a consideration of ZAR26.1 million. The goods are financed over a period of 24 months.

As at the Last Practical Date, the Issuer has neither indirect nor contingent indebtedness.

## Guarantees

The Group has guarantees to third parties for the total amount of US\$50.2 million as at the Last Practical Date which are described below:

- a) Guarantee given by the Company in favour of The Hong Kong and Shanghai Banking Corporation Limited (Hong Kong Special Administrative Region) in respect of post shipment finance facilities given to Arxo Resources. As at the Last Practical Date, the discounting balance amounts to US\$4.1 million.
- b) Completion guarantee given by the Company in favour of the Facility Lenders in respect of Tharisa Minerals obligations under the Common Terms Agreement. This guarantee will terminate once technical completion under the Common Terms Agreement has been achieved. As at the Last Practical Date, the balance of the guarantee amounts to US\$40.1 million.
- c) Guarantee given by the Company in favour of Guardrisk in respect of the ZAR14.0 million (US\$0.9 million as at the Last Practical Date) rehabilitation guarantee issued by Guardrisk to the DMR in respect of Tharisa Minerals' rehabilitation obligations.
- d) Guarantee given by the Company in favour of ABSA Bank Limited in respect of the ZAR19 million guarantees issued by ABSA in favour of Transnet in respect of Arxo Logistics' obligations to TPT and TFR. As at the Last Practical Date, the balance owing to TPT and TFR amounts to US\$1.7 million.
- e) Guarantee given by the Company in favour of Gunvor Singapore Pte Limited ("Gunvor") in respect of Arxo Resources obligations to Gunvor in terms of certain pre-pay off-take agreements. As at the Last Practical Date, the balance owing to Gunvor amounts to US\$3.4 million.

### **WORKING CAPITAL**

In the opinion of the Company, the working capital available to the Group is sufficient for the Group's present requirements and, in particular, is sufficient for at least 12 months from the date of this Prospectus.

## CREST AND DEPOSITARY ARRANGEMENTS

### CREST and Depositary Arrangements

The Company has established arrangements to enable investors to settle interests in the Ordinary Shares through the CREST system. CREST is a paperless settlement system allowing securities to be transferred from one person's CREST account to another without the need to use share certificates or written instruments of transfer. Securities issued by non-UK companies, such as the Company, cannot be held or transferred electronically in the CREST system. However, Depositary Interests allow such securities to be dematerialised and settled electronically through CREST. Where investors choose to settle interests in the Ordinary Shares through the CREST system, and pursuant to depositary arrangements established by the Company, the Custodian will hold the Ordinary Shares and issue dematerialised Depositary Interests representing the underlying Ordinary Shares, which will be held on trust for the holders of the Depositary Interests. The Depositary Interests will be independent securities constituted under English law which may be held and transferred through the CREST system. Investors should note that it is the Depositary Interests which will be admitted to and settled through CREST and not the Ordinary Shares.

The Articles are consistent with CREST membership in respect of Depositary Interests and the holding and transfer of Depositary Interests in uncertified form. Under the Cyprus Companies Act, companies are not prohibited from issuing shares in book-entry form but shareholders have the right to require the companies to issue physical certificates. The Board has passed a resolution authorising the issuance of shares in book-entry form.

The Company and the Depositary will enter into a depositary agreement on 8 June 2016, the principal terms of which are summarised below.

The Depositary Interests have been created pursuant to and issued on the terms of a deed poll that will be executed on 8 June 2016 by the Depositary in favour of the holders of the Depositary Interests from time to time. Holders of Depositary Interests should note that they will have no rights against Euroclear UK & Ireland (the operators of CREST) or its subsidiaries in respect of the underlying Ordinary Shares or the Depositary Interests representing them.

If a holder of Ordinary Shares so requests, its Ordinary Shares will be transferred to an account of the Depositary or its nominated custodian and the Depositary will issue Depositary Interests to participating CREST members. Each Depositary Interest will be treated as one Ordinary Share for the purposes of determining, for example, eligibility for any dividends. The Depositary will pass on to holders of Depositary Interests any stock or cash benefits received by it as holder of Ordinary Shares on trust for such Depositary Interest holder. Depositary Interest holders, through the Depositary, will also be able to receive notices of meetings of holders of Ordinary Shares and other notices issued by the Company to its Shareholders.

The Depositary Interests have the same security code (ISIN) as the underlying Ordinary Shares and will not require a separate admission to the Main Market. The Depositary Interests can then be traded and settled within the CREST system in the same way as any other CREST securities. Application will be made for the Depositary Interests to be admitted to CREST with effect from Admission.

If a holder wishes to cancel its Depositary Interest, it will either directly or through its broker instruct the applicable CREST participant to initiate a CREST withdrawal (where such withdrawal is sent to the Depositary) for the name that appears on the Register. The Depositary Interest will then be cancelled by

the Depositary and the related Ordinary Shares will be credited to the account on the Register by the Registrar. The Registrar will then send the holder a new Ordinary Share certificate.

The information included within this section relating to the obtaining and cancellation of Depositary Interests by a holder is intended to be a summary only and is not to be construed as legal, business or tax advice. Each investor should consult his or her own lawyer, financial adviser, broker or tax adviser for legal, financial or tax advice in relation to Depositary Interests.

### **Deed Poll**

The Deed Poll will be executed on 8 June 2016 by the Depositary and contains the following provisions:

1.1 The Depositary will hold (itself or through the Custodian), as bare trustee, the underlying Shares and all and any rights and other securities, property and cash attributable to the underlying Shares pertaining to the Depositary Interests for the benefit of the holders of the relevant Depositary Interests as tenants in common. The Depositary will re-allocate securities or Depositary Interests distributions allocated to the Depositary or Custodian pro rata to the Shares held for the respective accounts of the holders of Depositary Interests, but will not be required to account for fractional entitlements arising from such re-allocation.

1.2 Holders of Depositary Interests agree to give such warranties and certifications to the Depositary as the Depositary may reasonably require. In particular, holders of Depositary Interests warrant, inter alia, that the securities in the Company transferred or issued to the Depositary or Custodian on behalf of the Depositary for the account of the Depositary Interest holder are free and clear of all liens, charges, encumbrances or third party interests and that such transfers or issues are not in contravention of the Company's constitutional documents or any contractual obligation, or applicable law or regulation binding or affecting such holder, and holders of Depositary Interests agree to indemnify the Depositary against any liability incurred as a result of any breach of such warranty.

1.3 The Depositary and any Custodian shall pass on to the Depositary Interest holders and, so far as they are reasonably able, exercise on behalf of the Depositary Interest holders all rights and entitlements received or to which they are entitled in respect of the underlying Shares which are capable of being passed on or exercised. Rights and entitlements to cash distributions, to information, to make choices and elections and to call for, attend and vote at meetings shall, subject to the Deed Poll, be passed on in the form in which they are received, together with amendments and additional documentation necessary to effect such passing-on, or, as the case may be, exercised in accordance with the Deed Poll. If arrangements are made which allow a holder to take up rights in the Company's securities requiring further payment, the holder must put the Depositary in cleared funds before the relevant payment date or other date notified by the Depositary if it wishes the Depositary to exercise such rights.

1.4 The Depositary will be entitled to cancel Depositary Interests and treat the holders thereof as having requested a withdrawal of the underlying securities in certain circumstances, including where a Depositary Interest holder fails to furnish to the Depositary with such certificates or representations as to material matters of fact, including his identity, as the Depositary deems appropriate.

1.5 The Depositary warrants that it is an authorised person under the FSMA and is duly authorised to carry out custodian and other activities under the Deed Poll. It also undertakes to maintain that status and authorisation.

1.6 The Deed Poll contains provisions excluding and limiting the Depositary's liability. For example, the Depositary shall not be liable to any Depositary Interest holder or any other person for liabilities in connection with the performance or non-performance of obligations under the Deed Poll or otherwise except as may result from its negligence or wilful default or fraud or that of any person for whom it is vicariously liable, provided that the Depositary shall not be liable for the negligence, wilful default or fraud of any Custodian or agent which is not a member of its group unless it has failed to exercise reasonable care in the appointment and continued use and supervision of such Custodian or agent. Except in the case of personal injury or death, any liability incurred by the Depositary to a holder under the Deed Poll is limited to the lesser of:

(a) the value of the Shares that would have been properly attributable to the Depositary Interests to which the liability relates; and

(b) that proportion of £5 million which corresponds to the portion which the amount the Depositary would otherwise be liable to pay to the holder bears to the aggregate of the amounts the Depositary would otherwise be liable to pay to all such holders in respect of the same act, omission or event which gave rise to such liability or, if there are no such amounts, £5 million.

1.7 The Depositary is entitled to charge holders of Depositary Interests fees and expenses for the provision of its services under the Deed Poll.

1.8 Each holder of Depositary Interests is liable to indemnify the Depositary and any Custodian (and their agents, officers and employees), and hold each of them harmless, from and against all liabilities arising from or incurred in connection with, or arising from any act related to, the Deed Poll so far as they relate to the property held for the account of that holder, other than those caused by or resulting from the wilful default, negligence or fraud of: (i) the Depositary; or (ii) the Custodian or any agent if such Custodian or agent is a member of the Depositary's group or if, not being a member of the same group, the Depositary shall have failed to exercise reasonable care in the appointment and continued use of such Custodian or agent.

1.9 The Depositary is entitled to make deductions from the deposited property or any income or capital arising therefrom, or to sell such deposited property and make deductions from the sale proceeds thereof, in order to discharge the indemnification obligations of Depositary Interest holders.

1.10 The Depositary may terminate the Deed Poll by giving not less than 90 days' notice. During such notice period, Depositary Interest holders may cancel their Depositary Interests and withdraw their deposited property and, if any Depositary Interests remain outstanding after termination, the Depositary shall, as soon as reasonably practicable and amongst other things: (i) deliver the deposited property in respect of the Depositary Interests to the relevant Depositary Interest holder; or at the Depositary's discretion; (ii) sell all or part of such deposited property. It shall, as soon as reasonable practicable, deliver the net proceeds of any such sale, after deducting any sums due to the Depositary, together with any other cash held by it under the Deed Poll, pro rata to the Depositary Interest holders in respect of their Depositary Interests.

1.11 The Depositary or the Company may require from any holder: (i) information as to the capacity in which Depositary Interests are owned or held by such holders and the identity of any other person with any interest of any kind in such Depositary Interests or the underlying Shares and the nature and amounts of such interests; (ii) evidence or declaration of nationality or residence of the legal or beneficial owner(s) of Depositary Interests and such information as is required to transfer the relevant Depositary Interests or Shares to the holder; and (iii) such information as is necessary or

desirable for the purposes of the Deed Poll or CREST system, and holders are bound to provide such information requested. The holders of Depositary Interests consent to the disclosure of such information by the Depositary, Custodian or Company to the extent necessary or desirable to comply with their respective legal or regulatory obligations.

1.12 Furthermore, to the extent that the Company's constitutional documents, applicable laws or regulations, the Ground Rules for the Management of the FTSE UK Index Series (if applicable), or any court or legal or regulatory authority may require or the Company deems it necessary or desirable in connection therewith (including in response to requests for information), the disclosure to the Company of, or limitations in relation to, beneficial or other ownership of, or interests of any kind whatsoever in the Company's securities, the Depositary Interest holders are to comply with such provisions and with the Company's securities, the Depositary Interest holders are to comply with such provisions and with the Company's instructions with respect thereto, and consent to the disclosure of such information for such purposes.

It should also be noted that holders of Depositary Interests may not have the opportunity to exercise all of the rights and entitlements available to holders of Shares, including, for example, the ability to vote on a show of hands. In relation to voting, it will be important for holders of Depositary Interests to give prompt instructions to the Registrar or its nominated Custodian, in accordance with any voting arrangements made available to them, to vote the underlying Shares on their behalf or, to the extent possible, to take advantage of any arrangements enabling holders of Depositary Interests to vote such Shares as a proxy of the Registrar or its nominated Custodian.

### **Depositary Agreement**

The Depositary Agreement will be entered into between the Company and the Depositary on 8 June 2016 and contains the following provisions:

2.1 Under the Depositary Agreement, the Company appoints the Depositary to constitute and issue from time to time, upon the terms of the Deed Poll, a series of Depositary Interests representing Shares and to provide certain other services (including depositary services, custody services and dividend services) in connection with such Depositary Interests.

2.2 The Depositary agrees that it will comply with the terms of the Deed Poll and that it will perform its obligations with reasonable skill and care. The Depositary assumes certain specific obligations, including, for example, to arrange for the Depositary Interests to be admitted to CREST as participating securities and provide copies of, and access to, the register of Depositary Interests.

2.3 The Company acknowledges that it shall be its responsibility and undertakes to advise the Depositary promptly of any securities laws or other applicable laws, rules or regulations in Cyprus with which the Depositary must comply in providing the services.

2.4 The Company agrees to provide such assistance, information and documentation to the Depositary as is reasonably required by the Depositary for the purposes of performing its duties, responsibilities and obligations under the Depositary Agreement.

2.5 The Depositary is to indemnify the Company and its officers and employees from and against any loss (excluding indirect, consequential or special loss) which any of them may incur in any way as a result of or in connection with the fraud, negligence or wilful default of the Depositary (or its officers, employees, agents or sub-contractors).

2.6 Subject to earlier termination, the appointment of the Depositary shall continue for a fixed period of one year and thereafter until terminated in accordance with the terms of the Depositary Agreement. Should the Depositary Agreement be terminated for any reason, other than arising from the Depositary's fraud, negligence, wilful default or material breach of a term of the Depositary Agreement, the Company shall within 30 days of termination pay to the Depositary the Depositary's reasonable costs and expenses of transferring the Depositary Interest register to its new registrar. Either party may terminate the Depositary Agreement by giving not less than 3 months' notice in writing. Either party may terminate the Depositary Agreement with immediate effect by notice in writing if the other party: (i) shall be in persistent or material breach of any material term (of the Depositary Agreement) and such breach is not remedied within 21 days of a request for such remedy; (ii) goes into insolvency or liquidation or administration or a receiver is appointed over any part of its undertaking or assets, subject to certain provisos; or (iii) shall cease to have the appropriate authorisations which permit it lawfully to perform its obligations under the Depositary Agreement.

2.7 The Depositary will be entitled to employ agents for the purposes of carrying out certain of its obligations under the Depositary Agreement which the Depositary reasonably considers to be of a specialist nature.

2.8 The Company is to pay to the Depositary an annual fee for the services. The Company shall pay a fixed fee for the deposit, cancellation and transfer of the Depositary Interests and the compilation of the initial Depositary Interests register. The Company shall in addition reimburse the Depositary within [30] days of the Depositary's invoice for all network charges, CREST charges, money transmission and banking charges and other out-of-pocket expenses incurred by it in connection with the provision of the services under the Depositary Agreement.

2.9 The Company will indemnify the Depositary from and against all loss suffered by the Depositary as a result of or in connection with the performance of its obligations under the Depositary Agreement.

2.10 The aggregate liability of the Depositary to the Company over any 12-month period under the Depositary Agreement will not exceed twice the amount of the Fees (as defined in the Depositary Agreement) payable in any 12-month period in respect of a single claim or in the aggregate.

## TAXATION

*The information set out below describes the principal Cypriot, UK and South African tax consequences of the acquisition, holding and disposal of the Ordinary Shares and is included for general information only. This summary does not purport to be a comprehensive description of all Cypriot, UK and South African tax considerations that may be relevant to a decision to acquire, hold or dispose of the Company's Ordinary Shares. Each prospective investor should consult a professional tax adviser regarding tax consequences of acquiring, holding and disposing of the Company's Ordinary Shares under the laws of their country and/or state of citizenship, domicile or residence. Should any withholding taxes be payable on amounts payable by the Company, the Company assumes responsibility for withholding of such taxes at the source.*

*This summary is based on tax legislation in force as at the Last Practical Date, without prejudice to any amendments introduced at a later date and implemented with retroactive effect.*

### **Tax Residency**

The Issuer is registered in Cyprus and considered to be a Cyprus tax resident. A company which is considered to be a resident for tax purposes in Cyprus is subject to corporate income tax in Cyprus on its worldwide income, subject to certain exemptions. A company is considered to be a resident of Cyprus for tax purposes if its management and control is exercised from Cyprus. With respect to the individual shareholders, generally an individual is considered to be a tax resident of Cyprus if he or she is physically present in Cyprus for a period or periods exceeding in aggregate more than 183 days in any calendar year and is also domiciled in Cyprus.

Other members of the Group may be subject to the payment of corporate or other income tax in other jurisdictions either where they have their registered office and/or where they are managed and controlled and/or carry out their operations. The tax residency status of other Group companies has not been examined in this Prospectus. This section merely aims to set out the tax rules and rates applicable in the three principle jurisdictions where the Company and/or its Group companies may have business interests and/or where its shareholders may be tax resident for the purposes of preliminarily assessing taxable income deriving from shares held in the Company, subject always to the disclaimer for the requirement to obtain independent professional advice.

### **UK taxation**

The following statements are intended only as a general guide to current UK tax legislation and to the current practice of HMRC and may not apply to certain shareholders in the Company, such as dealers in securities, insurance companies and collective investment schemes. They relate (except where stated otherwise) to persons who are resident and ordinarily resident in the UK for UK tax purposes, who are beneficial owners of Ordinary Shares (and any dividends paid on them) and who hold their Ordinary Shares as an investment (and not as employment-related securities and other than via an individual savings account). They are based on current UK legislation and what is understood to be the current practice of HMRC as at the Last Practical Date, both of which may change, possibly with retroactive effect. The tax position of certain categories of shareholders who are subject to special rules (such as persons acquiring their Ordinary Shares in connection with employment, dealers in securities, insurance companies and collective investment schemes or those who hold 10% or more of the Ordinary Shares) is not considered.

**Any person who is in any doubt as to his or her tax position, or who is subject to taxation in any jurisdiction other than that of the UK, should consult his or her own professional advisers immediately.**

#### *Taxation of dividends – Individual Shareholders*

UK resident individual Shareholders will be liable to income tax in respect of dividends or other income distributions of the Company. A UK resident individual Shareholder will generally benefit from an allowance in the form of an exemption from tax for the first £5,000 of dividend income received in the relevant tax year (the “Dividend Allowance”). Any dividends above the Dividend Allowance will be taxable at 7.5% (to the extent it falls within an individual’s basic rate band), 32.5% (to the extent it falls within an individual’s higher rate band) or 38.1% (to the extent it falls within an individual’s additional rate band) for the 2016-17 tax year. Dividend income of individuals in tax exempt arrangements such as ISAs should be exempt.

The above paragraph assumes that Finance (No. 2) Bill 2016 will be enacted in the form published on 24 March 2016. However, it is not certain that such legislation will be enacted, or if it is, that it will be enacted in the same form. These rules, if enacted, will become effective from 6 April 2016 and replace previous rules on the taxation of dividends under which UK resident individual Shareholders would receive a 10% tax credit under certain circumstances.

#### *Taxation of dividends – Corporate Shareholders*

Dividends paid to a UK resident corporate Shareholder will be taxable income of the UK corporate Shareholder unless the dividends fall within an exempt class and certain other conditions are met. It is, however, expected that dividends paid by the Company to a UK resident corporate Shareholder would generally be exempt, provided certain anti-avoidance provisions are not triggered.

UK pension funds and charities are generally exempt from tax on dividends which they receive.

Other Shareholders who are not resident in the UK for tax purposes should consult their own advisers concerning their tax liabilities on dividends received.

#### *Withholding Tax*

Under UK tax legislation, the Company is not required to withhold tax at source from dividend payments it makes.

#### *Chargeable gains*

Shareholders who are resident or ordinarily resident in the UK for tax purposes and who dispose of their Ordinary Shares at a gain will ordinarily be liable to UK taxation on chargeable gains, subject to any available exemptions or reliefs. The gain will be calculated as the difference between the sale proceeds and any allowable costs and expenses, including the original acquisition cost of the Ordinary Shares.

Shareholders who are not resident or ordinarily resident in the UK for tax purposes but who carry on a trade, profession or vocation in the UK through a branch, agency or fixed place of business in the UK may be liable to UK taxation on chargeable gains on any gain on a disposal of their Ordinary Shares, if those shares are or have been held, used or acquired for the purposes of that trade, profession or vocation or for the purposes of that branch, agency or fixed place of business.

If an individual Shareholder ceases to be resident or ordinarily resident in the UK and subsequently disposes of Ordinary Shares, in certain circumstances any gain on that disposal may be liable to UK capital gains tax upon that Shareholder becoming once again resident or ordinarily resident in the UK.

For UK resident individual Shareholders, capital gains tax at the rate of 10% (for basic rate taxpayers) or 20% (for higher or additional rate tax payers) will be payable on any gain. UK resident individual Shareholders may benefit from certain reliefs and allowances (including a personal annual exemption allowance, which for 2016-17 tax year exempts the first £11 100 of gains from tax) depending on their circumstances.

The above paragraph assumes that Finance (No. 2) Bill 2016 will be enacted in the form published on 24 March 2016. However, it is not certain that such legislation will be enacted, or if it is, that it will be enacted in the same form. These rules, if enacted, will become effective from 6 April 2016.

For UK resident corporate Shareholders any gain will be within the charge to corporation tax. UK corporate Shareholders will benefit from indexation allowance which, in general terms, increases the chargeable gains tax base cost of an asset in accordance with the rise in the retail prices index.

#### *Stamp duty and SDRT*

The statements below are intended as a general guide to the current position under UK tax law. They do not apply to certain intermediaries who may be eligible for relief from stamp duty or SDRT, or to persons connected with depository arrangements or clearance services (or, in either case, their nominees or agents), who may be liable to stamp duty or SDRT at a higher rate.

Admission of the Ordinary Shares to the standard segment of the Official List will not give rise to a liability to stamp duty or SDRT on the basis that the Admission does not involve a change in title to the Ordinary Shares for consideration. (The definition of consideration for stamp duty purposes is restricted to consideration in the form of cash, shares or debt. However, the definition for SDRT purposes is broader and will include anything in money or money's worth).

On the assumption that the central management and control of the Company currently takes place and will continue to take place outside the UK, the Shareholders' Register is and will be maintained outside the UK and the underlying Ordinary Shares are and will continue to be listed on a recognised stock exchange, any transfer of Depository Interests representing the Ordinary Shares will not attract SDRT.

Provided that the Register continues to be maintained outside the UK, there will be no SDRT on any agreement to transfer the Ordinary Shares themselves. However, any document transferring title to the Ordinary Shares will attract stamp duty at the rate of 0.5% (rounded to the nearest £5 if necessary) if it is executed in the UK or relates (wheresoever executed) to any matter or thing done or to be done in the UK.

Where a document transfers title to non-UK shares, but the transfer has such a UK nexus, it may not be relied upon as evidence in civil proceedings within the UK unless it is exempt or has been duly stamped by the UK tax authorities.

#### *Inheritance Tax*

If any individual Shareholder is regarded as domiciled in the UK for inheritance tax purposes, inheritance tax may be payable in respect of the Ordinary Shares on the death of the Shareholder or on certain gifts of the Ordinary Shares during their lifetime, subject to any allowances, exemptions or reliefs. This is the case regardless of their residence status. In the case of an individual Shareholder who

is not regarded as domiciled in the UK for inheritance tax purposes at the date of death, their liability is limited to assets situated in the UK.

Non-UK domiciled individual Shareholders may be regarded as deemed domiciled for inheritance tax purposes only following a long period of residence in the UK. The concept of deemed domicile only currently applies for inheritance tax purposes and the Shareholder might still qualify as non-UK domiciled for income tax and capital gains tax. Further advice should be sought in these circumstances.

Status of shares for inheritance tax purposes is a complex matter and is governed by case law. To the extent the Ordinary Shares are not already treated as UK assets for inheritance tax purposes, then admittance of the Ordinary Shares to the standard segment the Official List may result in the Ordinary Shares being treated as UK assets for UK inheritance tax purposes. Admission of the Ordinary Shares to the Official List will not constitute a disposal of the Ordinary Shares held by existing Shareholders.

Individual Shareholders who are in any doubt about the impact of this change on their tax position should obtain detailed tax advice from their own professional advisers.

UK inheritance tax is a complex area and individuals should obtain their own advice in respect of this.

### **Cypriot Tax**

The following statements are intended only as a general guide to current and applicable Cyprus tax legislation and to the current practice of the Cyprus Inland Revenue Department and may not apply and/or may vary with respect to certain shareholders in the Company (such as, inter alia, dealers in securities, insurance companies, trusts, charities and collective investment schemes). They are based on current Cyprus legislation and what is understood to be the current practice of the Cyprus Inland Revenue Department as at the Last Practical Date, both of which may change, possibly with retroactive effect. The tax position of certain categories of shareholders who may be subject to special rules (such as, inter alia, persons acquiring their shares in connection with employment, dealers in securities, insurance companies, trusts, charities and collective investment schemes) is not considered.

Any person who is in any doubt as their tax position, or who is subject to taxation in any jurisdiction other than that of Cyprus, should consult his or her own professional advisers.

### **Corporation Tax**

Governed by the Income Tax Law (Law No. 118(I) of 2002, as amended).

All Cyprus tax resident companies are taxed on their income accrued or derived from all chargeable sources in Cyprus and abroad (corporation tax). A non-Cyprus tax resident company is taxed on income accrued or derived from a business activity which is carried out through a permanent establishment in Cyprus and on certain income arising from sources in Cyprus.

A company is a resident of Cyprus if it is managed and controlled in Cyprus.

Foreign taxes paid can be credited against the corporation tax liability in Cyprus.

The corporation tax rate for all companies is currently at 12.5%

The following type of corporate income is exempted from corporation tax in Cyprus:

- Profit from the sale of securities.
- Certain types of dividend.

- Interest not arising from the ordinary activities or closely related to the ordinary activities of the company (this will be subject to special Defence Tax contribution).
- Profits of a permanent establishment abroad, under certain conditions.
- Gains relating to foreign exchange differences with the exception of gains arising from actual trading in foreign currencies and related derivatives.

#### **Withholding taxes for non-Cyprus resident or domiciled shareholders**

Cyprus has in place a network of double taxation treaties affording double taxation relief to qualifying companies, including treaties with South Africa and the United Kingdom. Notwithstanding the aforementioned, Cyprus tax legislation allows for unilateral credit against income tax payable in Cyprus for foreign tax paid and there are no withholding taxes payable on dividends, interest and royalties to non-Cyprus tax resident or non-Cyprus domiciled shareholders.

#### **Special tax contribution for national defence purposes**

Governed by the Special Contribution for the Defence of the Republic Law (Law No. 117(I) of 2002, as amended).

Special Contribution for Defence may be imposed on certain types of dividend income (at the rate of 17%), passive interest income (at the rate of 30%) and rental income (at the rate of 3% - in addition to possible corporation tax) earned by companies' tax resident in Cyprus, as well as by individuals who are both Cyprus tax resident and Cyprus domiciled.

The following type of income is exempt from payment of special contribution for Defence Tax in Cyprus:

- Payment of a dividend by a Cyprus tax resident company to another Cyprus tax resident company.
- Payment of certain types of dividend by a non-Cyprus tax resident company to a Cyprus tax resident company, provided that more than 50% of the paying company's activities do not derive directly or indirectly from investment income and that the foreign tax is not significantly lower than the tax burden in Cyprus. The tax authorities have clarified that this should not be a tax rate of less than 6.25%.
- Interest income arising from the ordinary activities or closely related to the ordinary activities of the business (this will be subject to corporation tax).

#### **Special Defence Tax Payable on deemed dividend distribution**

Special Contribution for Defence is also payable by a Cypriot company on deemed dividends to the extent that its shareholders, being individuals, are both Cyprus tax resident and Cyprus domiciled. A Cypriot company which does not distribute at least 70% of its profits after corporation tax, within two years of the end of the year in which the profits arise, shall be deemed to have distributed this amount as a dividend two years after that year end. The tax on deemed dividend distribution would be payable only to the extent these profits are attributable to individual shareholders who are Cyprus tax resident as well as Cyprus domiciled, seeing as special defence contribution is exempt if paid from a Cypriot company to another Cypriot company. Defence tax may also be payable on deemed dividends in the event of a liquidation or capital reduction of the Company.

In the event that special Defence Tax is payable, the Company will debit such tax against the profits attributable to the respective Cypriot tax resident and domiciled shareholders. The amount of any deemed dividend distribution (subject to Defence Tax) would be reduced by any actual dividends paid

out of profits for the relevant year at any time up to the date of the deemed distribution. The profits to be taken into account in determining the deemed dividend do not include fair value adjustments to movable or immovable property (if any). In the event that a person who is not tax resident or domiciled in Cyprus receives a dividend from a Cypriot tax resident company and that dividend is paid out of profits which at any stage were subjected to the deemed dividend distribution rule described above, then that portion of the Defence Tax paid in respect of the deemed distribution which relates to the dividends received by such person is refundable. Deemed dividend distribution rules do not apply to shares held directly or indirectly by non-Cypriot tax or non-Cyprus domiciled residents.

### **Capital Gain Tax**

Governed by the Capital Gains Tax Laws 1980-2002, as amended.

Capital Gains Tax (subject to deductible expenses and indexation allowance, as well as various exemptions currently applicable), is imposed at the rate of 20% on gains from the disposal of immovable property situated in Cyprus, including gains from the disposal of shares in companies which directly own such immovable property. Further, shares of companies which indirectly own immovable property located in Cyprus and at least 50% of the value of the said shares derives from such immovable property are subject to Capital Gains Tax. Shares listed on any recognised stock exchange are excluded from these provisions.

### **Estate Duty**

Estate duty is currently not payable in Cyprus.

### **Value Added Tax**

Governed by the VAT Law 95(I)/2000 and relevant regulations, as amended.

VAT is imposed on the supply of goods and provision of services in Cyprus, as well as on the acquisition of goods from the European Union (EU) and the importation of goods into Cyprus. The standard rate is currently set at 19%, although other reduced rates and exemptions apply to certain goods and services.

### **South African Tax**

#### *Tax legislation*

The following statutes govern the taxation of all persons (natural persons and juristic persons) in South Africa, including Tharisa Minerals: Income Tax Act, 1962; Value-Added Tax Act, 1991; Transfer Duty Act, 1949; Securities Transfer Tax, 2007; Securities Transfer Tax Administration Act, 2007; Mineral and Petroleum Resources Royalty Act, 2008; Mineral and Petroleum Resources Royalty Administration Act, 2008; Skills Development Levies Act, 1999; Unemployment Insurance Contributions Act 2002; and Customs & Excise Act, 1964. The administration of the abovementioned Acts is undertaken by SARS. SARS is an organ of State within the public administration of South Africa.

In interpreting South African tax legislation, the normal grammatical meaning of the words must be given to the provision being interpreted. Where there is uncertainty or ambiguity, the purposive approach is applied to determine the intention of the legislature. South African tax legislation must also be interpreted to promote the spirit, purport and objects of the bill of rights to the Constitution of South Africa, 1996

### *Principles of taxation*

South Africa has a residence basis of taxation. This means that South African tax residents are taxed on their worldwide income. Persons who are not tax residents in South Africa are taxed on income which arises from a source within South Africa. A juristic person is regarded as being resident in South Africa for tax purposes if it is incorporated, established or formed or has its place of effective management in South Africa. Normal tax and corporate tax are levied against persons resident in South Africa and non-resident persons (who earn income from a South African source) on an annual basis calculated at pre-determined rates to the taxable income of such persons. South Africa has two types of taxes, direct and indirect. Direct taxes are imposed on persons whereas indirect taxes are imposed on transactions. Direct taxes are paid directly by the persons on whom they are levied whilst indirect taxes are usually collected by an intermediary and not paid to SARS directly by the person who bears them.

### *Taxes imposed by SARS*

The table below provides general data on the taxation of legal entities:

<b>Tax/Tax Level</b>	<b>Current Tax Rates</b>
Corporate Tax — Resident legal entities	Companies and close corporations resident in South Africa are taxed at a flat rate of 28% on their profits.  Dividends declared by companies and close corporations resident in South Africa are subject to a dividends withholding tax at a rate of 15% of the dividends declared.
Corporate Tax — Non-resident legal entities	Non-resident companies are taxed on their branch profits at a rate of 33%. Non-resident companies are not liable for dividends withholding tax.
VAT	VAT is levied at a rate of 14% on taxable goods and services.  The supply of certain goods and services are charged with VAT at a rate of 0% e.g. the supply of goods to a person who is not a resident of South Africa.  Certain suppliers of goods and services are exempt from VAT.
CGT	South African resident companies are liable for CGT on the disposal of capital assets at a maximum effective rate of 22.4%.  Non-resident companies are liable for CGT on the disposal of immovable property situated in South Africa, or on the disposal of an interest in a South African “property rich” company at a maximum effective tax rate of 22.4%.
Donations Tax	Donations tax is imposed on donations made by residents. Non-residents are thus not liable for donations

tax. Companies are liable to donations tax at a rate of 20%.

Transfer Duty

Transfer duty is payable on the transfer of immovable property by companies on a sliding scale up to 13% (for properties where the value is in excess of ZAR 10 million).

Securities Transfer Tax

Securities transfer tax is payable at a rate of 0.25% on the transfer of securities.

## ADDITIONAL INFORMATION

### Major Shareholders

Save as set out below, as at the Last Practical Date, the Company is not aware of any person who, directly or indirectly, was interested in 5% or more of the Company's capital or voting rights:

Name	Total Number of Ordinary Shares (direct and indirect)	Percentage interest
Medway Developments Limited*	119 030 073	46.52%
Pershing LLC	40 548 241	15.85%
Fujian Wuhang Stainless Steel Products Co. Limited	28 070 211	10.97%
Total	187 648 525	73.34%

\* Medway Developments Limited is held 96.74% by the Leto Settlement of which the trustees are Artemis Trustees Limited and the beneficiaries are Adonis Pouroulis, his spouse and his children. Adonis Pouroulis is the son of Loucas Pouroulis and brother of Phoevos Pouroulis, both executive directors of the Issuer.

None of the Company's major Shareholders has different voting rights from other Shareholders.

The Company is not aware of any person who, directly or indirectly, owns or controls the Company. The Company is not aware of any arrangements the operation of which may at a subsequent date result in a change of control of the Company.

### Pension arrangements

The Group's salaried employees in South Africa are members of defined contribution retirement benefit plans. The plans are incorporated in South Africa and are governed by the Pensions Funds Act (Act No. 24 of 1956). The contributors to the plans range from a minimum of 3% to a maximum of 15% of staff's pensionable salary. Contributions to the plans vest immediately. Contributions are accrued in the year in which the associated services are rendered by employees.

The Group's employees in Cyprus do not participate in group retirement benefit plans.

### Options and incentives

The Company operates the Share Award Plan for purposes of rewarding its employees (including executive directors) and consultants and aligning their interests with those of the Company. The Share Award Plan was approved by the Shareholders on 13 March 2014 and remains in full force and effect.

### Purpose

The purpose of the Share Award Plan is to advance the interests of the Company by encouraging the employees (including executive directors) and consultants of the Company and of its subsidiaries and affiliates to acquire Ordinary Shares, thereby increasing their proprietary interest in the Company, encouraging them to remain associated with the Company and furnishing them with additional incentive in their efforts on behalf of the Company in the conduct of its affairs.

### ***Basis of Awards***

Under the Share Award Plan the Remuneration Committee may grant an Award during a relevant grant period and in its discretion, or may procure that any Group Company grants Awards to any employees or consultants selected for participation by the Remuneration Committee.

The Remuneration Committee shall decide at the time of grant whether the Award will take the form of a Conditional Award or an Appreciation Right. A Participant may be granted any form of Award or any combination of Awards.

Each Award shall be subject to such terms and conditions consistent with the Share Award Plan as the Committee may determine in its sole discretion. No Award shall be granted under the Share Award Plan more than ten years after the date on which the Share Award Plan is adopted by the Remuneration Committee and approved by an ordinary resolution (requiring a 75% majority vote by Shareholders present or by proxy in a general meeting). Furthermore, no payment by the Participant shall be required on the grant or acceptance of an Award.

The grant of any Award shall be subject to any applicable dealing restrictions or approvals and to obtaining any approval or consent required under the provisions of any applicable rules published by the relevant listing authority if and to the extent that listing has occurred or of any regulation or enactment applicable to such grant.

### ***Limits***

#### ***Individual limits***

No Award may be granted under the Share Award Plan to the extent that the result of that grant would be that the aggregate number of Ordinary Shares realisable under that Award and of the Ordinary Shares realisable under any other Awards granted to the Participant under the Share Award Plan would exceed 1 273 903 Ordinary Shares, which are not shares that have already vested under the Share Award Plan. If the grant of any Award would have the result of breaching the individual limit, that Award shall be treated as taking effect over the maximum number of Ordinary Shares over which it could have been granted without breaching such limit. Furthermore, approval is required by the passing of an ordinary resolution (requiring a 75% majority vote by Shareholders present or by proxy in a General Meeting) in order for an Award, which would result in a breach of the abovementioned limit, to vest.

#### ***Plan limits***

No Award may be granted under the Share Award Plan to the extent that the result of that grant would be that the aggregate number of Ordinary Shares that could be issued on the realisation of that Award and any other Award granted at the same time, when added to the number of Ordinary Shares that could be or have been issued on the realisation or exercise of any awards granted under any other share-based incentive Share Award Plan established by the Company or any other company under the Company's control would exceed 12 739 032 Ordinary Shares.

Furthermore, this limit may not be exceeded except to the extent that approval has been granted by the passing of an ordinary resolution (requiring a 75% majority vote by Shareholders of the Company present or by proxy in a General Meeting).

### ***Vesting***

Rights of Participants before vesting:

Every Award granted under the Share Award Plan shall be personal to the Participant to whom it is granted and, except:

- (a) to the extent necessary to enable a personal representative to realise the Award following the death of a Participant; or
- (b) with the prior written consent of the Remuneration Committee to a family trust of which the beneficiaries are restricted to the Participant and/or his or her spouse, widow, widower, children and step-children.

Neither the Award nor the benefit thereof may be transferred, assigned, charged or otherwise alienated. Any transfer or attempted transfer of an Award otherwise than as permitted by the Share Award Plan shall cause an Award to lapse.

A Participant will have no rights in respect of any Ordinary Shares subject to an Award until the Ordinary Shares are issued or transferred to him. Upon any such shares subject to an Award being issued or transferred to a Participant, the Participant shall have such rights in respect of such Ordinary Shares as attach to those Ordinary Shares.

#### ***Vesting of awards***

An award may only be realised if and to the extent that the vesting period has expired and the performance conditions have been satisfied.

Vested Shares under Conditional Awards will be released or the cash amount paid, as applicable, to Participants automatically within 30 days of the vesting date. A Participant need take no action to realise a conditional Award.

Vested appreciation rights are exercisable up to the tenth anniversary of the date of grant after which they will lapse. A Participant may exercise a vested appreciation right in whole or in part by written notice to the Company in such form as required by the Company. The number of shares to be issued on the realisation of an appreciation right is calculated as:

$$\frac{A \times (B - C)}{B}$$

where

“A” represents the number of shares in the Award;

“B” represents the market value of Ordinary Shares on the exercise date;

“C” represents the market value of Ordinary Shares on the date of grant.

A Participant’s Award shall not vest if and for so long as he has been suspended from his employment by reason of suspected gross misconduct.

#### ***Performance conditions***

Performance conditions shall be determined by the Remuneration Committee at the date of grant and included in the notice of Award. The Remuneration Committee may determine that an Award should be subject to multiple performance conditions or that an Award should be sub-divided and that each part

be subject to different performance conditions and/or that any part be free from performance conditions.

### ***Leavers***

Should a Participant who was an employee at the date of grant leave the employ of the Group at any time before the vesting date, an Award granted to the Participant shall lapse automatically. Where a Participant was an employee at the date of grant and ceases to be an employee at any time before the vesting date applicable to an Award by reason of:

- (a) death;
- (b) injury, disability or ill-health;
- (c) redundancy;
- (d) retirement; or
- (e) any other reason where the Committee so determines in its absolute discretion,

a pro-rata portion of his Award shall continue, and will vest and be realisable at the end of the vesting period subject to the achievement of the performance conditions (if any) at that time.

### ***Corporate events for the Company***

#### *General offer*

If any person (either alone or together with any person acting in concert with him) obtains control of the Company as a result of making a general offer to acquire the whole of the share capital of the Company (other than those shares which are already owned by him and/or any person acting in concert with him), the Company shall, as soon as reasonably practicable thereafter, give notice to each Participant of such general or other offer. Each Participant may realise his Awards at such time before the date on which the acquirer obtains control as the Remuneration Committee may determine and, if the Remuneration Committee so requires, on terms such that the realisation is conditional upon the acquirer obtaining control. Failing any permitted realisation, the Awards shall lapse automatically upon the date on which the acquirer obtains control.

#### *Scheme of arrangement*

If a court shall direct that a meeting of the Shareholders be convened pursuant to Cyprus Companies Law for the purposes of considering a scheme of arrangement of the Company, each Participant may realise his Awards conditionally, on the scheme of arrangement being either approved by the Shareholders' meeting or sanctioned by the court (as determined by the Remuneration Committee in its absolute discretion) (the relevant condition), between the date of the court's direction and 12 noon on the day immediately preceding the date for which the Shareholders' meeting is convened.

Failing any permitted realisation, the Awards (or such part thereof as the Remuneration Committee may specify) shall be incapable of realisation between the last time upon which permitted realisation may occur and the first date on which it can be determined whether or not the relevant condition is satisfied. If the relevant condition is not satisfied, the Awards shall continue. If the relevant condition is satisfied, the Awards (or such part thereof as the Remuneration Committee may specify) shall lapse automatically on the day immediately after the date on which the scheme of arrangement is sanctioned by the court.

#### *Adjustment of capital*

In the event of a capitalisation issue, a special dividend, a rights issue or reduction of capital (capital adjustment), the Company shall adjust the aggregate number of Ordinary Shares that the Company is entitled to grant under any Award to a Participant subject to the provisions relating to individual limits under the Share Award Plan. Any such adjustment by the Company shall be carried out in a manner so as to provide participant the same proportion of Ordinary Shares as that to which he was previously entitled, prior to the capital adjustment.

#### *Internal reorganisation*

Awards shall not be realisable if the purpose and effect of the scheme of arrangement is to create a new holding company for the Company, such company having substantially the same shareholders and proportionate shareholdings as those of the Company immediately prior to the scheme of arrangement. Awards will in such circumstances not vest and will be replaced by equivalent share awards or options in the new holding company.

#### *Restructuring*

If the Remuneration Committee becomes aware that the Company is or is expected to be affected by any dividend in specie, super dividend, change of control or other corporate restructuring of the Company which, in the opinion of the Remuneration Committee, would affect the current or future value of any Awards, the Remuneration Committee, acting fairly, reasonably and objectively, may in its absolute discretion allow some or all Awards to be realised.

#### *Voluntary winding-up*

If notice is duly given of a resolution for a voluntary winding-up of the Company vested but unrealised Awards will be released or become exercisable following such winding-up. Unvested Awards will vest at the time of the winding-up.

#### *Exchange of Awards*

In the event of the occurrence of a change of control, or a scheme of arrangement the Remuneration Committee may, acting fairly and reasonably and having regard to all the circumstances of the event, determine at any time before Awards vest in accordance with these paragraphs (provided the acquiring company so consents), that the Participant may agree to exchange his Award or that Awards will not vest but shall be automatically exchanged on such date as the Remuneration Committee determines.

#### *Adjustment of Awards*

In the event of any capital reorganisation (or the implementation by the Company of a demerger or payment of a super dividend which would otherwise materially affect the value of an Award) the Remuneration Committee shall adjust the number of Ordinary Shares subject to Awards (including, for the avoidance of doubt, vested shares in respect of which any Award has been realised but Ordinary Shares have not yet been transferred to the Participant) and the Share Award Plan or individual limits, such that, following such adjustment, the number of Ordinary Shares subject to Awards provided to any Participant shall reflect the same proportion of Ordinary Shares as that to which he would have been entitled prior to such capital reorganisation.

### ***Amendments without Shareholder Approval***

The Share Award Plan provides that, subject to the specific amendments below that require Shareholder approval, the Remuneration Committee may at any time or from time to time, in its discretion alter, amend or vary the Share Award Plan without Shareholder approval for any reason.

Amendments by the Remuneration Committee relating to:

- (a) eligibility to participate in the Share Award Plan;
- (b) the number of Ordinary Shares which may be utilised for the purpose of the Share Award Plan;
- (c) the basis for determining Awards;
- (d) the amount (if any) payable on the grant or vesting of an Award;
- (e) the voting, dividend, transfer and other rights attached to the Awards;
- (f) the adjustment of Awards in the event of the events listed in the Share Award Plan; and
- (g) the procedure to be adopted in respect of the vesting of Awards in the event of termination of employment,

must be approved by Shareholders passing an ordinary resolution representing at least 75% of the votes cast in favour of such resolution.

The decision of the Remuneration Committee shall be final and binding in all matters relating to the Share Award Plan and it may at any time discontinue the grant of further Awards.

### ***Outstanding Awards***

The following table sets out information about Awards granted under the Share Award Plan:

<b>Year of award</b>	<b>Opening balance</b>	<b>Allocated</b>	<b>Vested</b>	<b>Forfeited</b>	<b>Total</b>
2014	-	3 679 129	-		3 679 129
2015	3 679 129	2 656 589	(1 191 256)	(1 043 081)	4 101 381

Valuation of 2014 Awards at grant date was ZAR23.11 per share. Valuation of 2015 Awards at grant date was ZAR6.37 per share.

Appreciation Rights:

<b>Year of award</b>	<b>Opening balance</b>	<b>Allocated</b>	<b>Vested</b>	<b>Forfeited</b>	<b>Total</b>
2014	-	2 051 139	-	-	2 051 139
2015	2 051 139	3 556 635	(947 471)	(2 033 302)	2 627 001

Valuation of 2014 share award at grant date was ZAR4.25 per award. Valuation of 2015 share award at grant date was ZAR2.01 per award.

## Material contracts

The following contracts which: (i) other than contracts entered into in the ordinary course of business are or may be material and have been entered into by a Group Company within two years immediately preceding the date of this Prospectus; or (ii) not being a contract entered into in the ordinary course of business have been entered into by a Group Company at any time before the date of this Prospectus where those contracts contain provisions under which the Group has an obligation or entitlement which is or may be material to the Group as at the Last Practical Date.

	Agreement
1.	<p><b>Shareholders Agreement</b></p> <p>Parties involved:</p> <p>Tharisa Minerals, Thari Resources and Tharisa.</p> <p>Nature of Agreement:</p> <p>An agreement between the shareholders of Tharisa Minerals governing their rights and obligations amongst each other as shareholders.</p> <p>Date of Agreement: 19 December 2008</p> <p>Details: The effective date of the Shareholders Agreement was the date upon which 370 shares of Tharisa Minerals were transferred to the Company pursuant to the Share Sale Agreement dated 6 May 2008 between Thari and the Company whereby the Company acquired 370 shares from Thari (the "Effective Date"). Pursuant to the Agreement, it is recorded that Thari qualifies as a Historically Disadvantaged South African (persons) Company ('HDSA Company').</p> <p>The Shareholders Agreement contains provisions, including rights in relation to shareholder meetings, the appointment of directors, forced sales, management and control of Tharisa Minerals, pre-emptive rights and drag-along rights.</p> <p>In addition, the Shareholders Agreement provides that for the duration of the restricted period referred in the Shareholders Agreement commencing on the Effective Date and ending on 1 May 2014, Thari Resources is required to ensure that a minimum 51% of its issued share capital is held by HDSAs and that a minimum of 51% of its total exercisable votes at any general meeting of Thari Resources is similarly held by HDSAs.</p> <p>The Shareholders Agreement also provides that the HDSA shareholders shall not have any obligations to fund the working capital requirements of Tharisa Minerals.</p> <p>On 18 February 2009, the description of the mining right in the Shareholders Agreement was amended in terms of an Addendum and on 6 September 2011, the Shareholders Agreement was further amended in terms of a Second Addendum:</p> <ul style="list-style-type: none"><li>• Replacing the definition of HDSA Trusts with Tharisa Community Trust,</li><li>• Providing for the sale and transfer of 30 Ordinary Shares (6% of the issued share capital) of Tharisa Minerals by Thari to Tharisa Community Trust for ZAR7.5 million; and</li><li>• Providing for the Company to donate ZAR7.5 million to the Tharisa Community Trust, in order to facilitate the aforementioned purchase of shares and upon such sale and transfer, the Tharisa Community Trust to sign a Deed of Adherence whereby the trustees of Tharisa</li></ul>

	<p>Community Trust are bound by the Shareholders Agreement and any amendments thereafter as if they were a party to the Shareholders Agreement.</p> <p>With the transfer of the 6% of the issued share capital to Tharisa Community Trust, Tharisa Minerals is owned 74% by the Company, 20% by Thari Resources and 6% by the Tharisa Community Trust.</p>
2.	<p><b>Mining Right</b></p> <p>Tharisa Minerals holds a Mining Right, granted by the DMR in terms of the MPRDA on 19 September 2008 and registered in the Mining and Petroleum Titles Registration Office on 13 August 2009 for the mining area situated in North West Magisterial/Administrative District of Rustenburg. The Mining Right shall be in force for a period of 30 years, ending on 18 September 2038. The Mining Right entitles Tharisa Minerals to solely and exclusively mine, and recover the mineral/s in, on and under the designated mining area for its own benefit and account, and deal with, remove and sell or otherwise dispose of the minerals, subject to the terms and conditions of the granted mining right. The designated mining area refers to certain portions of the farm 342 J.Q. (in respect of PGMs, Gold, Nickel, Copper and Chrome) and Rooikoppies 297 J.Q. (in respect of PGMs, Gold, Nickel, Copper and Chrome contained in the MG Chromitite Layer only).</p> <p>On 14 July 2011, an application was granted in terms of Section 102 of the MPRDA to amend the Mining Right by the addition of Portions 96, 183 and 286 of the property 342 J.Q. to the Mining Right and subsequent to such amendment, the area of the Mining Right amounts to 5 474.86 hectares. The original holder of the Mining Right of portions 96 and 183 of the farm 342 J.Q. situated on the North West Magisterial/Administrative District of Rustenburg measuring 60.8870 hectares, was South African Producers and Beneficiators of Chrome Ore Proprietary Limited.</p> <p>The Mining Right contains certain terms and obligations, which are summarised as follows:</p> <ul style="list-style-type: none"> <li>• The terms of the right (including any extensions of the area covered by the right and the addition of any minerals), may not be amended or varied without the written consent of the Minister.</li> <li>• The holder shall be entitled to abandon or relinquish the right or the area covered by the right or any part thereof but upon so doing, the holder must furnish the DMR with all prospecting and mining results and information as well as the general evaluation of the geology, geophysics and borehole data in respect of the abandoned area and apply for a closure certificate in terms of the MPRDA. Upon any such abandonment or relinquishment, the Minister is then entitled to grant a mining right or prospecting right to any other person in respect of such abandoned areas.</li> <li>• The holder is required to pay royalties as required in terms of the Mineral and Petroleum Resources Royal Act, 2008. Should any royalty not be paid punctually, the holder will be in default and shall be required to pay interest thereon at the prescribed rate.</li> <li>• Under Section 5 of the MPRDA, the holder is entitled to enter the land on which the right relates, to bring onto that land any plant, machinery or equipment and to build and construct any surface or underground infrastructure which may be required for the purpose of exercising its right.</li> </ul>

- The holder is also entitled to mine for its own account the minerals for which such right has been granted, to remove and dispose of such minerals and to carry out any other activity incidental to such mining operations, provided such activities do not contravene the provisions of the MPRDA.
- The mining operations must be conducted in accordance with a Mining Work Programme or any amendment to such Mining Work Programme as approved by the DMR and in accordance with the approved Environmental Management Plan of the holder.
- The holder shall not trespass nor shall it interfere or prejudice the rights of occupiers and owners of land in the vicinity of the mining area, except to the extent that such interference is necessary for the purpose of enabling the holder to properly exercise its rights under the mining right.
- As a condition of the mining right, the holder is required to dispose of all minerals derived from the exploitation of the right at competitive market prices.
- The mining right may not be encumbered or disposed of without the prior written consent of the Minister.
- All excavations made by the holder during the currency of the mining right must be sealed, closed and fenced and made safe by the holder in accordance with the approved Environmental Management Programme, the Mine Health and Safety Act and all other applicable laws.
- The holder is required to take all necessary steps to adequately safeguard and protect the environment, the mining area and any persons using or entitled to use the surface of the mining area from any possible damage or injury associated with the activities on the mining area.
- The Minister and his duly authorised representatives shall be entitled to inspect the mining area, the mining operations and the execution of the Environmental Management Programme and any instruction conveyed to the holder by the Minister or its duly authorised representatives requiring the proper performance by the holder of its obligations which shall be carried out.
- Subject to Section 47 of the MPRDA which requires that the Minister must give prior written notice of any intention to suspend or cancel the right setting out the reasons for such written notice, afford the holder a reasonable opportunity to show why the right should not be suspended or cancelled together with a direction that the holder must take specific measures to remedy any contravention, breach or failure, the Minister may cancel or suspend the mining right if the holder:
  - submits inaccurate, incorrect or misleading information in connection with the mining right;
  - fails to honour or carry out any agreement, arrangement or undertaking including any undertaking made by the holder in terms of the Mining Charter and the Social and Labour Plan;
  - breaches any material term and condition of the mining right;

	<ul style="list-style-type: none"> <li>– conducts mining operations in contravention of the MPRDA; and</li> <li>– contravenes the requirements of the Environmental Management Programme.</li> </ul> <ul style="list-style-type: none"> <li>• The holder is required to maintain all such books, plans and records with regards to its mining activities as required by the MPRDA and is required to furnish reports and documents to the DMR. Such reports and documents include monthly returns contemplated in the MPRDA.</li> <li>• The holder is required on an annual basis to submit a detailed implementation plan of its approved Social and Labour Plan.</li> </ul>
3.	<p><b>Common Terms Agreement Dated 9th February 2012 (“CTA”, “Loan Agreement”)</b></p> <p><b><i>Parties involved</i></b></p> <p>HSBC Bank Plc Johannesburg Branch (previously “The Hong Kong and Shanghai Banking Corporation Limited Johannesburg Branch) (the “Facility Agent”), Nedbank Limited (a division of Nedbank Limited), ABSA Capital (a division of Absa Bank Limited) (collectively the “Facility Lenders”), and Tharisa Minerals (the “Borrower”), Tharisa, Thari Resources and Business Venture Investments No 1568 Proprietary Limited.</p> <p><b><i>Nature of agreement</i></b></p> <p>CTA: financing of an aggregate principal amount of ZAR1 billion was provided to Tharisa Minerals. The primary purpose of the facility was to fund the expansion of the mining footprint and construction of the Voyager Plant at the Tharisa Mine (“Facility Purpose”) and has been drawn down in full.</p> <p>The Facility Lenders to provide facilities to the Borrower solely for the Facility Purpose.</p> <p><b><i>Date of agreement</i></b></p> <p>9 February 2012</p> <p><b><i>Details</i></b></p> <p>The Facility Agent shall act as the facility agent bank for the Facility Lenders.</p> <p>The interest rate on the facility is JIBAR plus a margin of 4.9% per annum before the satisfaction of the technical and economic completion tests and a margin of 2.4% per annum after the satisfaction of the completion tests. The date for satisfaction of the completion tests is 28 November 2016.</p> <p>The first repayment date of the facility was 31 December 2013. The final maturity date of the facility is 31 March 2019. The aggregate principal balance of the facility is repayable in arrears in 22 equal quarterly instalments from the first repayment date up to and including the final maturity date, subject to recalculations in the event that any mandatory pre-payment has been made.</p> <p>The agreement provides undertakings by the Borrower which are standard and customary for such transactions and include the following:</p> <ul style="list-style-type: none"> <li>• The Borrower will comply with all its obligations under the agreement and all other finance documents linked to the agreement and that it shall maintain, protect and defend all its</li> </ul>

rights under the said agreements.

- The Borrower shall carry on its business as contemplated in the finance agreements and no material change therein shall be permitted without the prior written consent of the Facility Lenders.
- Any replacement of its auditors will require the written approval of the Facility Lenders.
- The Borrower shall materially comply with all applicable laws which affects its affairs and business and it shall install and maintain suitable accounting, cost control and management information systems and ensure that all its books and accounting records are up to date and are properly kept in accordance with applicable laws.
- All audited financial statements and interim financial statements shall be prepared in accordance *inter alia* with IFRS and shall be delivered to the Facility Lenders.
- Save in respect of those assets which are owned by the relevant contractors and/or leased by the Borrower, the Borrower shall own all the assets and properties that are required by it to enable it to conduct its operations and business, that all its assets and properties will be in good order and condition and fully operational and properly maintained.
- The Borrower shall have free and beneficial ownership of all its properties.
- The Borrower will at all times comply with its mining right and the provisions of the MPRDA in relation to its mining right and that it shall not endanger its rights pursuant to the mining right.
- All contracts entered into by the Borrower shall be entered into in the ordinary course of business, on market related commercial terms and in respect of contracts above a certain threshold, shall be recorded in writing.
- The Borrower shall do all things required to ensure that the security provided is valid, enforceable and satisfies all the essential legal requirements.
- The Borrower shall promptly notify the Facility Lenders immediately upon any proposed changes to the businesses or operations of third parties to material contracts concluded by the Borrower. It shall also notify the Facility Lenders of any material litigation or other legal proceedings against it.
- Any changes to the shareholding of the Borrower must be notified to the Facility Lenders in writing prior thereto.
- The Borrower is required to comply with all labour laws, labour regulations and labour determinations applicable to it.
- The Borrower is required to ensure that all relevant insurances are taken out and maintained to ensure that all reasonable business risks are covered by such insurance.
- The Borrower is required to comply with all applicable environmental laws and to advise the Facility Lenders of any legal proceedings against it pursuant to any environmental laws.
- The Borrower shall make full and complete disclosure of all revenues and costs in its tax returns and shall properly comply with all laws and regulations relating to taxes.
- The Borrower shall not transfer, sell or dispose of any part of its business undertakings,

assets or properties without the prior written approval of the Facility Lenders other than for assets not required or useful in respect of the business operations and sold at market value.

- The Borrower is not entitled to incur any indebtedness other than specified permitted indebtedness. Subject to agreed thresholds, the borrower is not entitled to incur any indebtedness in respect of which it or its subsidiaries is required to provide any security.
- The Borrower is not entitled to permit any encumbrances to exist over any of its assets save for specific permitted encumbrances.
- The Borrower is not permitted to make any loan or advance credit to any person, subject to agreed thresholds other than in the normal course of trade, on market related, commercial or trade terms to suppliers.
- The Borrower undertakes that it shall not enter into any transactions with individuals or organisations appearing on the OFAC list or who are the subject of any sanctions.

#### *Security*

A security interest over all of the shares in Tharisa Minerals held by the Company and Thari Resources; Arxo Logistics' rights in certain logistics contracts, substantially all of the assets of Tharisa Minerals and the DSRA referred to below.

Tharisa Minerals and the Company have each provided negative pledges standard and customary for senior debt financings of this nature agreeing not to create any further encumbrances over the assets of Tharisa Minerals, with certain customary and agreed exceptions. The Company has given an irrevocable and unconditional guarantee to the Facility Lenders in respect of the performance by Tharisa Minerals of its obligations up to completion testing.

Tharisa Minerals is required to comply with certain financial covenants referred to below. Standard and customary events of default for senior debt financing of this nature are included.

Tharisa Minerals is required to maintain a DSRA with HSBC and to ensure that such account is funded in an amount equal to 2 (two) instalment payments of the facility (principal plus interest). The DSRA may, with the consent of the Facility Lenders be used to fund any shortfall in the payment obligations of Tharisa Minerals, provided that the required credit balance in the account is promptly restored.

At 30 September 2015 an amount of US\$196.4 million of the carrying amount of the Group's property, plant and equipment was pledged as security against secured bank borrowings.

The loan contains the following financial covenants:

- DSCR at a level greater than 1.4 times
- Loan life cover ratio at a level greater than 1.6 times
- Debt/equity ratio at a level greater than 1.5 times
- Reserve tail ratio at a level of 30% or greater

As at 30 September 2014, Tharisa Minerals complied with all covenant ratios, except for the historic DSCR which was calculated as -0.36. Repayment terms were not renegotiated but the interest rate was increased by 100 basis points to JIBAR + 4.9% prior to technical and economic

	<p>completion. The DSCR is calculated as the cash flow available for repayment divided by the actual repayment for the six-month period preceding the covenant measurement date. The Facility Lenders granted a waiver on the requirement as at 30 September 2014.</p> <p>As at 30 September 2015 Tharisa Minerals complied with all covenant ratios. As at 31 March 2016 Tharisa Minerals complied with all covenant ratios, except for the historic DSCR which was calculated at -0.56. The banks have condoned non-compliance with the DSCR and therefore there is no impact on the loan facility which has been fully drawn down and on the funding of the Group. The technical completion date was extended to 28 November 2016. Tharisa Minerals hedges a portion of the facility for interest rate risk via an interest rate cap.</p> <p>The payment obligations have been discharged in full and on due date.</p>
4.	<p><b>Limited Recourse Disclosed Receivables Discounting Agreement (LRDRDS)</b></p> <p><b><i>Parties involved</i></b></p> <p>ABSA Bank Limited (acting through its Corporate and Investment Banking division)(hereinafter the “Purchasing Agent”), Nedbank Limited (acting through its Nedbank Capital division), HSBC Bank Plc Johannesburg Branch and Tharisa Minerals.</p> <p><b><i>Nature of agreement</i></b></p> <p>Tharisa Minerals is entitled to discount its Platinum, Palladium and Gold receivables under the PGM Concentrate off-take agreement with Impala Platinum up to a maximum revolving facility amount of ZAR300 million.</p> <p><b><i>Date of agreement</i></b></p> <p>30 May 2013</p> <p><b><i>Conditions</i></b></p> <p>The receivables to be discounted will require the prior approval of the Facility Agent (as per the definition of the CTA described above) under the LRDRDS and if approved, the amount payable will be based on the quantity of Platinum, Palladium and Gold as per the assay purchased by IRS under the Concentrate Off-take Agreement and the agreed ZAR Hedge Price for such metals as the assay purchased by IRS . The receivables will be discounted on a limited recourse basis.</p> <p>If payment received from IRS under the discounted invoices does not cover the amounts deductible in consequence of the limited recourse events then Tharisa Minerals shall have two business days following the recourse events to discharge any amounts owing to the Purchasing Agent.</p>
5.	<p><b>Relationship Agreement</b></p> <p>The Relationship Agreement dated 5 April 2016 between the Company and Medway Developments Limited, which will come to force on Admission, regulates the ongoing relationship between the parties. The principal purpose of the Relationship Agreement is to ensure that Medway and its Associates (as defined in the Relationship Agreement) do not prevent the Company from complying with its obligations under the Listings Rules and that all transactions with the Group are at arm’s length and on normal commercial terms. The Relationship Agreement is not required to be entered into for the purpose of the Listing Rules as the Company is only a Standard Listed Company, however it will continue in full force until</p>

	the termination, cancellation or withdrawal of admission of the Ordinary Shares to trading on the Official List and the London Stock Exchange's Main Market and provided that Medway, together with its Associates, have an aggregate interest of at least 30% in the voting rights of the Company.
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## Litigation

Other than as disclosed below, there are no governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened and of which the Company is aware) which may have, or have had during the 12 months prior to the date of this Prospectus, a significant effect on the Company and/or the Group's financial position or profitability.

	Litigation
<b>1.</b>	<p><b><i>Shareholder action</i></b></p> <p>In October 2014, the Company received a "letter before action" from a firm of solicitors representing a Shareholder which asserts intended claims against, <i>inter alia</i>, the Company for damages purporting to arise in the context of the listing of the Company on the JSE and the compulsory conversion of the convertible redeemable preference shares held by that Shareholder in the Company into Ordinary Shares as provided for in the terms of the convertible redeemable preference shares.</p> <p>The Board has taken legal advice and in the event legal proceedings are instituted, the Company will defend itself vigorously. In accordance with paragraph 92 of IAS 37 "Provisions, contingent liabilities and contingent assets" no further information is disclosed in the audited financial statements in relation to the subject matter on the grounds that it may prejudice the position of the Company in a dispute with other parties.</p>
<b>2.</b>	<p><b><i>Spoilation Application by New Wave Advanced Capital (Pty) Limited ("Advanced Capital") against Tharisa Minerals</i></b></p> <p>Pursuant to the decision of the board of Tharisa Minerals taken on 29 September 2015, the mining contract with Advanced Capital was summarily cancelled on 6 October 2015 and pursuant to the binding term sheet concluded with MCC on the same date, MCC took over the interburden waste and reef mining activities on the Tharisa Mine with immediate effect upon the termination of the Advanced Capital contract.</p> <p>On or about 3 November 2015, a Notice of Motion for a spoliation application was served on Tharisa Minerals by Advanced Capital. The basis of a spoliation application is that the Applicant (Advanced Capital) was in possession of the Tharisa Mine or parts of the Tharisa Mine and was unlawfully dispossessed thereof pursuant to the summary termination of the mining contract. The matter was to be heard on an urgent basis in the North West Division of the High Court of South Africa, Mahikeng on Wednesday, 18 November 2015.</p> <p>Tharisa Minerals opposed the application and raised numerous defences to the matter including without limitation, the material non-joinder of MCC to the proceedings. In view of the defences raised by Tharisa Minerals, Advanced Capital removed the matter from the Court roll, tendered wasted costs and indicated that it wished to join MCC to the proceedings. Advanced Capital also indicated that they anticipated an intervention in the</p>

	<p>matter by Advanced DigMin (in provisional liquidation) as co-applicant, in which case it would be necessary for Advanced DigMin to apply to Court to intervene in the matter.</p> <p>As at the Last Practical Date, no court papers have been served or filed for the joinder of MCC or Advanced DigMin to the proceedings.</p>
<p><b>3.</b></p>	<p><b><i>South African Human Rights Commission</i></b></p> <p>On 11 August 2015, a complaint was made to the Human Rights Commission in South Africa that the dust and blasting from the Tharisa Mine made living conditions for land owners living in the vicinity unbearable.</p> <p>The Human Rights Commission gave notice to the Company of the complaint and arrived at a determination that if the allegations were proven to be true, then this would amount to a violation of S24 of the South African Constitution (S24 of the Constitution provides that everybody has the right to an environment that is not harmful to their health or wellbeing and to have the environment protected through reasonable measures that (i) prevent pollution and ecological degradation, (ii) promote conservation, and (iii) secure ecological sustainable development and use of natural resources while promoting justifiable economic and social development).</p> <p>Tharisa Minerals prepared and submitted a comprehensive response to the Human Rights Commission with the assistance of its attorney and an advocate (counsel) who specialises in constitutional matters.</p> <p>The matter continues.</p>

## Related Party Transactions

In the ordinary course of its business, the Group has engaged, and in certain circumstance continues to engage, in transactions with related parties. Parties are considered to be related if one party has the ability to control the other party or to exercise significant influence over the other party in making financial or operational decisions or if such parties are under common control.

The Group seeks to conduct all transactions with entities under common control or otherwise related to it on market terms and in accordance with relevant legislation. The terms and conditions of sales to related parties are determined based on arrangements specific to each contract or transaction. However, there can be no assurance that any or all of these transactions have been or will be conducted on market terms.

As at the date of this Prospectus, there is no significant change in the numbers included either 'as at 31 March 2016' or 'six months ended 31 March 2016' in the following tables.

The balances with related parties at each reporting date were as follows:

	As at 31 March 2016 <sup>1</sup> US\$'000	As at 30 September 2015 US\$'000	2014 US\$'000	2013 US\$'000
<b>Trade and other receivables:</b>				
Kameni Management Services Proprietary Limited	0	0	17	21
Salene Mining Proprietary Limited	0	0	9	10
Kameni Proprietary Limited	0	0	22	24
Keaton Administrative and Technical Services Proprietary Limited	1	1	7	0
	<b>1</b>	<b>1</b>	<b>55</b>	<b>55</b>
<b>Loans payable to related parties</b>				
Langa Trust	<b>1 782</b>	<b>1 884</b>	<b>2 217</b>	<b>2 870</b>

<sup>1</sup>Source: Unaudited Management Accounts.

<sup>2</sup>As at 30 September 2015, the loan funding from Langa Trust has been subordinated in favour of the lenders of the senior debt facility as per the Common Terms Agreements (see section "ADDITIONAL INFORMATION", *Material Contracts*) and may only be repaid either out of additional equity invested into Tharisa Minerals or from the cash flow waterfall as provided for in the financial agreements. The loan has no fixed repayment date and bears interest at South African prime interest rate +2%.

	Six months ended on 31 March 2016 <sup>1</sup> US\$'000	Year ending on 30 September 2015 US\$'000	2014 US\$'000	2013 US\$'000
<b>Amounts due to related parties<sup>2</sup>:</b>				
Evi Papacleovoulou	0	0	0	34
Keaton Administrative and Technical Services Proprietary Limited	0	0	0	1
Kameni Management Services Proprietary Limited	0	0	2	11
<b>Directors<sup>3</sup>:</b>				

Antonios Djakouris	21	23	32	38
John David Salter	24	42	37	28
Ioannis Drapaniotis	15	21	26	38
Omar Kamal	14	14	11	0
Brian Chi Ming Cheng	11	10	0	0
Carol Bell	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>88</b>	<b>110</b>	<b>108</b>	<b>150</b>

<sup>1</sup>Source: Unaudited Management Accounts.

<sup>2</sup>The amounts due to related parties are unsecured, interest free and with no fixed repayment dates.

<sup>3</sup>These amounts relate to directors' fees due to directors and not yet paid.

	As at	As at 30 September		
	31 March 2016 <sup>1</sup>	2015	2014	2013
	US\$'000	US\$'000	US\$'000	US\$'000
<b>Interest bearing - accrued dividends to related parties</b>				
Arti Trust	2 271	2 396	2 849	0
Ditodi Trust	196	204	243	0
Makhaye Trust	196	204	243	0
The Phax Trust	389	408	485	0
The Rowad Trust	196	204	243	0
Moira June Jaquet-Briner	196	204	243	0
<b>Total</b>	<b>3 444</b>	<b>3 620</b>	<b>4 306</b>	<b>0</b>

<sup>1</sup>Source: Unaudited Management Accounts.

Significant transactions carried at arm's length with related parties during the year were as follows:

	Six months ended on	Year ending on 30 September		
	31 March 2016 <sup>1</sup>	2015	2014	2013
	US\$'000	US\$'000	US\$'000	US\$'000
<b>Interest expense</b>				
Langa Trust	103	245	285	311
Arti Trust	112	286	515	661
Ditodi Trust	11	24	44	56
Makhaye Trust	11	24	44	56
The Phax Trust	23	49	88	112
The Rowad Trust	11	24	44	56
Moira June Jaquet-Briner	11	24	44	56
<b>Total</b>	<b>282</b>	<b>676</b>	<b>1 064</b>	<b>1 308</b>

<sup>1</sup>Source: Unaudited Management Accounts.

Compensation to key management of the Company for the year ended 30 September 2015 and 2014 and for the six months ended 31 March 2016 is set out in the tables below:

	Salary and fees US\$'000	Expense allowances US\$'000	Provident fund and risk benefits US\$'000	Share based payments US\$'000	Total US\$'000
<b>Compensation to key management for the six months ended 31 March 2016<sup>1</sup></b>					
Non-executive Directors remuneration	245	0	0	0	245
Executive Directors remuneration	518	4	39	0	561
Other key management remuneration	343	11	63	0	417
<b>Total</b>	<b>1 106</b>	<b>15</b>	<b>102</b>	<b>0</b>	<b>1 223</b>
<b>2015 Compensation to key management</b>					
Non-executive Directors remuneration	504	0	0	0	504
Executive Directors remuneration	1 230	10	83	73	1 396
Other key management remuneration	817	32	109	42	1 000
<b>Total</b>	<b>2 551</b>	<b>42</b>	<b>192</b>	<b>115</b>	<b>2 900</b>
<b>2014 Compensation to key management</b>					
Non-executive Directors remuneration	598	0	0	0	598
Executive Directors remuneration	1 384	12	102	0	1 498
Other key management remuneration	1 007	0	125	3	1 135
<b>Total</b>	<b>2 989</b>	<b>12</b>	<b>227</b>	<b>3</b>	<b>3 231</b>

<sup>1</sup>Source: Unaudited Management Accounts.

And for the year ended 30 September 2013 and 2014 is shown below:

	Year ending on 30 September	
	2014 US\$'000	2013 US\$'000
<b>Compensation to key management (excluding directors)</b>		
Short term employee benefits	1 038	1 217
Post employment benefits - defined contribution plans	94	111
Share-based payments	3	0
	<b>1 135</b>	<b>1 328</b>
<b>Travel expenses paid</b>		
Salene Mining Proprietary Limited	0	1

Share-based awards to the Directors are disclosed in section "ADDITIONAL INFORMATION", "Options and Incentives". Awards to other key management during the Financial Years 2015 and 2014 are as follows:

	Opening balance	Allocated	Vested	Forfeited	Total
2015 Ordinary Shares LTIP	239 841	474 701	(79 946)	(158 234)	476 362

2014 Ordinary Shares					
LTIP	-	239 841	-	-	239 841
	<b>Opening balance</b>	<b>Allocated</b>	<b>Vested</b>	<b>Forfeited</b>	<b>Total</b>
2015 Ordinary Shares					
SARS	165 946	333 310	(82 973)	(166 655)	249 628
2014 Ordinary Shares					
SARS	-	165 946	-	-	165 946

During the FY 2013 the following transactions have taken place:

	<b>Year ending on 30 September 2013</b>	
	<b>Number of shares</b>	<b>Carrying Amount US\$'000</b>
<b>Class B preference shares of a subsidiary held by related parties:</b>		
Arti Trust	4 000	6 998
Ditodi Trust	300	485
Makhaye Trust	300	485
The Phax Trust	600	970
The Rowad Trust	300	485
Moira June Jacquet-Briner	300	485
	<b>5 800</b>	<b>9 908</b>
<b>Convertible redeemable preference shares of the Company held by related parties</b>		
Fujian Wuhang Stainless Steel Products Co. Limited	112	27 738

The following table illustrates the relationships between the related parties excluding the Directors:

<b>Name</b>	<b>Relationship</b>
Kameni Management Services Proprietary Limited (Kameni)	A director of the holding company of Kameni is also a director of Tharisa Minerals and of the Issuer. In addition, a director of the holding company of Kameni is also a director of the Issuer.
Kameni Proprietary Limited (Kameni P)	A director of Kameni P is also a director of Tharisa Minerals and the Issuer. In addition, a director of Kameni P is also a director of the Issuer,

Salene Mining Proprietary Limited (Salene)	A director of Salene is also a director of Tharisa Minerals Proprietary Limited and the Issuer. In addition, a director of Salene is also a director of the Issuer.
Keaton Administrative and Technical Services Proprietary Limited (Keaton)	Two of the directors of the holding company of Keaton is also a director of Tharisa Minerals and the Issuer.
Langa Trust	One of the directors of the Issuer who is also a director of Tharisa Minerals is a beneficiary of this trust.
Arti Trust	One of the directors of the Issuer who is also a director of Tharisa Minerals is a beneficiary of this trust.
Ditodi Trust	The non-controlling interest of Tharisa Minerals is a beneficiary of this trust.
Makhaye Trust	The non-controlling interest of Tharisa Minerals is a beneficiary of this trust.
The Phax Trust	One of the directors of the Issuer who is also a director of Tharisa Minerals is a beneficiary of this trust.
The Rowad Trust	One of the directors of the Issuer who is also a director of Tharisa Minerals is a beneficiary of this trust.
Moira June Jacquet-Briner	She is the director of Tharisa Minerals who is also a shareholder in the non-controlling interest of Tharisa Minerals.
Fujian Wuhang Stainless Steel Products Co. Limited	Shareholder of the Company.

Save for the related party transactions set out in the audited consolidated financial statements of the Group for the Financial Years 2013, 2014 and 2015, there are no related party transactions that were entered into by the Group up to and including the date of this Prospectus apart from the following:

Related Party Agreements	
1.	<p><b>Logistical Services Agreement ('LSA')</b></p> <p><i>Parties involved</i></p> <p>Arxo Logistics and Tharisa Minerals.</p> <p><i>Nature of agreement</i></p> <p>Tharisa Minerals appointed Arxo Logistics as its sole and exclusive provider and supplier of logistical services to Tharisa Minerals.</p> <p><i>Date of agreement</i></p> <p>5 November 2009</p> <p><i>Details</i></p> <p>The LSA continues indefinitely until terminated by either party on six months' prior written notice.</p> <p>The fee for providing the services under this agreement is an amount equal to all Arxo Logistics' direct and indirect costs of providing the services plus a 3% margin thereon.</p>
2.	<p><b>Agency and Off-take Agreement ('AOA')</b></p> <p><i>Parties involved</i></p> <p>Arxo Resources and Tharisa Minerals.</p> <p><i>Nature of agreement</i></p> <p>Tharisa Minerals appointed Arxo Resources as Tharisa Minerals' sole and exclusive agent to sell and market its metallurgical chrome products throughout the world excluding South Africa.</p> <p><i>Date of agreement</i></p> <p>22 August 2011</p> <p><i>Details</i></p> <p>The AOA continues indefinitely until terminated by either party on not less than 24 months' notice of termination. In addition to providing the agency services, Arxo Resources is entitled at any time and from time to time during the subsistence of the agreement on written notice to Tharisa Minerals to be appointed as an off-taker of chrome product. The fee for providing services under this agreement is an amount equal to 3% of the CIF sales price of product sold by Arxo Resources and an administration fee of US\$2 per tonne. In the case of the purchase of product under the off-take arrangements, the price is the fair market price of the product as agreed from time to time between the parties but shall not be less than competitive market prices (being non-discriminatory prices and non-export parity prices).</p>

3.	<p><b>Inter-Company Services Agreements with Braeston</b></p> <p><i>Parties Involved</i></p> <p>Braeston and each of the Company, Tharisa Investments Limited, Arxo Resources, Arxo Metals, Tharisa Minerals and Arxo Logistics.</p> <p><i>Nature of Agreements</i></p> <p>The provision of management, technical and administrative services.</p> <p><i>Details</i></p> <p>The agreements will endure indefinitely until six months' prior notice of termination has been given by either party.</p> <p><i>Fees</i></p> <p>Direct and indirect costs of providing the services plus a mark-up of 8%.</p>
4.	<p><b>Inter-Company Services Agreements with Tharisa Administrative Services Limited</b></p> <p><i>Parties Involved</i></p> <p>Tharisa Administrative Services Limited and each of the Company, Arxo Resources, Tharisa Investments Limited, Tharisa Fujian Investment Co., Ltd, Arxo Logistics, and Arxo Metals.</p> <p><i>Nature of Agreements</i></p> <p>The provision of management and administrative services;</p> <p><i>Details</i></p> <p>The agreements will endure indefinitely until six months' prior notice of termination has been given by either party.</p> <p><i>Fees</i></p> <p>Direct and indirect costs of providing the services plus a mark-up of 7%.</p>

### **Miscellaneous**

The total costs (including fees and commissions, but exclusive of VAT) payable by the Company in connection with Admission are estimated to be £600 000.

The Company confirms that all third party information contained in this Prospectus has been accurately reproduced and, so far as the Company is aware and is able to ascertain from information published by that third party, no facts have been omitted that would render the reproduced information inaccurate or misleading. Where third party information has been used in this Prospectus, the source of such information has also been identified.

### **Resources and reserves reporting – basis of preparation**

Coffey Mining Proprietary Ltd of Block D, Somerset Office Estate, 604 Kudu Street, Allens Nek, Johannesburg, South Africa, 1737 was requested by the Company, to complete a Mineral Expert Report on the Tharisa Mine.

The report complies with the Listing Rules of the London Stock Exchange. The Mineral Resources and Reserves are reported in accordance with the guidelines of the SAMREC Code and the SAMVAL Code.

The report is dated 31 December 2015 and the Company has advised Coffey that no material change has occurred to the Tharisa Mine since 31 December 2015 other than in terms of the mine plan.

The Issuer affirms that no material changes have occurred since the date of the Competent Person's Report the omission of which would make the competent person's report misleading.

**Documents Incorporated by Reference**

No documents or content of any website are incorporated by reference in this Prospectus.

## DESCRIPTION OF THE SHARES AND CORPORATE RIGHTS AND OBLIGATIONS

*Set forth below is a brief description of the Company's share capital and certain requirements of Cypriot legislation. The description does not purport to be complete and is qualified in its entirety by references to the Articles of Association of the Company and relevant Cyprus Companies Law. Holders of Ordinary Shares will be able to exercise their rights with respect to the Ordinary Shares only in accordance with the provisions and the relevant requirements of Cyprus Companies Law and the Articles of Association of the Company.*

*The rights attaching to the Ordinary Shares provided for in the Company's Articles of Association are set out under the heading "Rights attached to the Shares" in this section. The rights attaching to the Ordinary Shares are also subject in all respects to the Cyprus Companies Law.*

### Share capital of the Company

1. As at the Last Practical Date and at 30 September 2015, the Company's authorised share capital amounts to US\$10 001 051 and is comprised of:
  - a) US\$10 000 000 divided into 10 000 000 000 Ordinary Shares of nominal value US\$0.001 each, and
  - b) US\$1 051 divided into 1 051 convertible redeemable preference shares of nominal value US\$1.00 each.
2. As at the Last Practical Date and at 30 September 2015 the Company's issued share capital amounts to US\$255 891.89 divided into 255 891 886 Ordinary Shares of nominal value US\$0.001 each.
3. As at the Last Practical Date, all of the Company's issued share capital is fully paid and ranks pari passu with each other. There are no different voting rights, and each Ordinary Share carries one vote.
4. The Ordinary Shares are registered shares. The Ordinary Shares are freely transferable and there are no restrictions on transfer. The Ordinary Shares have been issued under, and are governed by, the laws of Cyprus, in particular, Cyprus Companies Law, Cap. 113, as amended.
5. The Issuer does not have in issue any listed or unlisted securities not representing its share capital. Neither the Issuer nor any of its subsidiaries (nor any party on its behalf) holds any of its Ordinary Shares. Neither the Issuer nor any of its subsidiaries has any outstanding convertible securities, exchangeable securities or securities with warrants or any relevant acquisition rights or obligations over the Issuer's or any of the subsidiaries' authorised but unissued capital or undertakings to increase its issued share capital. None of the Issuer's shares are currently in issue with a fixed date on which entitlement to a dividend arises and there are no arrangements in force whereby future dividends are waived or agreed to be waived.
6. The Ordinary Shares are listed on the JSE, where they began trading on 10 April 2014 under the trading symbol "THA".
7. Application has been made for all of the Ordinary Shares to be admitted to trading on the London Stock Exchange's Main Market for listed securities and the Company's International Securities

Identification Number (ISIN) number for the Ordinary Shares is CY0103562118. The trading symbol for the Ordinary Shares on the Main Market will be “THS”.

8. There have been no public takeover bids by third parties in respect of the Ordinary Shares within the last Financial Year or in the current Financial Year as at the Last Practical Date. There is no indication of the existence of any mandatory takeover bids and/or squeeze out and sell out attempts in relation to the securities.
9. During the period of the historical financial statements, there have been the following changes in the issued share capital of the Company:

<b>Date of Issuance</b>	<b>Number of Ordinary Shares</b>	<b>Issue Price per Security (ZAR)</b>	<b>Aggregate Funds Received</b>	<b>Nature of Issue</b>
01 January 2013	6 169 900			Opening balance
09 April 2014	13 157 895	38	ZAR500 million	Private placement
09 April 2014	81 173 716	38	No funds received	New shares issued to holders of convertible redeemable preference shares of the Company
09 April 2014	154 247 500	at nominal value	No funds received	Shares issued as a bonus issue of 25 ordinary shares for each share held – excluding shares granted to employees on the same date below
09 April 2014	31 635	at nominal value	No funds received	Shares granted to employees, conditional on the listing of the Company
26 June 2015	1 111 240	6.44	No funds received	Shares were issued and allotted in terms of the Company share award scheme for 2014
<b>Total</b>	<b>255 891 886</b>			

In 2011, the Company created and issued 1 051 convertible redeemable preference shares having a par value of US\$1.00 each. Such preference shares at the occurrence of a liquidity or redemption event, entitled the holder to a return equal to a 25% internal rate of return on the original investment amount. No redemption event occurred and upon the listing of the Issuer on the JSE (being a liquidity event) the preference shares were converted into 81 173 716 fully paid Ordinary Shares in the Company at a conversion rate which reflected the price of the Ordinary Shares on listing on the JSE and the above internal rate of return.

## **Articles of Association**

### ***Objects, Capacity and Powers***

The Company's objects are not limited by its Articles and there are no restrictions on the type of business that the Company may conduct.

### ***Qualification of Directors***

If and for so long as the shares of the Company are listed on the JSE, the Board shall comprise at least four directors, and there shall be no limitation as to the maximum number.

The quorum necessary for the transaction of the business of the directors may be fixed by the directors, and unless so fixed shall be two. Where the quorum of directors is two, the chairman shall not be permitted to have a casting vote if only two directors are present at a meeting of directors. Provided however that for so long as the Company, pursuant to the provisions of these Articles, has only one director a resolution in writing signed by such director in accordance with the provisions of the Articles shall be deemed in all respects as a resolution of the directors passed at a meeting of the directors at which a quorum was present.

The office of director shall be vacated if the director:

- (a) becomes bankrupt or makes any arrangement or composition with his creditors generally; or
- (b) becomes prohibited from being a director by reason of any order made under section 180 of the Cyprus Companies Law or, if and for so long as the shares of the Company are listed on the JSE, the JSE Listings Requirements; or
- (c) becomes of unsound mind; or
- (d) resigns his office by notice in writing to the Company;
- (e) if his period of office has terminated in accordance with the provisions of these Articles; or
- (f) shall for more than six months have been absent without permission of the directors from at least three consecutive meetings of the directors duly convened and held during that period.

### ***Remuneration of Directors***

The remuneration of the executive directors shall be determined by the Remuneration Committee and a remuneration report may be presented to the members in General Meeting.

The Remuneration Committee may grant special remuneration to any director who performs any special or extra services to or at the request of the Company, save where relating to a director other than an executive director, subject to the limits prescribed by the Articles.

A director shall be paid out of the funds of the Company for all travelling, hotel and other expenses properly and necessarily incurred by him in and about the discharge of his duties and the business of the Company, including his expenses of travelling to and from meetings of the Board, committee meetings, General Meetings and separate meetings of the holders of any class of securities of the Company.

### ***Borrowing Powers of Directors***

The directors may exercise all the powers of the Company to borrow or raise money, to guarantee, to indemnify, to charge or mortgage its undertaking, property and uncalled capital, or any part thereof,

and to issue debentures, debenture stock, and other securities as security for any debt, loss or obligation of the company or of any third party. If and for so long as the shares of the Company are listed on the JSE, no special privileges relating to attending and voting at General Meetings and to the appointment of directors shall be granted to the holders of debt instruments issued by the Company.

#### ***Retirement or Non-retirement of Directors***

At each Annual General Meeting one third of the elected directors for the time being, or if their number is not three or a multiple of three, the number nearest to one third, but not less than one third, shall retire from office, provided that if an elected director is appointed as managing director or as an employee of the Company in any other capacity, he or she shall not, while he or she continues to hold that position or office, be subject to retirement by rotation and he or she shall not, in such case, be taken into account in determining the rotation or retirement of directors.

A retiring director shall be eligible for re-election.

The Company at the General Meeting at which a director retires in the manner aforesaid may fill the vacated office by electing a person thereto, and in default the retiring director, shall, if offering himself for re-election, be re-elected by confirmation of the members present at such meeting, unless if at such meeting it is expressly resolved not to fill such vacated office or unless an Ordinary Resolution for the re-election of such director shall have been put to the meeting and lost.

The directors may grant retirement pensions or annuities or other gratuities or allowances, including allowances on death, to any person or to the widow of or dependants of any person in respect of services rendered by him to the Company whether as director or in any executive office or in any other office or employment under the Company or indirectly as an officer or employee of any subsidiary company of the Company notwithstanding that he may be or may have been a director of the Company and the Company may make payments towards insurances or trusts for such purposes in respect of such persons and may include rights in respect of such pensions, annuities and allowances in the terms or engagement of any such person, without being precluded from granting such retirement pensions or annuities or other gratuities or allowances including allowances of death not as a part and independently of the terms of any engagement but upon the retirement, resignation or death of any such person as the Board may decide.

#### ***Ordinary Shares***

The holders of Ordinary Shares are entitled to:

- (a) receive notice of and to attend at and to vote at meetings of holders of Ordinary Shares on the basis of one vote per Ordinary Share;
- (b) receive dividends declared on the Ordinary Shares; and
- (c) receive pro-rata the remaining property of the Company upon dissolution in equal rank with the holders of other Ordinary Shares of the Company.

#### ***Issuances of Ordinary Shares***

Subject to Cyprus Companies Law and the JSE Listings Requirements, these Articles and the terms of any resolution of the Company at a General Meeting creating new shares: (a) the unissued shares from time to time shall be under the control of the Board which may allot the same to such persons, against cash or for such other consideration which is not cash, with such restrictions and conditions, in excess of their nominal value, at their nominal value and/or with payment of commission and at such times as

the Board shall deem appropriate; and (b) the Board shall be authorised to grant any person the option to acquire from the Company any authorised and unissued shares, including the right to subscribe for, or to convert or exercise any security into, authorised and unissued shares, in each case on such terms as the Board shall deem appropriate.

Subject to the Cyprus Companies Law and the pre-emption rights contained in the Articles, the Company may at any time pass a resolution of its Shareholders, authorising the Directors to exercise all of the powers of the Company to allot unissued securities and/or to grant options over unissued securities and the Directors shall, upon the passing of such a resolution, be generally and unconditionally authorised to allot unissued securities and/or to grant options over unissued securities as the Directors in their discretion deem fit, provided that:

- (a) if and for so long as the shares of the Company are listed on the JSE and/or any freshly issued shares are to be made subject to a listing application, such allotment and/or grant shall be made subject to the JSE Listings Requirements;
- (b) the nominal amount of such securities (where such securities are shares) or the nominal amount of the shares in respect of which such securities confer the right to subscribe for, or convert or exercise into (where such securities are not shares) shall not exceed, in aggregate, the sum specified in such resolution; and
- (c) any such authority shall (unless otherwise specified in such resolution or subsequently varied or abrogated by a resolution passed by the Shareholders of the Company) expire on the date of the next Annual General Meeting or 15 months after the date on which the authority was granted, whichever is the shorter, subject to the requirements of the JSE.

#### ***Pre-emptive Rights***

The Articles provide Shareholders with pre-emptive rights to acquire Ordinary Shares or other securities of the Company.

#### ***Alteration of Rights***

Subject to the Cyprus Companies Law, and without prejudice to any special rights previously conferred on the holders of any existing shares or class of shares, any share in the Company may be issued with such preferred, deferred or other special rights or such restrictions, whether in regard to dividend, voting, return of capital or otherwise as the Company may from time to time, by Ordinary Resolution, determine, provided that if and for so long as the shares of the Company are listed on the JSE, as the Company may, from time to time, by Special Resolution determine.

If at any time the share capital is divided into different classes of shares, the rights attached to any class may, whether or not the Company is being wound-up, be varied with the consent of the requisite number of votes of Shareholders passed at a separate General Meeting of the holders of the shares of the class, as per section 59A of the Cyprus Companies Law, or, if and for so long as the shares of the Company are listed on the JSE, by Special Resolution passed by the Shareholders at such General Meeting. To every such separate General Meeting the provisions of these Articles relating to General Meetings shall apply, but so that the necessary quorum shall be three Shareholders at least holding or representing by proxy one-third of the issued shares of the class and that any holder of shares of the class present in person or by proxy may demand a poll. The holders of shares of the class shall on a poll have one vote in respect of every share of the class held by them respectively.

Subject to section 59A of the Cyprus Companies Law, the Company may from time to time increase the share capital by such sum, to be divided into shares of such amount, as the resolution shall prescribe, provided that if and for so long as the shares of the Company are listed on the JSE, such increase in the share capital may only be effected by Special Resolution. Except to the extent otherwise provided in such applicable resolution, such new shares shall be subject to all the provisions applicable to the shares of the original share capital of the Company including, for the avoidance of doubt, the provisions of these Articles.

The Company may by Ordinary Resolution (or, if and for so long as the shares of the Company are listed on the JSE, by Special Resolution):

- (a) consolidate and divide all or any of its share capital into shares of larger amounts than its existing shares;
- (b) subdivide its existing shares, or any of them, into shares of smaller amounts than is fixed by the Memorandum of Association subject, nevertheless, to the provisions of section 60(1)(d) of the Cyprus Companies Law;
- (c) cancel any shares which, at the date of the passing of the Resolution, have not been taken or agreed to be taken by any person; and
- (d) create any class of shares or convert shares of one class into shares of one or more other classes.

#### ***Transfer of Ordinary Shares***

The Articles do not preclude the transfer of shares or other securities of the Company in uncertificated form. All transfers of shares which are in uncertificated form may be effected by means of the rules and regulations of the relevant system and the JSE Listings Requirements.

In respect of certificated shares, the instrument of transfer of any share shall be executed by or on behalf of the transferor and transferee, and the transferor shall be deemed to remain a holder of the share until the name of the transferee is entered in the register of members in respect thereof. In respect of certificated shares, any member may transfer all or any of his shares by instrument in writing in any usual or common form or any other form, including electronic form, which the Directors may approve. In respect of certificated shares, the Board may refuse to register and/or allot any shares which are not fully paid and in respect of uncertificated shares, the Board may refuse to allot any such shares which are not fully paid. In respect of certificated shares, the directors may choose to recognise any instrument of transfer relating to the transfer of such shares. If the Board refuses to register a transfer of any certificated share, it shall within 14 days after the date on which the instrument of transfer was lodged with the Company send to the transferee notice of the refusal. In respect of certificated shares, no fee shall be charged for the registration of any instrument of transfer or other document relating to or affecting the title to any share. The Company shall be entitled to retain any instrument of transfer which is registered, but any instrument of transfer which the Board refuses to register shall be returned to the person lodging it when notice of the refusal is given.

#### ***Dividends and Reserve***

The Board may from time-to-time pay to the Shareholders such interim dividends as appear to the Board to be justified by the profits of the Company. If at any time the share capital of the Company is divided into different classes, the Board may pay such interim dividends on shares which rank after shares conferring preferential rights with regard to dividend as well as on shares conferring preferential

rights unless at the time of payment any preferential dividend is in arrears. Provided that the Board acts in good faith it shall not incur any liability to the holders of shares conferring preferential rights for any loss that they may suffer in consequence of the declaration or by the lawful payment of any interim dividend on shares ranking after those with preferential rights.

No dividend shall be paid otherwise than out of profits and if and for so long as the shares of the Company are listed on the JSE, dividends may only be declared and paid to Shareholders of the Company registered as such on the Register of Members as at a date subsequent to the date of declaration or date of confirmation of the dividend, whichever is the later.

The directors may, before recommending any dividend, set aside out of the profits of the Company such sums as they think proper as a reserve or reserves which shall, at the discretion of the Directors, be applicable for any purpose to which the profits of the company may be properly applied, and pending such application may, at the like discretion, either be employed in the business of the Company or be invested in such investments (other than shares of the Company) as the Directors may from time to time think fit. The Directors may also without placing the same to reserve carry forward any profits which they may think prudent not to divide.

Subject to the rights of persons, if any, entitled to shares with special rights as to dividend, all dividends shall be declared and paid according to the amounts paid or credited as paid on the shares in respect whereof the dividend is paid, but no amount paid or credited as paid on a share in advance of calls shall be treated for the purposes of this regulation as paid on the share. All dividends shall be apportioned and paid proportionately to the amounts paid or credited as paid on the shares during any portion or portions of the period in respect of which the dividend is paid: but if any share is issued on terms providing that it shall rank for dividend as from a particular date, or in case a unanimous decision of all the Shareholders of the Company to that effect is passed, such share shall rank for dividend accordingly.

The directors may deduct from any dividend payable to any Shareholder all sums of money (if any) presently payable by him to the company on account of calls or otherwise in relation to the shares of the company and they may also deduct from any such dividends any other sums presently payable by him to the company for any reason.

Any General Meeting declaring a dividend or bonus may direct payment of such dividend or bonus wholly or partly by the distribution of specific assets and in particular, but without prejudice to the generality of the foregoing, of paid up shares, debentures or debenture stock of any other company or in any one or more of such ways, and the directors shall give effect to such resolution, and where any difficulty arises in regard to such distribution, the directors may settle the same as they think expedient.

Any dividend, interest or other monies payable in cash in respect of shares will be paid by electronic transfer into the bank account of the Shareholder or bank account nominated by the holder whose name appears first on the register, or if so requested by the Shareholders, may be paid by cheque or warrant sent through the post directed to the registered address of the holder or, in the case of joint holders, to the registered address of that one of the joint holders who is first named on the Register of Members or to such person and to such address as the holder or joint holders may in writing direct. Every such cheque or warrant shall be made payable to the order of the person to whom it is sent. Any one of two or more joint holders may give effectual receipts for any dividends, bonuses or other monies payable in respect of the shares held by them as joint holders.

No dividend shall bear interest against the Company.

If cheques, warrants or orders for dividends or other sums payable in respect of a share sent by the Company to the person entitled thereto by post are returned to the Company undelivered or left uncashed on two consecutive occasions the Company shall not be obliged to send any further dividends or other moneys payable in respect of that share due to that person until he notifies the Company of an address to be used for the purpose.

All dividends, interest or other sum payable and unclaimed for 12 months after having become payable may be invested or otherwise made use of by the Board for the benefit of the Company until claimed and the Company shall not be constituted a trustee in respect thereof. All dividends unclaimed for a period of 12 years after having become due for payment shall (if the Board so resolves) be forfeited and shall revert to the Company.

The waiver in whole or in part of any dividend on any share by any document (whether or not under seal) shall be effective only if such document is signed by the Shareholders (or the person entitled to the share in consequence of the death, bankruptcy or mental disorder of the holder or otherwise by operation of law) and delivered by the Company and only if or to the extent that the same is accepted as such or acted upon by the Company.

#### ***Lien on Ordinary Shares***

If and for so long as the shares of the Company are listed on the JSE, the Company shall not claim or have a lien on any securities of the Company. In all other circumstances, except to the extent the same may be waived or subordinated in writing, the Company shall have a first and paramount lien on every share for all monies (whether presently payable or not) called or payable at a fixed time in respect of that share, and the Company shall also have a first and paramount lien on all shares standing registered in the name of a single person for all monies for any reason and for any cause whatsoever presently payable by him or his estate to the Company. Such lien shall extend to all dividends from time to time declared or paid in respect of such share. The company's lien, if any, on a share shall extend to all dividends payable thereon as well as on any capital or other monies which may at any time be payable by the Company to such person

#### ***Inspection of Books and Records***

The directors shall from time to time determine whether and to what extent and at what times and places and under what conditions or regulations the accounts and books of the Company or any of them shall be open to the inspection of members not being directors, and no member (not being a director) shall have any right of inspecting any account or book or document of the Company except as conferred by statute or authorised by the directors or by the company in a General Meeting. The directors shall from time to time, in accordance with sections 141 to 143 inclusive of the Cyprus Companies Law, cause to be prepared and to be laid before the company in a General Meeting such profit and loss accounts, balance sheets, group accounts (if any) and reports as are referred to in those sections.

#### ***Reduction of Capital***

The company may by Special Resolution reduce its share capital, any capital redemption reserve fund or any share premium account in any manner and with, and subject to, any incident authorised, and consent required, by Cyprus Companies Law.

### ***Share Repurchases***

Subject to the provisions of the Cyprus Companies Law, the Company may acquire, for valuable consideration, shares in its own share capital if, and in so far as, the Company, at a General Meeting, has authorised the Board by a Special Resolution to acquire such shares. The authorisation may be given for no more than twelve months on each occasion, notwithstanding any other provisions. The Company may, subject to being authorised thereto in a General Meeting, acquire shares in its own share capital in order to transfer those shares to the employees of the Company or a group company under a scheme applicable to such employees.

Shares in respect of which voting rights may not be exercised by law or by the Articles shall not be taken into account when determining to what extent the members cast votes, to what extent they are present or represented or to what extent the share capital is provided or represented.

Upon the proposal of the Board, subject to the provisions of the Cyprus Companies Law, the Company, at a General Meeting, may decide to cancel shares acquired by the Company from its own share capital.

The Company may only offer to purchase or otherwise acquire its shares or beneficial interests in its shares if the members' resolution authorising the purchase or other acquisition contains a statement that the members are satisfied, on reasonable grounds, that immediately after the acquisition the value of the Company's assets will exceed its liabilities and the Company will be able to pay its debts as they fall due.

Subject to the other provisions of these Articles and subject always to the provisions of the Law, the Company may purchase beneficial interests in its shares in the following circumstances:

- (a) where the members by Special Resolution have approved the purchase of beneficial interests in its shares; and/or
- (b) where the proposed purchases are made in open market transactions on a Stock Exchange; and/or
- (c) where the proposed purchases may be effected from time to time, as authorised by the members by Special Resolution, at a price per beneficial interest in a share being no higher than the average of the closing prices of said shares on a Stock Exchange, for the five days on which said beneficial interests in the said shares are traded immediately preceding any such purchase; and
- (d) where an offer is made by the Company to all members to purchase beneficial interests in a specified number of shares from each member at a specified price, with all tenders of beneficial interests in shares made in response to such offer to be accepted pro rata in the event that more shares are to be tendered than the Company has offered to purchase, except that all tenders of beneficial interests in 99 shares or less may be accepted in full at the discretion of the Directors,

provided that in all cases, the Company shall not, purchase in aggregate beneficial interests in more than such number of shares as shall result in the Company holding more than 10% of the Company's issued share capital.

Subject to the provisions of the Cyprus Companies Law and the Company's Articles of Association, shares that the Company purchases or otherwise acquires pursuant to the Articles of Association, may be cancelled or held as treasury shares. All rights and obligations attaching to a treasury share are suspended and shall not be exercised by the Company while it holds the share as a treasury share.

Treasury shares may be transferred by the Company on such terms and conditions (not otherwise inconsistent with the Articles) as the Company may by resolution of Directors determine.

### ***Shareholder Meetings and Voting***

The Company shall in each year hold a General Meeting as its Annual General Meeting in addition to any other meetings in that year, and shall specify the meeting as such in the notices calling it; and not more than 15 months shall elapse between the date of one Annual General Meeting of the Company and that of the next. The Annual General Meeting shall be held at such place and time as the Directors shall appoint.

All General Meetings other than Annual General Meetings shall be called extraordinary General Meetings. General Meetings may be held in any part of the world as may be determined by the Board, provided that, if and for so long as the shares are listed on the JSE, the Board shall enable persons entitled to attend a General Meeting to do so at a satellite meeting place in Johannesburg pursuant to the Articles of Association. General Meetings, whether Annual General Meetings or extraordinary General Meetings, may be held by telephone or video communication, or through any other means of communication which allows all persons participating in the General Meeting to hear and be heard.

The directors may, whenever they think fit, convene an extraordinary General Meeting, and extraordinary General Meetings shall also be convened on such requisition, or in default, may be convened by such requisitionists, as provided by section 126 of the Cyprus Companies Law.

At any General Meeting a resolution put to the vote of the meeting shall be decided on a poll. Subject to any rights or restrictions for the time being attached to any class or classes of shares and subject also to any special provisions contained in the Articles of Association, on a poll every member shall have one vote for each share of which he is the holder. If and for so long as the shares of the Company are listed on the JSE, the holders of securities of the Company other than ordinary shares shall not be entitled to vote on any resolution taken by the Company in General Meeting, unless so prescribed by the JSE Listings Requirements.

No objection shall be raised to the qualification of any voter except at the meeting or adjourned meeting at which the vote objected to is given or tendered and every vote not disallowed at such meeting shall be valid for all purposes. Any such objection made in due time shall be referred to the chairman of the meeting, whose decision shall be final and conclusive.

On a poll, votes may be given either personally or by proxy.

Each member shall be entitled to appoint one or more proxies to attend on the same occasion, on condition however that such appointment shall be made in one single instrument. Provided that the attendance on any occasion of the person first mentioned in the instrument of proxy shall preclude any other person named therein from attending and so on. The instrument appointing a proxy shall be in writing signed by the appointer or of his attorney duly authorised in writing, or, if the appointer is a corporation, either under Seal, or under the hand of an officer or attorney duly authorised. A proxy need not be a member of the Company.

An instrument appointing a proxy shall be in such form as may be prescribed by the Directors from time to time.

### ***Quorum***

No business shall be transacted at any General Meeting unless a quorum of members is present at the time when the meeting proceeds to business. The quorum shall be two members (or, if and for so long

as the shares of the company are listed on the JSE, three members entitled to attend and vote at that General Meeting) or more present in person or by proxy holding, in the aggregate, at least 20% or, if and for so long as the shares of the Company are listed on the JSE of the voting rights in the issued share capital of the Company.

### ***Votes to govern***

Subject to any rights or restrictions for the time being attached to any class or classes of shares and subject also to any special provisions contained in the Articles, on a poll every member shall have one vote for each share of which he is the holder. If and for so long as the shares of the company are listed on the JSE, the holders of securities of the Company other than Ordinary Shares shall not be entitled to vote on any resolution taken by the Company in General Meeting, unless so prescribed by the JSE Listings Requirements.

### ***Proxies***

Each member shall be entitled to appoint one or more proxies to attend on the same occasion, on condition however that such appointment shall be made in one single instrument. Provided that the attendance on any occasion of the person first mentioned in the instrument of proxy shall preclude any other person named therein from attending and so on. The instrument appointing a proxy shall be in writing signed by the appointer or of his attorney duly authorised in writing, or, if the appointer is a corporation, either under Seal, or under the hand of an officer or attorney duly authorised. A proxy need not be a member of the Company.

An instrument appointing a proxy shall be in such form as may be prescribed by the Directors from time to time.

### ***Votes of Shareholders***

Subject to any rights or restrictions for the time being attached to any class or classes of shares and subject also to any special provisions contained in these Articles, on a poll every Shareholder shall have one vote for each share of which he is the holder. If and for so long as the shares of the Company are listed on the JSE, the holders of securities of the Company other than Ordinary Shares shall not be entitled to vote on any resolution taken by the Company in General Meeting, unless so prescribed by the JSE Listings Requirements.

In the case of joint holders, the vote of the senior who tenders a vote, whether in person or by proxy, shall be accepted to the exclusion of the votes of the other joint holders; and for this purpose seniority shall be determined by the order in which the names stand in the Register of Members.

A Shareholder of unsound mind, or in respect of whom an order has been made by a Court having jurisdiction in lunacy, may vote on a poll, by the administrator of his property, his committee, receiver, curator bonis, or other person in the nature of an administrator, committee, receiver or curator bonis appointed by that Court, and any such administrator, committee, receiver, curator bonis or other person may, on a poll, vote by proxy.

Unless the Directors determine otherwise, no Shareholder shall be entitled to vote at any General Meeting unless all calls or other sums presently payable by him in respect of shares in the Company have been paid.

No objection shall be raised to the qualification of any voter except at the meeting or adjourned meeting at which the vote objected to is given or tendered and every vote not disallowed at such

meeting shall be valid for all purposes. Any such objection made in due time shall be referred to the chairman of the meeting, whose decision shall be final and conclusive.

On a poll, votes may be given either personally or by proxy.

The chairman of a General Meeting has no second or casting vote.

Any corporation which is a Shareholder of the Company may by resolution of its directors or other governing body authorise such person as it thinks fit to act as its representative at any meeting of the company or of any class of Shareholders of the Company, and the person so authorised shall be entitled to exercise the same powers on behalf of the corporation which he represents as that corporation could exercise if it were an individual Shareholders of the Company.

### ***Winding-up, Liquidation and Dissolution***

If the Company is wound-up, the surplus assets remaining after payment of all creditors are to be divided among the Shareholders in proportion to the capital which at the commencement of the winding-up is paid up on the shares held by them, respectively and, if such surplus assets are insufficient to repay the whole of the paid up capital, they are to be distributed so that as nearly as may be the losses are borne by the Shareholders in proportion to the capital paid up at the commencement of the winding up on the shares held by them, respectively. This Article is subject to the rights attached to any shares which may be issued on special terms or conditions.

If the Company shall be wound-up the liquidator may, with the sanction of an extraordinary resolution of the company and any other sanction required by the Cyprus Companies Law, divide amongst the Shareholders in specie or kind the whole or any part of the assets of the Company (whether they shall consist of property of the same kind or not) and may, for such purpose set such value as he deems fair upon any property to be divided as aforesaid and may determine how such division shall be carried out as between the Shareholders or different classes of Shareholders. The liquidator may, with the like sanction, vest the whole or any part of such assets in trustees upon such trusts for the benefit of the contributories as the liquidator, with the like sanction, shall think fit, but so that no Shareholder shall be compelled to accept any shares or other securities whereon there is any liability.

### ***Financial Disclosure***

The directors shall cause proper books of account to be kept with respect to:

- (a) all sums of money received and expended by the company and the matters in respect of which the receipt and expenditure takes place;
- (b) all sales and purchases of goods by the company; and
- (c) the assets and liabilities of the company.

Proper books shall not be deemed to be kept if there are not kept such books of account as are necessary to give a true and fair view of the state of the company's affairs and to explain its transactions. The books of account shall be kept at the registered office of the company, or, subject to section 141(3) of the Cyprus Companies Law, at such other place as the Directors think fit, and shall always be open to the inspection of the Directors subject to the relevant provisions of section 141(3) of the Cyprus Companies Law.

**Adoption of Annual Accounts**

The Company's fiscal year is the financial year starting from 1 October and ending on 30 September. The Directors shall from time to time, in accordance with sections 142, 149, 151 and 152 of the Cyprus Companies Law, cause to be prepared and to be laid before the Company in a General Meeting such complete sets of financial statements and Group financial statements (if any) according to International Accounting Standards and reports as are referred to in those sections.

A copy of every set of financial statements (including every document required by the Cyprus Companies Law to be annexed thereto) which is to be laid before the Company in a General Meeting, together with a copy of the Directors' and Auditors' report, shall be made available to every shareholder and every holder of debentures of the Company not less than 21 days before the date of the meeting.

The annual accounts are signed by the Board of Directors and must be presented to the General Meeting. The annual accounts will be available at the Company's registered office for inspection by shareholders and debenture holders and will be provided to any of them on request in printed or electronic form.

## INFORMATION FROM THIRD PARTIES, OPINIONS OF EXPERTS AND DECLARATIONS OF INTEREST

### Information from third parties, opinions of experts

The following parties, Sharelink Securities and Financial Services Limited, KPMG Limited, Arlington Group Asset and Coffey Mining (SA) Pty Ltd have each given and have not withdrawn their written consent to the inclusion in this Prospectus of their names and the references thereto in the form and context in which they appear.

#### *In relation to the Prospectus*

#### **From Sharelink Securities and Financial Services Limited**

2 June 2016

Board of Directors  
Tharisa plc

Dear Sirs,

In accordance with paragraph 23 of Annex I of Regulation 809/2004 of the Commission of the European Union, we provide with this letter and do not withdraw our written consent for the references made to our name in the form and context in which it appears in the Prospectus of Tharisa plc dated 2 June 2016.

Regards,  
Sharelink Securities and Financial Services Limited  
Underwriter responsible for the drawing up of the Prospectus

#### **From KPMG Limited**

2 June 2016

Board of Directors  
Tharisa Plc

Dear Sirs,

In accordance with paragraph 23 of Annex I of Regulation 809/2004 of the Commission of the European Union, we give and do not withdraw our written consent for:

- i The inclusion of our reports dated 7 December 2015, 15 December 2014 and 13 February 2014 and in the form and context in which they appear for the three years ended 30 September 2013, 2014 and 2015 within the Prospectus of Tharisa plc dated 2 June 2016; and
- ii the references made to our name in the form and context in which it appears in the Prospectus of Tharisa plc dated 2 June 2016.

Regards,

KPMG Limited  
Chartered Accountants

**From Arlington Group Asset Management Limited**

2 June 2016  
Board of Directors  
Tharisa plc

Dear Sirs,

In accordance with paragraph 23 of Annex I of Regulation 809/2004 of the Commission of the European Union, we provide with this letter and do not withdraw our written consent for the references made to our name in the form and context in which it appears in the Prospectus of Tharisa plc dated 2 June 2016.

Regards,

Arlington Group Asset Management Limited

***In relation to the financial statements of the Issuer***

**From KPMG Limited**

2 June 2016

Board of Directors  
Tharisa plc

Dear Sirs,

We, KPMG Limited, acting as independent auditors have audited the consolidated financial statements for the years ended 30 September 2015, 2014 and 2013 of Tharisa plc (“the Company”) which have been prepared in accordance to International Financial Reporting Standards and the requirements of the Cyprus Companies Law, Cap. 113.

We have conducted our audit on the consolidated financial statements of the Company for the years ended 30 September 2015, 2014 and 2013 in accordance with International Standards on Auditing, and have issued audit reports dated 7 December 2015, 15 December 2014 and 13 February 2014, respectively, with an unqualified audit opinion containing an emphasis of matter paragraph in relation to the Going Concern assessment.

Regards,

KPMG Limited  
Chartered Accountants

**From the Competent Person responsible for drawing up the Competent Person's Report**

2 June 2016  
Board of Directors  
Tharisa plc

Dear Sirs,

In accordance with paragraph 23 of Annex I of Regulation 809/2004 of the Commission of the European Union, we provide with this letter and do not withdraw our written consent for the references made to our name in the form and context in which it appears in the Prospectus of Tharisa plc dated 2 June 2016.

Regards

Coffey Mining (SA) Pty Ltd

**Declaration of interest**

The parties described in the section above have contractual relationships with the Issuer in connection with the Admission.

In regards to the Competent Persons Report, neither Coffey, nor the key personnel nominated for the completed and reviewed work, has any interest (present or contingent) in Tharisa and its subsidiaries, its directors, senior management, advisers or the mineral properties reported on in this report. The proposed work, and any other work done by Coffey for Tharisa, is strictly in return for professional fees. Payment for the work is not in any way dependent on the outcome of the work, nor on the success or otherwise of Tharisa's own business dealings. As such there is no conflict of interest in Coffey undertaking the MER as contained in this Prospectus.

The Financial Adviser and/or any of its respective affiliates may have engaged in transactions with, and provided various investment banking, financial advisory and other services to the Company, for which they would have received customary fees. The Financial Adviser and/or any of its respective affiliates may provide such services to the Company and any of its respective affiliates in the future. There is no conflict of interest between the Financial Adviser and the Issuer or in connection with the Admission.

There are no actual or potential conflicts of interest between the obligations of the members of the Board of Directors and the Senior Managers.

## DOCUMENTS ON DISPLAY

Copies of the following documents will be available for inspection during normal business hours on any Business Day at the offices of Memery Crystal LLP during regular business hours from the date of publication of this Prospectus throughout the validity period of this Prospectus:

1. The Prospectus;
2. the Memorandum and Articles of the Company;
3. the audited consolidated financial statements of the Company as at 30 September 2013, 30 September 2014 and 30 September 2015, together with the independent auditor's audit reports thereon;
4. the report by Coffey set out in section "*Competent Person's Report*"; and
5. the letters confirming the consents referred to in section "*Information from Third Parties, Opinions of Experts of this Prospectus*".

The Prospectus will be available electronically in the websites of:

1. Cyprus Securities and Exchange Commission, [www.cysec.gov.cy](http://www.cysec.gov.cy);
2. The Issuer's website, [www.tharisa.com](http://www.tharisa.com);
3. The website of the Underwriter responsible for the preparation of the Prospectus, Sharelink Securities & Financial Services Ltd, [www.sharelinksecurities.com](http://www.sharelinksecurities.com)

## DEFINITIONS

<b>AQA</b>	The National Environmental Management: Air Quality Act, 2004 of South Africa.
<b>AQA Regulations</b>	The regulations published, on 31 March 2010, under Government Notice 248 of South Africa.
<b>Activity 19</b>	Activity 19 under the Environmental Impact Assessment Regulations Listing Notice 2, 2010 of South Africa.
<b>Admission, Listing</b>	The admission of the Ordinary Shares of the Issuer to the standard segment of the Official List and to trading on the Main Market for listed securities.
<b>ANC</b>	The African National Congress.
<b>Annual Financial Statements</b>	The audited consolidated financial statements of the Issuer for the years ended 30 September 2014 and 2015.
<b>Appreciation Right</b>	The Award which takes the form of a right to call for Ordinary Shares of an aggregate market value or receive a cash amount equal to the increase (if any) between the date an Award is granted and the exercise date of the market value of such number of Ordinary Shares as is specified in the Notice of Award and has Vested.
<b>Articles or Articles of Association</b>	The articles of association of the Company.
<b>Arxo Logistics</b>	Arxo Logistics Proprietary Limited (Registration number 2009/006720/07), a private company duly registered and incorporated in South Africa, a wholly-owned subsidiary of Tharisa and a member of the Group.
<b>Arxo Metals</b>	Arxo Metals Proprietary Limited (Registration number 2011/143342/07), a private company duly registered and incorporated in South Africa, an indirect wholly-owned subsidiary of Tharisa and a member of the Group.
<b>Arxo Resources</b>	Arxo Resources Limited (Registration number HE221459), a company duly registered and incorporated in Cyprus, a wholly-owned subsidiary of Tharisa and a member of the Group.
<b>Audit Committee</b>	The audit committee established by the Board, as set out in section <i>"DIRECTORS, SENIOR MANAGEMENT AND CORPORATE GOVERNANCE"</i> , <i>"Corporate Governance"</i> of this Prospectus.
<b>Authorised Dealer</b>	The South African banks that are authorised to deal in

	foreign exchange, granted by Exchange Control.
<b>Award</b>	The award granted under the Share Award Plan in the form of a Conditional Award or an Appreciation Right.
<b>BAR</b>	The Basic Assessment Report in terms of NEMA.
<b>BCEA</b>	The Basic Conditions of Employment Act, of South Africa.
<b>BEE</b>	Black Economic Empowerment, as defined in the MPRDA and “Broad-based Socio Economic Empowerment” as defined in the Mining Charter.
<b>Board</b>	The board of directors of the Company from time to time
<b>Braeston</b>	Braeston Corporate Consulting Proprietary Limited (Registration number 2007/022755/07), a private company duly registered and incorporated in South Africa, an indirect wholly-owned subsidiary and member of the Group.
<b>Business Day</b>	A day (other than a Saturday, a Sunday) on which banks are open for business in London.
<b>Challenger Plant</b>	The integrated beneficiation plant adjacent to the Genesis Plant for the production of chemical and foundry grade concentrate owned by Arxo Metals.
<b>CGU</b>	A cash generating unit.
<b>Coffey</b>	Coffey Mining (South Africa) Proprietary Limited (Registration number 2006/030152/07), a private company duly registered and incorporated in South Africa.
<b>COIDA</b>	Compensation for Occupational Injuries and Diseases Act, 1993 of South Africa.
<b>Company, Issuer, Tharisa</b>	Tharisa plc, a company incorporated under the laws of the Republic of Cyprus with registration number HE223412.
<b>Competent Person</b>	In accordance with the SAMREC Code he/she is a person with 5 years relevant experience and member of a recognised professional organisation.
<b>Competent Person’s Report</b>	The “Tharisa Chrome and PGM Mine, South Africa Mineral Expert Report” prepared by Coffey Mining (South Africa) for Tharisa with date 31 December 2015.
<b>Community Trust</b>	The Tharisa Community Trust, established under the Trust laws of South Africa.
<b>Conditional Award</b>	An Award which takes the form of a contingent right to receive, at no or nominal cost, such number of Ordinary Shares or receive a cash amount as is

	specified in the notice of award and has Vested.
<b>Common Terms Agreement, CTA</b>	The Common Terms Agreement between the Company and the Facility Lenders dated 21 February 2012, the terms of which are summarised in section "ADDITIONAL INFORMATION", "Material Contracts" of this Prospectus.
<b>CREST</b>	The relevant system (as defined in the Uncertificated Securities Regulations) in respect of which Euroclear UK & Ireland is the operator (as defined in the Uncertificated Securities Regulations).
<b>CySEC</b>	The Cyprus Securities and Exchange Commission, the capital market regulatory authority in Cyprus.
<b>Cyprus</b>	The Republic of Cyprus.
<b>Cyprus Companies Law</b>	Chapter 113 of the laws of Cyprus, as amended, supplemented or otherwise modified from time to time.
<b>Cyprus Prospectus Law</b>	The Public Offer and Prospectus Law of the Republic of Cyprus of 2005, as amended.
<b>Cyprus Tax Law</b>	Cyprus Tax Law 2002, as amended from time to time.
<b>Custodian</b>	Computershare Investor Services PLC.
<b>DEA</b>	The South African Department of Environmental Affairs.
<b>DMR</b>	The South African Department of Mineral Resources.
<b>Deed Poll</b>	The deed poll will be executed on 8 June 2016 by the Depositary in favour of the holders of the Depositary Interests from time to time
<b>Defence Tax</b>	The tax imposed on the gross amount of income in Cyprus in terms of the Special Contribution for the defence of the Republic Law.
<b>Depositary</b>	Computershare Investor Services PLC.
<b>Depositary Agreement</b>	The agreement will be entered into on 8 June 2016 between the Company and the Depositary appointing the Depositary.
<b>Depositary Interests</b>	The dematerialised depositary interests issued by the Depositary in respect of the underlying Ordinary Shares.
<b>Directors</b>	The members of the board of directors of the Company, as at the Last Practical Date.
<b>Disclosure and Transparency Rules or DTR</b>	The Disclosure and Transparency Rules made by the FCA under Part VI of the FSMA.
<b>DSCR</b>	The Debt Service Cover Ratio.

<b>DTR5</b>	Chapter 5 of the Disclosure and Transparency Rules.
<b>DWS</b>	The South African Department of Water Sanitation.
<b>EA</b>	Environmental authorisation,
<b>EEA</b>	European Economic Area,
<b>EIA Regulations</b>	Environmental Impact Assessment Regulations 2010,
<b>EMP</b>	The environmental management plan in terms of the MPRDA.
<b>Equator Principles</b>	The set of voluntary guidelines adopted and interpreted in accordance with International Finance Corporation Performance Standards and the World Bank's EHS guidelines, adopted by Equator Principle Financial Institutions, as updated from time to time.
<b>Eskom</b>	Eskom Holdings SOC Limited.
<b>ETF</b>	Exchange traded funds.
<b>EUR or €</b>	Euro, the lawful currency of the European Economic and Monetary Union, of which Cyprus is a member
<b>Euroclear UK &amp; Ireland</b>	Euroclear UK & Ireland Limited, the operator of CREST.
<b>Exchange Control</b>	The Exchange Control Department of the South African Reserve Bank.
<b>Facility Lenders</b>	HSBC Bank plc (Johannesburg Branch), Nedbank Limited and ABSA Bank Limited.
<b>FCA</b>	The Financial Conduct Authority of the United Kingdom.
<b>Financial Adviser</b>	Arlington Group Asset Management Limited of New Liverpool House, 3 <sup>rd</sup> floor, 15 Eldon Street, London, EC2M 7LD.
<b>Financial Markets Act</b>	The Financial Markets Act, 19 of 2012 of South Africa.
<b>Financial Year or FY</b>	The Financial Year of the Company which commences on 1 October of each year and ends on 30 September of the following year.
<b>FSMA</b>	The Financial Services and Markets Act 2000.
<b>FTSE</b>	FTSE International Limited.
<b>Fujian Wuhang</b>	Fujian Wuhang Stainless Steel Co., Ltd.
<b>Genesis Plant</b>	A 100 ktpm ROM processing plant for the production of PGM and chrome concentrates, owned by Tharisa Minerals.
<b>Group</b>	The Company including all its Subsidiaries as at the Last Practical Date.
<b>Guardrisk</b>	Guardrisk Premium Finance Proprietary Limited.

<b>HDSAs</b>	Historically Disadvantaged South Africans as defined in the MPRDA and the Mining Charter.
<b>HeYi Mining</b>	Hong Kong HeYi Mining Resources Co., Ltd.
<b>HMRC</b>	Her Majesty's Revenue and Customs.
<b>Impala Platinum</b>	Impala Refining Services Limited, a 100% owned subsidiary of Impala Platinum Holdings Limited.
<b>IFRS</b>	The International Financial Reporting Standards as adopted by the International Accounting Standards Board.
<b>JIBAR</b>	The Johannesburg Interbank Agreed Rate.
<b>JSE or Johannesburg Stock Exchange</b>	The Johannesburg Stock Exchange located in South Africa, a licensed exchange under the Securities Services Act, 2004.
<b>JSE Listings Requirements</b>	The listings requirements of the JSE, as amended from time to time.
<b>King Code</b>	The King Code of Governance Principles for South Africa 2009 as amended from time to time.
<b>Last Practical Date</b>	31 May 2016, being the latest practicable date before publication of this Prospectus.
<b>Leto Settlement</b>	A discretionary trust established in accordance with the Trusts (Guernsey) Law 1989 by Artemis Trustees, in its capacity as trustee of the Zeus Settlement, out of a portion of the trust assets of the Zeus Settlement, for the benefit of Adonis Pouroulis, his wife and children.
<b>Listing Rules</b>	The Listing Rules made by the FCA under Part VI of the FSMA.
<b>London Stock Exchange or LSE</b>	The London Stock Exchange plc.
<b>LRA</b>	The Labour Relations Act, 1995 of South Africa.
<b>MCC</b>	MCC Contracts Proprietary Limited (Registration number 1983/008084), a subsidiary of Eqstra Holdings Limited, a company duly registered and incorporated in South Africa.
<b>Main Market</b>	The Main Market of the LSE.
<b>Management</b>	The Board of Directors and Senior Managers of the Group.
<b>Medway</b>	Medway Developments Limited (Registration number HE34472), a company duly registered and incorporated in Cyprus.
<b>Member State</b>	A member of the EEA.
<b>Memorandum of Association</b>	The memorandum of association of the Company.

<b>MHSA</b>	The Mine Health and Safety Act, 1996 of South Africa.
<b>Mining Charter</b>	The Mining Charter promulgated under the MPRDA.
<b>Mining Right</b>	A new order mining right, granted by the DMR in terms of the MPRDA, which provides the holder thereof the required legal title to mine.
<b>Model Code</b>	The model code on directors' dealings in securities set out in the Annex to Chapter 9 of the Listing Rules.
<b>MPRDA</b>	The Mineral and Petroleum Resources Development Act, 2002 of South Africa.
<b>MTRA</b>	The Mining Titles and Registration Act, 1967 of South Africa.
<b>National Road Traffic Act</b>	The National Road Traffic Act, 1998 of South Africa.
<b>NEMA</b>	The National Environmental Management Act, 1998 of South Africa.
<b>Noble</b>	Noble Resources International PTE Limited, (Registration number 201115304N), a company duly registered and incorporated in Singapore.
<b>Nominations Committee</b>	The nominations governance and nominating committee established by the Board, as set out in section "DIRECTORS, SENIOR MANAGEMENT AND CORPORATE GOVERNANCE", "Corporate Governance" of this Prospectus.
<b>NUM</b>	The National Union of Mineworkers.
<b>NWA</b>	The National Water Act, 1998 of South Africa.
<b>NWA Regulations</b>	Regulations published on 4 June 1999, under the South African Government Gazette 704 relating to the use of water for mining and related activities aimed at the protection of water resources.
<b>ODMWA</b>	Occupational Diseases in Mines and Works Act, 1973 of South Africa.
<b>Ordinary Shares</b>	All the issued ordinary shares of the Company of nominal value US\$0.001 each.
<b>OFAC</b>	The Office of Foreign Assets Control of the United States Department of Treasury.
<b>Official List</b>	The official list of the FCA.
<b>Participant</b>	An employee or consultant who holds a subsisting Award or, where appropriate, his legal personal representatives and excluding any trustee.
<b>PGM or Platinum Group Metals</b>	Platinum Group Metals, being platinum, palladium, rhodium, ruthenium, iridium, osmium, and, for the purposes of this report and in accordance with industry

	practice, gold.
<b>PMA</b>	The Precious Metal Act, 2005 of South Africa.
<b>PRC or China</b>	The Peoples Republic of China.
<b>Premium Listing</b>	A listing on the premium segment of the Official List of the FCA.
<b>Prospectus</b>	This Prospectus constituting a prospectus in the meaning of the Prospectus Directive prepared or the purpose of the Admission
<b>Prospectus Directive</b>	Directive 2003/71/EC of the European Parliament and of the Council of the European Union of November 4, 2003, on the prospectus to be published when securities are offered to the public or admitted to trading and amending Directive 2001/34/EC and any relevant implementing measures, as amended.
<b>Prospectus Regulation</b>	Commission Regulation (EC) no 809/2004 of April 29, 2004 implementing Directive 2003/71/EC of the European Parliament and of the Council as regards information contained in prospectuses as well as the format, incorporation by reference and publication of such prospectuses and dissemination of advertisements, as amended.
<b>Rand York</b>	Rand York Minerals Proprietary Limited (Registration number 1985/004951/07), a private company duly registered and incorporated in South Africa.
<b>RBDBT</b>	The Richards Bay Dry Bulk Terminal.
<b>Register or Register of Members</b>	The register of members of the Company kept in accordance with Cyprus Companies Law.
<b>Registrar</b>	Cymain Registrars Limited.
<b>Relationship Agreement</b>	The relationship agreement dated 5 April 2016 between the Company and Medway.
<b>Remuneration Committee</b>	The remuneration committee established by the Board, set out in section <i>"DIRECTORS, SENIOR MANAGEMENT AND CORPORATE GOVERNANCE"</i> , <i>"Corporate Governance"</i> of this Prospectus.
<b>SAMREC Code</b>	The South African Code for Reporting of Exploration Results, Mineral Resources and Reserves (prepared by the South African Mineral Resource Committee (SAMREC) Working Group) (2007 and as amended in 2009).
<b>SAMVAL Code</b>	The South African Code for Reporting of Mineral Asset Valuation (2008 and as amended in July 2009 prepared by the South African Minerals Asset Valuation Committee (SAMVAL) Working Group.

<b>SARS</b>	The South African Revenue Services.
<b>S&amp;EIR</b>	The Scoping and Environmental Impact Assessment Report.
<b>SDRT</b>	Stamp Duty Reserve Tax.
<b>Senior Managers</b>	The senior managers of the Group included in section <i>"DIRECTORS, SENIOR MANAGERS AND CORPORATE GOVERNANCE"</i> , <i>"Senior Managers"</i> .
<b>Share Award Plan</b>	The Company's share award plan approved by the Shareholders.
<b>Shareholder</b>	A holder of Ordinary Shares of the Company from time to time.
<b>Shareholders' Agreement</b>	An agreement between Tharisa Minerals, Thari Resources and the Tharisa governing their rights and obligations amongst each other as shareholders signed on 17 June 2008, as amended.
<b>SOC</b>	A State owned company.
<b>South Africa</b>	The Republic of South Africa.
<b>Standard Listing</b>	A listing on the standard segment of the Official List.
<b>STG</b>	Sterling, the lawful currency of the United Kingdom.
<b>Subsidiary</b>	Any company which is a subsidiary of the Company within the meaning of Cyprus Companies Law and "Subsidiaries" shall be construed accordingly.
<b>Takeover Code</b>	The UK City Code on Takeovers & Mergers.
<b>TFR</b>	Transnet Freight Rail, a division of Transnet.
<b>Thari Resources</b>	Thari Resources Proprietary Limited (Registration number 2005/001270/07) a private company duly registered and incorporated in South Africa and a BEE shareholder in the issued capital of Tharisa Minerals.
<b>Tharisa Mine</b>	Tharisa Minerals' wholly-owned PGM and chrome mining and processing operations located in the Magisterial District of Rustenburg (North West region), South Africa, situated in the Bushveld Complex.
<b>Tharisa Minerals</b>	Tharisa Minerals Proprietary Limited (registration number 2006/009544/07), a company registered and incorporated in the Republic of South Africa, the developer and operator of the Tharisa Mine, held 74% by Tharisa.
<b>Tharisa</b>	Tharisa plc (Registration number HE223412), a public company duly registered and incorporated in Cyprus.

<b>The Disclosure and Transparency Law</b>	Law 190(I)/2007, as amended (Law providing for transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market), governed by CySEC.
<b>TPT</b>	Transnet Port Terminals, a division of Transnet.
<b>Transnet</b>	Transnet SOC Limited.
<b>UK or United Kingdom</b>	The United Kingdom of Great Britain and Northern Ireland.
<b>UK Listing Authority or UKLA</b>	The Financial Conduct Authority acting in its capacity as the competent authority for the purposes of Part VI of the FSMA and in the exercise of its functions in respect of admission to the Official List.
<b>Ukwazi</b>	Ukwazi Mining Solutions Proprietary Limited.
<b>Uncertificated Securities Regulations</b>	The Uncertificated Securities Regulations 2001 (SI 2001 No. 3755).
<b>Underwriter</b>	Sharelink Securities and Financial Services Ltd is acting as the Underwriter responsible for the preparation of the Prospectus.
<b>US</b>	The United States of America.
<b>US\$</b>	US dollar, the lawful currency of the US.
<b>US Securities Act</b>	The United States Securities Act of 1933 (as amended).
<b>VAT</b>	Value Added Tax.
<b>Voyager Plant</b>	A 300 ktpm ROM processing plant for the production of PGM and chrome concentrates, owned by Tharisa Minerals.
<b>Waste Act</b>	The National Environmental Management: Waste Act, 2008 of South Africa.
<b>World Platinum Investment Council</b>	World Platinum Investment Council Limited.
<b>ZAR</b>	Rand, the lawful currency of South Africa.

## GLOSSARY OF TECHNICAL TERMS

6E or 5PGE + Au	Pt, Pd, Rh, Ru, Ir and Au
Au	Gold
Cr <sub>2</sub> O <sub>3</sub>	chromium (III) oxide
CIF	Cost, insurance and freight as defined in Incoterms 2010
EIA	Environmental Impact Assessment
ktpm	Thousand tonnes per month
koz	Thousand ounces
MG Chromitite Layers	Group of five chromitite layers that are known in the lower and upper Critical Zone of the Bushveld Complex
Mt	Million tonnes
Mtpa	Million tonnes per annum
oz	Ounce
PGE	Platinum group elements
PGMs	Platinum group metals
Pd	Palladium
Pt	Platinum
Rh	Rhodium
ROM	Run of mine
UG Chromitite Layers	The No 1 Upper Group Chromitite Layers of the Bushveld Complex

**FINANCIAL STATEMENTS**

**Reports and Consolidated Financial Statements for the year ended 30 September 2015**



**REPORTS AND  
CONSOLIDATED FINANCIAL STATEMENTS**

**For the year ended 30 September 2015**

REPORTS AND  
CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

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**Board of Directors**

**Loucas Christos Pouroulis** - Executive Chairman

**Phoevos Pouroulis** - Chief Executive Officer

**Michael Gifford Jones** - Chief Finance Officer

**John David Salter** - Lead Independent Non-Executive Director

**Ioannis Drapaniotis** - Independent Non-Executive Director

**Antonios Djakouris** - Independent Non-Executive Director

**Omar Marwan Kamal** - Independent Non-Executive Director

**Brian Chi Ming Cheng** - Non-Executive Director (*appointed 19 December 2014*)

**Joanna Ka Ki Cheng** - Alternate Non-Executive Director to  
Brian Chi Ming Cheng  
(*appointed 25 September 2015*)

**Company Secretaries**

**Lysandros Lysandrides**

**Sanet de Witt**

# tharisa

plc

## BOARD OF DIRECTORS, PROFESSIONAL ADVISERS AND CORPORATE INFORMATION (continued)

<b>Auditors</b>	<b>KPMG Limited</b>
<b>Group bankers</b>	<b>The Hong Kong and Shanghai Banking Corporation Limited</b> <b>Nedbank Limited</b> <b>ABSA Capital - member of the Barclays Group</b> <b>Bank of Cyprus Public Company Limited</b> <b>Standard Bank Limited</b> <b>China Construction Bank Limited</b> <b>Industrial and Commercial Bank of China Limited</b> <b>Barclays Bank Plc</b>
<b>Address of registered office</b>	<b>Sofoklis Pittokopitis Business Centre, Offices 108-110</b> <b>17 Neophytou Nicolaides and Kilkis Street</b> <b>8011 Paphos</b> <b>Cyprus</b>
<b>Registration number</b>	<b>HE223412</b>

## **Board of Directors' Report**

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The Board of Directors of Tharisa plc (the "Company") presents to the members its report together with the audited consolidated financial statements of the Company and its subsidiaries (together with the Company, the "Group") for the year ended 30 September 2015.

### **PRINCIPAL ACTIVITY**

The Company is a Cyprus incorporated public company with a primary listing on the main board of the Johannesburg Stock Exchange. The principal activity of the Company is that of an investment holding company with controlling interests in platinum group metals ("PGM") and chrome mining, processing operations and associated sales and logistics operations. The Group operates the Tharisa Mine, a co-producing, open pit PGM and chrome mine located in the Bushveld Complex of South Africa.

### **FINANCIAL RESULTS**

The results of the Group are disclosed in the consolidated statement of profit or loss and other comprehensive income on page 9. The profit of the Group for the year before income tax amounted to US\$9 632 thousand (2014: US\$40 325 thousand (loss)). The profit for the year amounted to US\$6 015 thousand (2014: US\$54 873 thousand (loss)). The Board of Directors recommends that the profit for the year be transferred to revenue reserve.

### **DIVIDENDS**

The dividend policy of the Company is to pay a dividend of 10% of consolidated net profit after tax. However in view of the current commodity prices and the impact thereof on the financial position of the Group and the matter dealt with in note 2(d) (going concern) to the consolidated financial statements, the Board of Directors does not recommend the payment of any dividends.

### **SHARE CAPITAL**

The authorised share capital of the Company comprises 10 000 000 thousand ordinary shares of US\$0.001 each and 1 051 convertible redeemable preference shares of US\$1 each. At 1 October 2014, the issued and fully paid ordinary share capital comprised 254 780 646 ordinary shares. During the year ended 30 September 2015, the Company issued 1 111 240 ordinary shares in respect of the vesting of the first tranche of the Conditional Awards granted during 2014. At 30 September 2015, the issued and fully paid ordinary share capital comprised 255 891 886 ordinary shares and remain unchanged at the date of this report.

### **MAIN RISKS**

The main financial risks faced by the Group are disclosed in notes 2(d) (going concern) and 29 of the consolidated financial statements.

## **FUTURE DEVELOPMENT**

The Board of Directors does not anticipate significant changes in the operations of the Group in the foreseeable future.

## **BRANCHES**

During the year the Group did not operate any branches.

## **BOARD OF DIRECTORS**

The members of the Group's Board of Directors as at 30 September 2015 and as at the date of this report are:

Loucas Christos Pouroulis (Executive Chairman)

Phoevos Pouroulis (Chief Executive Officer)

Michael Gifford Jones (Chief Finance Officer)

John David Salter (Lead Independent Non-Executive Director)

Ioannis Drapaniotis (Independent Non-Executive Director)

Antonios Djakouris (Independent Non-Executive Director)

Omar Marwan Kamal (Independent Non-Executive Director)

Brian Chi Ming Cheng (Non-Executive Director)

Joanna Ka Ki Cheng (Alternate Non-Executive Director to Brian Chi Ming Cheng)

Directors' remuneration and interests in share capital are disclosed in notes 9 and 27 of the consolidated financial statements.

## **JOINT COMPANY SECRETARIES**

Lysandros Lysandrides and Sanet de Witt serve as the Joint Company Secretaries. The Board of Directors formally assessed and considered the performance and qualifications of the Company Secretaries and is satisfied that they are competent, suitably qualified and experienced. They are not directors of the Company, nor are they related or connected to any of the Directors and the Board of Directors is satisfied that they maintain an arm's length relationship with the Board of Directors. Their contact details are as follows:

Lysandros Lysandrides  
26 Vyronos Avenue  
1096, Nicosia  
Cyprus

Sanet de Witt  
Eland House, The Braes  
3 Eaton Avenue  
Bryanston, 2191  
South Africa

**EVENTS AFTER THE REPORTING PERIOD**

Events after the reporting period disclosed in note 35 of the consolidated financial statements are not considered likely to have a material impact on the operations of the Group.

**INDEPENDENT AUDITORS**

The independent auditors, KPMG Limited, have expressed their willingness to continue in office and a resolution fixing their remuneration will be submitted at the Annual General Meeting.

On behalf of the Board of Directors

**Phoevos Pouroulis**

**Michael Jones**

Paphos, Cyprus  
7 December 2015

## **Independent Auditors' report**

### **To the Members of Tharisa plc**

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#### **Report on the consolidated financial statements**

We have audited the consolidated financial statements of Tharisa plc (the "Company") and its subsidiaries (together with the Company, the "Group") on pages 9 to 86 which comprise the consolidated statement of financial position as at 30 September 2015, and the consolidated statements of profit or loss and other comprehensive income, changes in equity and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

#### *Board of Directors' responsibility for the consolidated financial statements*

The Board of Directors is responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards and the requirements of the Cyprus Companies Law, Cap. 113, and for such internal control as the Board of Directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

#### *Auditors' responsibility*

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation of consolidated financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the Board of Directors as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

## **Independent Auditors' report**

### **To the Members of Tharisa plc**

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#### *Opinion*

In our opinion, the consolidated financial statements give a true and fair view of the financial position of the Group as at 30 September 2015, and of its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards and the requirements of the Cyprus Companies Law, Cap. 113.

#### *Emphasis of matter*

We draw attention to note 2(d) of the consolidated financial statements which indicates that notwithstanding that the Group made a profit of US\$6 015 thousand for the year ended 30 September 2015, as at that date its current liabilities exceeded its current assets by US\$10 305 thousand. The note indicates that subsequent to year end, global commodity prices have weakened significantly to the extent that short term cash flows reflect a shortfall in cash. In the event that the weakened commodity prices persist, forecast production is not achieved and the Group is unable to raise further funding, a material uncertainty will exist which may cast significant doubt on the ability of the Group to continue as a going concern. Our opinion is not qualified in respect of this matter.

#### **Report on other legal requirements**

Pursuant to the additional requirements of the Auditors and Statutory Audits of Annual and Consolidated Accounts Laws of 2009 as amended from time to time, we report the following:

- We have obtained all the information and explanations we considered necessary for the purposes of our audit.
- In our opinion, proper books of account have been kept by the Company, so far as appears from our examination of those books.
- The consolidated financial statements are in agreement with the books of account.
- In our opinion and to the best of our information and according to the explanations given to us, the consolidated financial statements give the information required by the Cyprus Companies Law, Cap. 113, in the manner so required.
- In our opinion, the information given in the report of the Board of Directors on pages 3 to 5 is consistent with the consolidated financial statements.

## **Independent Auditors' report**

### **To the Members of Tharisa plc**

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#### **Other matter**

This report, including the opinion, has been prepared for and only for the Company's members as a body in accordance with Section 34 of the Auditors and Statutory Audits of Annual and Consolidated Accounts Laws of 2009 as amended from time to time and for no other purpose. We do not, in giving this opinion, accept or assume responsibility for any other purpose or to any other person to whose knowledge this report may come to.

Maria A. Karantoni FCA

Certified Public Accountant and Registered Auditor

for and on behalf of

**KPMG Limited**

Certified Public Accountants and Registered Auditors

14 Esperidon Street

1087 Nicosia

Cyprus

7 December 2015

## CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the year ended 30 September 2015

	Note	Years ended 30 September	
		<u>2015</u>	<u>2014</u>
		US\$'000	US\$'000
Revenue	4	246 782	240 731
Cost of sales	4	<u>(203 692)</u>	<u>(208 119)</u>
<b>Gross profit</b>		43 090	32 612
Other income	5	42	149
Administrative expenses	7	<u>(24 777)</u>	<u>(26 908)</u>
<b>Results from operating activities</b>		<u>18 355</u>	<u>5 853</u>
Finance income	8	1 185	897
Finance costs	8	(11 855)	(13 996)
Changes in fair value of financial assets at fair value through profit or loss	8	(25)	(659)
Changes in fair value of financial liabilities at fair value through profit or loss	8	<u>1 972</u>	<u>(32 420)</u>
<b>Net finance costs</b>		<u>(8 723)</u>	<u>(46 178)</u>
<b>Profit/(loss) before tax</b>		9 632	(40 325)
Tax	10	<u>(3 617)</u>	<u>(14 548)</u>
<b>Profit/(loss) for the year</b>		<u>6 015</u>	<u>(54 873)</u>
<b>Other comprehensive income</b>			
<i>Items that may be classified subsequently to profit or loss:</i>			
Foreign currency translation differences for foreign operations, net of tax		<u>(39 399)</u>	<u>(21 162)</u>
<b>Other comprehensive income, net of tax</b>		<u>(39 399)</u>	<u>(21 162)</u>
<b>Total comprehensive income for the year</b>		<u>(33 384)</u>	<u>(76 035)</u>
<b>Profit/(loss) for the year attributable to:</b>			
Owners of the Company		4 623	(48 997)
Non-controlling interests		<u>1 392</u>	<u>(5 876)</u>
		<u>6 015</u>	<u>(54 873)</u>
<b>Total comprehensive income for the year attributable to:</b>			
Owners of the Company		(24 721)	(66 188)
Non-controlling interests		<u>(8 663)</u>	<u>(9 847)</u>
		<u>(33 384)</u>	<u>(76 035)</u>
<b>Earnings per share</b>	11	<u>2</u>	<u>(20)</u>
Basic and diluted earnings per share (US\$ cents)			

The notes on pages 16 to 86 are an integral part of these financial statements.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 30 September 2015

		<u>30 September</u>	<u>30 September</u>
		<u>2015</u>	<u>2014</u>
	Note	US\$'000	US\$'000
<b>Assets</b>			
Property, plant and equipment	12	214 518	253 356
Goodwill	13	919	1 211
Other financial assets	16	1 636	5 008
Long term deposits	14	10 656	14 479
Deferred tax assets	22	<u>1 954</u>	<u>5 970</u>
<b>Non-current assets</b>		<u>229 683</u>	<u>280 024</u>
Inventories	17	8 951	14 567
Trade and other receivables	18	37 979	32 515
Other financial assets	16	55	442
Current taxation	25	144	3
Cash and cash equivalents	19	<u>24 265</u>	<u>19 629</u>
<b>Current assets</b>		<u>71 394</u>	<u>67 156</u>
<b>Total assets</b>		<u>301 077</u>	<u>347 180</u>
<b>Equity</b>			
Share capital	20	256	255
Share premium	20	452 512	452 363
Other reserve	20	47 245	47 245
Foreign currency translation reserve	20	(76 705)	(47 361)
Revenue reserve	20	<u>(206 566)</u>	<u>(216 596)</u>
<b>Equity attributable to owners of the Company</b>		216 742	235 906
<b>Non-controlling interests</b>		<u>(37 794)</u>	<u>(26 052)</u>
<b>Total equity</b>		<u>178 948</u>	<u>209 854</u>

The notes on pages 16 to 86 are an integral part of these financial statements.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 30 September 2015

		<u>30 September</u> <u>2015</u>	<u>30 September</u> <u>2014</u>
	Note	US\$'000	US\$'000
<b>Liabilities</b>			
Provisions	21	4 088	4 452
Borrowings	23	36 329	64 223
Deferred tax liabilities	22	<u>13</u>	<u>20</u>
<b>Non-current liabilities</b>		<u>40 430</u>	<u>68 695</u>
Borrowings	23	33 692	30 986
Other financial liabilities	24	388	-
Current taxation	25	98	421
Trade and other payables	26	<u>47 521</u>	<u>37 224</u>
<b>Current liabilities</b>		<u>81 699</u>	<u>68 631</u>
<b>Total liabilities</b>		<u>122 129</u>	<u>137 326</u>
<b>Total equity and liabilities</b>		<u>301 077</u>	<u>347 180</u>

The consolidated financial statements were authorized for issue by the Board of Directors on 7 December 2015.

.....  
**Phoevos Pouroulis**

Director

.....  
**Michael Jones**

Director

The notes on pages 16 to 86 are an integral part of these financial statements.

**CONSOLIDATED STATEMENT OF CHANGES IN EQUITY**

For the year ended 30 September 2015

Attributable to owners of the Company

	Share capital	Share premium	Other reserve	Foreign currency translation reserve	Revenue reserve	Total	Non-controlling interests	Total equity	
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	
<b>Balance at 1 October 2014</b>	Note 255	452 363	47 245	(47 361)	(216 596)	235 906	(26 052)	209 854	
<b>Total comprehensive income for the year</b>									
Profit for the year	-	-	-	-	4 623	4 623	1 392	6 015	
Other comprehensive income:									
Foreign currency translation differences	-	-	-	(29 344)	-	(29 344)	(10 055)	(39 399)	
<b>Total comprehensive income for the year</b>	-	-	-	(29 344)	4 623	(24 721)	(8 663)	(33 384)	
<b>Transactions with owners of the Company</b>									
Contributions by and distributions to owners									
Reclassification of non-controlling interests	20(d)	-	-	-	3 079	3 079	(3 079)	-	
Equity-settled share based payments		-	-	-	2 317	2 317	-	2 317	
Issue of ordinary shares	20(a)	1	149	-	11	161	-	161	
Contributions by owners of the Company		1	149	-	5 407	5 557	(3 079)	2 478	
Total transactions with owners of the Company		1	149	-	5 407	5 557	(3 079)	2 478	
<b>Balance at 30 September 2015</b>		256	452 512	47 245	(76 705)	(206 566)	216 742	(37 794)	178 948

The notes on pages 16 to 86 are an integral part of these financial statements.

**CONSOLIDATED STATEMENT OF CHANGES IN EQUITY**

For the year ended 30 September 2015

<b>Balance at 1 October 2013</b>		<u>6</u>	<u>113 342</u>	<u>47 245</u>	<u>(30 170)</u>	<u>(167 859)</u>	<u>(37 436)</u>	<u>(16 205)</u>	<u>(53 641)</u>
<b>Total comprehensive income for the year</b>									
Loss for the year		-	-	-	-	(48 997)	(48 997)	(5 876)	(54 873)
Other comprehensive income:									
Foreign currency translation differences		-	-	-	(17 191)	-	(17 191)	(3 971)	(21 162)
<b>Total comprehensive income for the year</b>		<u>-</u>	<u>-</u>	<u>-</u>	<u>(17 191)</u>	<u>(48 997)</u>	<u>(66 188)</u>	<u>(9 847)</u>	<u>(76 035)</u>
<b>Transactions with owners of the Company</b>									
Share issue expenses	20(b)	-	(1 416)	-	-	-	(1 416)	-	(1 416)
Equity-settled share based payments		-	-	-	-	260	260	-	260
Issue of ordinary shares for cash	20(a)	13	47 847	-	-	-	47 860	-	47 860
Issue of ordinary shares to employees resulting from share grants	20(a)	-	115	-	-	-	115	-	115
Issue of ordinary shares from bonus issue	20(a)	154	(154)	-	-	-	-	-	-
Issue of ordinary shares from conversion of redeemable convertible preference shares	20(a)	<u>82</u>	<u>292 629</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>292 711</u>	<u>-</u>	<u>292 711</u>
Contributions by owners of the Company		<u>249</u>	<u>339 021</u>	<u>-</u>	<u>-</u>	<u>260</u>	<u>339 530</u>	<u>-</u>	<u>339 530</u>
Total transactions with owners of the Company		<u>249</u>	<u>339 021</u>	<u>-</u>	<u>-</u>	<u>260</u>	<u>339 530</u>	<u>-</u>	<u>339 530</u>
<b>Balance at 30 September 2014</b>		<u>255</u>	<u>452 363</u>	<u>47 245</u>	<u>(47 361)</u>	<u>(216 596)</u>	<u>235 906</u>	<u>(26 052)</u>	<u>209 854</u>

The notes on pages 16 to 86 are an integral part of these financial statements.

**CONSOLIDATED STATEMENT OF CASH FLOWS**

For the year ended 30 September 2015

	Note	Years ended 30 September	
		<u>2015</u>	<u>2014</u>
		US\$'000	US\$'000
<b>Cash flows from operating activities</b>			
Profit/(loss) for the year		6 015	(54 873)
Adjustments for:			
Depreciation of property, plant and equipment	12	10 256	10 764
Write off of property, plant and equipment		-	25
Impairment losses on property, plant and equipment		3	-
Impairment losses on goodwill	13	63	72
Impairment losses on inventory		217	1 195
Changes in fair value of financial liabilities at fair value through profit or loss		(1 972)	32 420
Impairment of other financial assets		27	-
Interest income	8	(777)	(897)
Changes in fair value of financial assets at fair value through profit or loss		25	659
Interest expense	8	11 754	13 400
Tax		3 617	14 548
Equity-settled share based payments		<u>3 157</u>	<u>389</u>
		32 385	17 702
Changes in:			
- Inventories		5 811	8 144
- Trade and other receivables		(5 464)	(3 392)
- Trade and other payables		10 296	996
- Provisions		<u>(777)</u>	<u>(152)</u>
Cash from operations		42 251	23 298
Income tax paid		<u>(847)</u>	<u>(942)</u>
<b>Net cash flows from operating activities</b>		<u>41 404</u>	<u>22 356</u>
<b>Cash flows from investing activities</b>			
Interest received		669	699
Additions to property, plant and equipment	12	(24 591)	(24 289)
Proceeds from disposal of property, plant and equipment		3	37
Refunds/(additions) of other financial assets		<u>2 702</u>	<u>(1 606)</u>
<b>Net cash flows used in investing activities</b>		<u>(21 217)</u>	<u>(25 159)</u>

The notes on pages 16 to 86 are an integral part of these financial statements.

**Cash flows from financing activities**

Proceeds from issue of ordinary shares	-	47 860
Refund/(establishment) of long term deposits	2 367	(6 771)
Proceeds from/(repayment of) bank credit and other facility borrowings	7 523	(2 835)
Net proceeds from obligations under new loan	146	-
Repayment of secured bank borrowings and loan to third party	(27 267)	(30 989)
Interest paid	(1 134)	(349)
Redemption of Class B preference shares	-	(6 818)
Share issue expenses capitalised to share premium	-	(1 416)
<b>Net cash flows used in financing activities</b>	<u>(18 365)</u>	<u>(1 318)</u>

<b>Net increase/(decrease) in cash and cash equivalents</b>	1 822	(4 121)
<b>Cash and cash equivalents at the beginning of the year</b>	19 629	28 017
Effect of exchange rate fluctuations on cash held	<u>2 814</u>	<u>(4 267)</u>
<b>Cash and cash equivalents at the end of the year</b>	19 <u>24 265</u>	<u>19 629</u>

The notes on pages 16 to 86 are an integral part of these financial statements.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

### 1. BACKGROUND

Tharisa plc (the "Company") was incorporated in Cyprus on 20 February 2008 under registration number HE223412. The name of the Company was changed from Tharisa Limited to Tharisa plc on 19 January 2012. On 10 April 2014, the Company listed its ordinary share capital on the main board of the Johannesburg Stock Exchange ("JSE").

Its registered office is at Sofoklis Pittokopitis Business Centre, Offices 108-110, 17 Neophytou Nicolaides and Kilkis Street, 8011 Paphos, Cyprus.

On 9 February 2009, the Company acquired 74% of the share capital of Tharisa Minerals Proprietary Limited, a company established in South Africa. The principal activity of Tharisa Minerals Proprietary Limited is PGM and chrome mining and processing.

On 2 November 2010, the Company incorporated Tharisa Investments Limited, a company established in Cyprus. The principal activity of Tharisa Investments Limited is that of investment holding.

On 15 February 2012, Tharisa Investments Limited incorporated Tharisa Fujian Industrial Co. Ltd, a company established in the People's Republic of China ("China"). The principal activity of Tharisa Fujian Industrial Co. Ltd is that of ferrochrome smelting. Tharisa Fujian Industrial Co. Ltd has not commenced operations up to the date of this report. During April 2011, Tharisa Investments Limited issued additional shares representing 15% of its expanded share capital to Fujian Wuhang Stainless Steel Products Co. Ltd ("Fujian"). On 22 November 2011, the Company and Fujian signed an agreement, according to which Fujian transferred its 15% equity interests in Tharisa Investments Limited to the Company. The consideration for this transfer was the par value of the shares transferred of US\$22.5 and a call option written by the Company which conferred to Fujian a right to purchase 15% of the equity capital of Tharisa Fujian Industrial Co. Ltd at Chinese Yuan Renminbi ("YUAN") 100 at any time after 31 December 2012. As at 30 September 2015, the call option had yet to be exercised.

On 24 August 2011, Tharisa Investments Limited incorporated Tharisa Investments (Hong Kong) Limited, a company established in Hong Kong. Tharisa Investments (Hong Kong) Limited has not commenced operations up to the date of this report.

On 4 February 2011, the Company incorporated Arxo Resources Limited, a company established in Cyprus. The principal activity of Arxo Resources Limited is the selling and distribution of chrome concentrates. On 7 December 2011, Arxo Resources Limited incorporated Arxo Metals Proprietary Limited, a company established in South Africa. The principal activity of Arxo Metals Proprietary Limited is metal processing and it currently produces foundry and chemical grade chrome concentrates.

On 1 March 2011, the Company acquired 100% of the share capital of Arxo Logistics Proprietary Limited, a company established in South Africa. The principal activity of Arxo Logistics Proprietary Limited is the provision of logistics services.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

### 1. **BACKGROUND** *(continued)*

On 31 May 2011, the Company incorporated Tharisa Administration Services Limited, a company established in Cyprus. Tharisa Administration Services Limited provides management and administration services to the Group. On 1 April 2013, Tharisa Administration Services Limited, acquired Braeston Corporate Consulting Services Proprietary Limited, a company established in South Africa. The principal activity of Braeston Corporate Consulting Services Proprietary Limited is the provision of management services to the Group.

On 30 May 2013, the Company incorporated Dinami Limited, a company established in Guernsey. The principal activity of Dinami Limited is the provision of consultancy services in relation to the sale of the Group's foundry and chemical grade chrome concentrate products.

### 2. **BASIS OF PREPARATION**

#### **(a) Statement of compliance**

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRSs"), the JSE Listing Requirements and the requirements of the Cyprus Companies Law, Cap.113.

#### **(b) Basis of measurement**

The consolidated financial statements are prepared on the historical cost basis except as otherwise stated in the accounting policies set out below.

#### **(c) Functional and presentation currency**

The consolidated financial statements are presented in United States Dollars (US\$) which is the Company's functional currency and amounts are rounded to the nearest thousand.

#### **(d) Going concern basis**

Notwithstanding that the Group made a profit for the year ended 30 September 2015 of US\$6 015 thousand (2014: US\$54 873 thousand (loss)) as at that date its current liabilities exceeded its current assets by US\$10 305 thousand (2014: US\$1 475 thousand).

For the year ended 30 September 2015

**2. BASIS OF PREPARATION** (*continued*)

**(d) Going concern basis** (*continued*)

Based on the commodity prices prevailing at the financial year end, the short term cash flow forecasts of the Group reflect a positive cash flow position sufficient to meet the operational cash flows, the approved capital expenditure and the debt repayments. However, subsequent to the financial year end, global commodity prices weakened significantly and the weakening of the South African Rand against the US\$ has been insufficient to off-set the weakened commodity prices. Based on current commodity spot prices and US\$ exchange rate, the short term cash flow forecasts reflect a shortfall in cash. Should the current depressed commodity prices persist beyond the near term and/or should forecast production not be achieved, the Group will need to source additional cash to fund its operations. The operations are, in part, funded through chrome pre-pay transactions and it is the intention of the Group to continue with these arrangements. In addition, the Group may secure a further working capital facility or the Company may undertake a placement of shares to provide this funding should this be required. In addition, the Group is reviewing its cost structure in order to reduce operating costs.

The financial statements however continue to be prepared on the going concern basis. In the event that the weakened commodity prices persist, forecast production is not achieved and the Group is unable to raise further funding, a material uncertainty will exist which may cast significant doubt on the ability of the Group to continue as a going concern and, therefore, it may be unable to realise its assets and settle its liabilities in the normal course of business.

**(e) Use of estimates and judgments**

The preparation of the consolidated financial statements in conformity with IFRS requires management to make judgements, estimates and assumptions that affect the application of accounting policies and reported amounts of assets, liabilities, income and expenses. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

For the year ended 30 September 2015

## 2. BASIS OF PREPARATION *(continued)*

### **(e) Use of estimates and judgments** *(continued)*

Judgements made by management in the application of IFRS that have a significant effect on the consolidated financial statements and major sources of estimation uncertainty are as follows:

#### *Impairment of assets*

The recoverable amount of each non-financial asset or cash-generating-unit (“CGU”) is determined as the higher of the value-in-use and fair value less costs to sell, in accordance with the Group's accounting policies (see note 3(p)). Determination of the value-in-use of an asset or CGU based on a discounted cash flow model requires the use of estimates and assumptions, including: the appropriate rate at which to discount the cash flows, the timing of cash flows and expected life of the asset or CGU, exchange rates, commodity prices, ore reserves, future capital requirements and future operating performance. Changes in these estimates and assumptions impact the recoverable amount of the asset or the CGU and, accordingly, could result in an adjustment to the carrying amount of that asset or CGU.

#### *Mineral reserves*

Economically recoverable ore reserves represent the estimated quantity of product in an area of interest that can be expected to be profitably extracted, processed and sold under current and foreseeable economic conditions. The determination of ore reserves includes estimates and assumptions about a range of geological, technical and economic factors, including: quantities, grades, production techniques, recovery rates, production costs, transport costs, commodity demand, commodity prices and exchange rates. Changes in ore reserves impact the assessment of recoverability of exploration and evaluation assets, property, plant and equipment, the carrying amount of assets depreciated on a units-of-production basis, provision for site rehabilitation and the recognition of deferred tax assets, including tax losses.

#### *Rehabilitation provision*

The Group's mining and exploration activities are subject to various laws and regulations governing the protection of the environment. The Group recognises management's best estimate for asset retirement obligations in the period in which they are incurred. Actual costs incurred in future periods can differ materially from these estimates. Additionally, future changes to environmental laws and regulations, life of mine estimates and discount rates can affect the carrying amount of the provision. The estimated long-term environmental provision, comprising rehabilitation and mine closure is based on the Group's environmental policy taking into account the current technological, environmental and regulatory requirements. The provision for future rehabilitation was determined using calculations which required the use of estimates.

#### *Inventories*

Net realisable value tests are performed at least annually based on the estimated future sales price of the products based on prevailing metal prices, less estimated costs to complete production and bring the product to sale. The nature of the net realisable value test inherently limits the ability to precisely monitor recoverability levels and may result in additional write-downs of inventories in future periods.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

**2. BASIS OF PREPARATION** (*continued*)**(f) New and revised International Financial Reporting Standards and Interpretations**

As from 1 October 2014, the Group adopted the following standards and interpretations that are effective for the current financial year that are relevant to its operations. This adoption did not have a material effect on the accounting policies of the Group

Standards and Interpretations

- IAS 32 (Amendments) "Offsetting Financial Assets and Financial Liabilities" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2014).
- IAS 36 (Amendments) "Recoverable Amount: Disclosures for Non-Financial Assets" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2014).
- IFRIC 21 "Levies" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2014).
- IFRS 2 (Amendments) "Share-based Payments: Annual improvements project" (effective for annual periods beginning on or after 1 July 2014).
- IAS 16 (Amendments) "Property, Plant and Equipment: Annual improvements project" (effective for annual periods beginning on or after 1 July 2014).
- IAS 24 (Amendments) "Related Party Disclosures: Annual improvements project" (effective for annual periods beginning on or after 1 July 2014).
- IFRS 13 (Amendments) "Fair Value Measurement: Annual improvements project" (effective for annual periods beginning on or after 1 July 2014).
- IAS 38 (Amendments) "Intangible Assets: Annual improvement project" (effective for annual periods beginning on or after 1 July 2014).

The following Standards, Amendments to Standards and Interpretations have been issued but are not yet effective for annual periods beginning on 1 October 2014. The Board of Directors is currently evaluating the impact of these on the Group.

Standards and Interpretations

- IFRS 9 "Financial Instruments" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2018).
- IFRS 10, IFRS 12 and IAS 28 (Amendments) "Investment Entities: Applying the Consolidation Exception" (effective for annual periods beginning on or after 1 January 2016).
- IAS 1 (Amendments) "Disclosure Initiative" (effective for annual periods beginning on or after 1 January 2016).
- IAS 10 and IAS 28 (Amendments) "Sale or Contribution of Assets between an Investor and its Associate or Joint Venture" (effective for annual periods beginning on or after 1 January 2016).
- IFRS 14 "Regulatory Deferral Accounts" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2016).
- IFRS 15 "Revenue from contracts with customers" (effective for annual periods beginning on or after 1 January 2018).

### 2. BASIS OF PREPARATION *(continued)*

#### (f) New and revised International Financial Reporting Standards and Interpretations *(continued)*

##### Standards and Interpretations*(continued)*

- IAS 16 and IAS 41 (Amendments) "Bearer Plants" (effective for annual periods beginning on or after 1 January 2016).
- IAS 27 (Amendments) "Equity method in separate financial statements" (effective for annual periods beginning on or after 1 January 2016).
- Annual Improvements to IFRSs 2012-2014 Cycle (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2016).

### 3. SIGNIFICANT ACCOUNTING POLICIES

#### (a) Basis of consolidation

The consolidated financial statements include, on a line by line basis, the financial statements of all subsidiaries.

The following policies have been applied during the consolidation process:

##### *Business combinations*

The Group accounts for business combinations using the acquisition method when control is transferred to the Group.

Goodwill represents the excess of:

- (i) The aggregate of the fair value of the consideration transferred, the amount of any non-controlling interest in the acquiree and the fair value of the Group's previously held equity interest in the acquiree; over
- (ii) The net fair value of the acquiree's identifiable assets and liabilities measured as at the acquisition date.

When (ii) is greater than (i), then this excess is recognised immediately in profit or loss as a gain on a bargain purchase.

Goodwill is stated at cost less accumulated impairment losses. Goodwill arising on a business combination is allocated to each CGU, or groups of CGUs, that is expected to benefit from the synergies of the combination and is tested annually for impairment (see note 3(p)).

On disposal of a CGU during the year, any attributable amount of purchased goodwill is included in the calculation of the profit or loss on disposal.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(a) Basis of consolidation** *(continued)*

*Subsidiaries and non-controlling interests*

Subsidiaries are entities controlled by the Group. Control exists when the Group has the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities. In assessing control, potential voting rights that currently are exercisable are taken into account. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

Non-controlling interests represent the equity in a subsidiary not attributable directly or indirectly to the Company, and in respect of which the Group has not agreed any additional terms with the holders of those interests which would result in the Group as a whole having a contractual obligation in respect of those interests that meets the definition of a financial liability. For each business combination, the Group can elect to measure any non-controlling interests either at fair value or at their proportionate share of the subsidiary's net identifiable assets.

Non-controlling interests are presented in the consolidated statement of financial position within equity, separately from equity attributable to the owners of the Company. Non-controlling interests in the results of the Group are presented on the face of the consolidated statement of profit or loss and other comprehensive income as an allocation of the total profit or loss and total comprehensive income for the year between non-controlling interests and the owners of the Company.

Changes in the Group's interests in a subsidiary that do not result in a loss of control are accounted for as equity transactions, whereby adjustments are made to the amounts of controlling and non-controlling interests within consolidated equity to reflect the change in relative interests, but no adjustments are made to goodwill and no gain or loss is recognised.

When the Group loses control of a subsidiary, it is accounted for as a disposal of the entire interest in that subsidiary, with a resulting gain or loss being recognised in profit or loss. Any interest retained in that former subsidiary at the date when control is lost is recognised at fair value and this amount is regarded as the fair value on initial recognition of a financial asset.

*Transactions eliminated on consolidation*

Intra-Group balances and transactions and any unrealised income and expenses arising from intra-Group transactions are eliminated in preparing the consolidated financial statements. Unrealised losses resulting from intra-Group transactions are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(a) Basis of consolidation** *(continued)*

*Foreign operations*

The assets and liabilities of foreign operations including goodwill and fair value adjustments arising on acquisition, are translated to the presentation currency at exchange rates at the end of each reporting period. The income and expenses of foreign operations are translated to the presentation currency using the average rate for the year. Foreign currency differences are recognised in other comprehensive income and presented in the foreign currency translation reserve in equity. When a foreign operation is disposed of, the cumulative amount of the exchange differences relating to that foreign operation are transferred to profit or loss as part of the profit or loss on disposal.

**(b) Revenue**

Revenue is measured at the fair value of the consideration received or receivable. Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Group and the revenue can be reliably measured. The following specific recognition criteria must also be met before revenue is recognised:

*Sale of chrome concentrates*

The Group enters into contracts for the sale of chrome concentrates. Revenue arising from chrome sales under these contracts is recognised when the price is determinable, the product has been delivered in accordance with the terms of the contract, the significant risks and rewards of ownership have been transferred to the customer, collection of the sale price is probable and associated costs can be reliably estimated. These criteria may vary per contract. As sales from chrome contracts are subject to a customer survey adjustment with regards to quality, sales are initially recorded on a provisional basis using management's best estimate of the chrome quality. Subsequent adjustments are recorded in revenue to take into account final adjustments, if different from the initial estimates.

*Sale of PGM*

Revenue from the sale of PGM is initially recognised at the estimated fair value of the consideration receivable at the date of delivery. Adjustments to the sale price occur based on movements in the metal market price and currency up to the date of final pricing. Final pricing is based on the monthly average market price in the month of settlement. The period between initial recognition and final pricing is typically 4 months. The revenue adjustment mechanism embedded within the sale arrangement has the characteristics of a commodity derivative. Accordingly the fair value of the final sales price adjustment is re estimated continuously and changes in fair value are recognised as a re estimated adjustment to revenue in profit or loss and trade receivables in the statement of financial position.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(c) Other income**

*Rental income*

Rental income is recognised in profit or loss on a straight line basis over the term of the lease. Lease incentives granted are recognised as an integral part of the total rental income, over the term of the lease.

**(d) Segmental reporting**

Operating segments, and the amounts of each segment item reported in the consolidated financial statements, are identified from the financial information provided regularly to the Group's management for the purposes of allocating resources to, and assessing the performance of, the Group's various lines of business and geographical locations. The Board of Directors is of the view that the Group had two operating segments during the reporting period, the PGM segment and the chrome segment.

**(e) Lease payments**

Payments under leases which do not transfer substantially all the risks and rewards of ownership to the Group are classified as operating leases. Operating lease payments are recognised in profit or loss on a straight line basis over the term of the lease. Lease incentives received are recognised as an integral part of the total lease expense, over the term of the lease.

**(f) Foreign currency transactions**

Transactions in foreign currencies are translated to the respective functional currencies of Group entities at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated to the functional currency at the foreign exchange rate at that date. The foreign currency gain or loss on monetary items is the difference between amortised cost in the functional currency at the beginning of the year, adjusted for effective interest and payments during the year, and the amortised cost in foreign currency translated at the exchange rate at the end of the year.

Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currency at the exchange rate at the date that the fair value was determined. Non-monetary items in a foreign currency that are measured in terms of historical cost are translated using the exchange rate at the date of the transaction. Foreign currency differences arising on retranslation are recognised in profit or loss.

For the year ended 30 September 2015

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(g) Finance income and finance costs**

Finance income comprises interest income on funds invested, changes in fair value of financial assets at fair value through profit or loss and net foreign currency gains. Interest income is recognised in profit or loss as it accrues using the effective interest method.

Finance costs comprise interest expense on borrowings, bank charges, unwinding of the discount on provisions, impairment losses recognised on financial assets (other than trade receivables) and net foreign currency losses. Borrowing costs that are not directly attributable to the acquisition, construction or production of a qualifying asset (see note 3(1)) are recognised in profit or loss using the effective interest method.

Foreign currency gains and losses are reported on a net basis.

**(h) Employee benefits**

*Provident funds*

The Group's salaried employees in South Africa are members of defined contribution retirement benefit plans. The contributions to the plans range from a minimum of 3% to a maximum of 15% of staff's pensionable salary. Contributions to the plans vest immediately. Contributions are accrued in the year in which the associated services are rendered by employees.

The Group's employees in Cyprus and China do not participate in retirement benefit plans.

*Share based payment transactions*

Equity settled share based payments to employees and others providing similar services are measured at the fair value of the equity instruments at the grant date. Details regarding the determination of the fair value of equity settled share based transactions are set out in the supporting notes.

The fair value determined at the grant date of the equity settled share based payments is expensed on a straight line basis over the vesting period, based on the company's estimate of equity instruments that will eventually vest, with a corresponding increase in the equity. At the end of each reporting period, the company revises its estimate of the number of equity instruments expected to vest. The amount recognized as an expense is adjusted to reflect the revision of the original estimate.

Equity settled share based payment transactions with parties other than the employees are measured at fair value of the goods and services received, except where that fair value cannot be estimated reliably, in which case they are measured at the fair value of the equity instruments granted, measured at the date the entity obtains the goods or the counterparty renders the service.

Where the Company has the right to elect settlement either equity settled or cash settled, the share based payment transactions will be treated as equity settled share based payments.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(h) Employee benefits** *(continued)*

*Short term benefits*

Liabilities for employee benefits for wages, salaries and annual leave that are expected to be settled within 12 months from the reporting date are calculated at undiscounted amounts based on remuneration rates that the Group expects to pay as at the reporting date including related costs, such as workers compensation insurance and payroll tax. Non-accumulating monetary benefits such as medical aid contribution are expensed as the benefits are taken by the employees.

*Termination benefits*

Termination benefits are expensed at the earlier of when the Group can no longer withdraw the offer of those benefits and when the Group recognises costs for a restructuring. If benefits are not expected to be settled wholly within 12 months of the reporting date, then they are discounted.

**(i) Tax**

Income tax comprises current and deferred taxes. Income tax is recognised in profit or loss except to the extent that it relates to items recognised in other comprehensive income or directly in equity, in which case it is recognised in other comprehensive income or directly in equity, respectively.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustments to tax payable in respect of previous years.

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the reporting date.

Apart from certain limited exceptions, all deferred tax liabilities and all deferred tax assets, to the extent that it is probable that future taxable profits will be available against which the asset can be utilised, are recognised. Future taxable profits that may support the recognition of deferred tax assets arising from deductible temporary differences include those that will arise from the reversal of existing taxable temporary differences, provided those differences relate to the same taxation authority and the same taxable entity, and are expected to reverse either in the same period as the expected reversal of the deductible temporary difference or in periods into which a tax loss arising from the deferred tax asset can be carried back or forward. The same criteria are adopted when determining whether existing taxable temporary differences support the recognition of deferred tax assets arising from unused tax losses and credits, that is, those differences are taken into account if they relate to the same taxation authority and the same taxable entity, and are expected to reverse in a period, or periods, in which the tax loss or credit can be utilised.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(i) Tax** *(continued)*

The limited exceptions to recognition of deferred tax assets and liabilities are those temporary differences arising from goodwill not deductible for tax purposes, the initial recognition of assets or liabilities that affect neither accounting nor taxable profit (provided they are not part of a business combination), and temporary differences relating to investments in subsidiaries to the extent that, in the case of taxable differences, the Group controls the timing of the reversal and it is probable that the differences will not reverse in the foreseeable future, or in the case of deductible differences, unless it is probable that they will reverse in the future.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but which they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realised simultaneously.

A deferred tax asset is recognised for unused tax losses, tax credits and deductible temporary differences, to the extent that it is probable that future taxable profits will be available against which they can be utilised. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

Additional income taxes that arise from the distribution of dividends are recognised at the same time as the liability to pay the related dividend is established.

In determining the amount of current and deferred tax, the Group takes into account the impact of uncertain tax positions and whether additional taxes and interest may be due. This assessment relies on estimates and assumptions and may involve a series of judgements about future events. New information may become available that causes the Group to change its judgement regarding the adequacy of existing tax liabilities; such changes to tax liabilities will impact tax expense in the period that such a determination is made.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(j) Earnings per share**

The Group presents basic and diluted earnings per share data for its ordinary shares. Basic earnings per share is calculated by dividing the profit or loss attributable to ordinary shareholders of the Company by the weighted average number of ordinary shares outstanding during the period. Diluted earnings per share is determined by adjusting the profit or loss attributable to ordinary shareholders and the weighted average number of ordinary shares outstanding for the effects of all dilutive potential ordinary shares, which comprise instruments convertible into ordinary shares and share options granted to employees. The Group also presents headline earnings per share according to the JSE requirements, by adjusting the earnings as determined in International Accounting Standard 33, excluding separate identifiable re-measurements, net of related tax (current and deferred) and related non-controlling interests other than re-measurements specifically included in headline earnings ("included re-measurements").

If the number of ordinary or potential ordinary shares outstanding increases as a result of capitalisation, a bonus issue or a share split, or decreases as a result of a reverse share split before the consolidated financial statements are authorised for issue, the calculation of basic and diluted earnings per share for all periods presented are adjusted retrospectively, as if such changes to share capital had been effective since the beginning of the earliest period presented.

**(k) Dividends**

Dividends are recognised as a liability in the period they are declared according to International Accounting Standard 10.

**(l) Property, plant and equipment**

*Mining assets and infrastructure*

Mining assets and infrastructure typically include those costs incurred for the development of the mine, including the design of the mine plan, constructing and commissioning the facilities and preparation of the mine and necessary infrastructure for production. The mine development phase generally begins after completion of a feasibility study and ends upon the commencement of commercial production. Mining assets are measured at cost less accumulated depreciation and less any accumulated impairment losses. Expenditure, including evaluation costs, incurred to establish or expand productive capacity, to support and maintain that productive capacity prior to the commencement of commercial levels of production, are capitalised to assets under construction and transferred to mining plant and infrastructure when the mining venture reaches commercial production. Maintenance costs incurred to maintain current production are expensed.

The remaining useful life of mine and infrastructure is currently estimated to be 21 years.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(I) Property, plant and equipment** *(continued)*

*Deferred stripping costs*

All stripping costs incurred (costs incurred in removing overburden to expose the reef) during the production phase of a mine are treated as variable production costs and as a result are included in the cost of inventory during the period in which the stripping costs are incurred. However, any costs of overburden stripping in excess of the expected open-pit life average stripping ratio are deferred. Any costs deferred are capitalised to property, plant and equipment. This asset is depreciated using the units of production method over the expected useful life of the identified component of the ore body that becomes more accessible as a result of the stripping activity.

*General*

General assets are initially measured at cost and are subsequently measured at cost less accumulated depreciation and less any accumulated impairment losses. The cost of self-constructed assets includes the cost of materials, direct labour and an appropriate portion of normal production overheads. Directly attributable expenses relating to major capital projects and site preparation are capitalised until the asset is brought to a working condition for its intended use. These costs include dismantling and site restoration costs. Administrative and other general overhead costs are expensed as incurred. Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

Borrowing costs directly attributable to the construction or acquisition of qualifying assets are capitalised directly to the cost of the qualifying asset. To the extent that funds are borrowed specifically for the purpose of obtaining a qualifying asset, these borrowing costs shall be determined as the actual borrowing costs incurred on that borrowing.

To the extent that funds are borrowed generally and used for the purpose of obtaining a qualifying asset, the amount of borrowing costs shall be determined by applying a capitalisation rate to the expenditure on that asset. Borrowing costs specifically to finance the establishment of qualifying mining assets are capitalised until commercial levels of production are achieved. Otherwise, capitalisation of borrowing costs ceases when the asset is substantially complete.

Where an item of property, plant and equipment comprises major components with different useful lives, the components are accounted for as separate items of property, plant and equipment.

Expenditure incurred to replace a component of an item of property, plant and equipment that is accounted for separately, including major inspection and overhaul expenditure, is capitalised when the costs can be reliably measured and if it is probable that the future economic benefits embodied within the component will flow to the Group. The carrying amount of the replaced component, if any, are derecognised.

Maintenance and day to day servicing and repairs, which neither materially add to the value of assets nor appreciably prolong their useful lives, are recognised in profit or loss.

For the year ended 30 September 2015

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(I) Property, plant and equipment** *(continued)*

*General (continued)*

Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of the item and are recognised in profit or loss.

*Government grants*

Government grants are recognized as a deduction in the carrying amount of the item of property, plant and equipment they relate to, when there is reasonable assurance that they will be received, and the Group will comply with the conditions associated with the grant.

*Depreciation*

Depreciation of mining assets and infrastructure is calculated using the units-of-production method based on estimated economically recoverable proved and probable mineral reserves. Proved and probable reserves reflect estimated quantities of economically recoverable resources which can be recovered in the future from known mineral deposits. Depreciation is first charged on mining assets and infrastructure from the date on which they are available for use.

For other property, plant and equipment, depreciation is recognised in profit or loss on a straight-line basis at rates that will reduce the carrying amounts to estimated residual values over the estimated useful lives of the assets. Leasehold improvements on premises occupied under operating leases are expensed over the shorter of the lease term and the useful lives.

Depreciation, unless otherwise stated, is calculated as follows:

- buildings at 10% per annum
- motor vehicles at 20% per annum
- computer equipment and software at 33.3% per annum
- office equipment between 10% and 33.3% per annum
- furniture at 20% per annum

No depreciation is provided on freehold land and mine development assets under construction.

Depreciation methods, residual values and useful lives are reviewed at least annually, and adjusted if appropriate, at each reporting date.

For the year ended 30 September 2015

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(m) Mineral reserves**

The estimation of reserves impacts the amortisation of property, plant and equipment, the recoverable amount of property, plant and equipment and the timing of rehabilitation expenditure.

Factors impacting the determination of proved and probable reserves:

- commodity prices;
- the grade of mineral reserves;
- unforeseen operational issues at the mine; and
- the reliability of the measurement of the fair value or cost of the asset.

**(n) Inventories**

Inventories comprising PGM and chrome concentrates, ore stockpiled, in-process metal contained in ore and consumable items are measured at the lower of cost and net realisable value. The cost is determined using the weighted average method and includes direct mining expenditure and an appropriate portion of overhead expenditure. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and costs to sell. Obsolete, redundant and slow moving inventories are identified and written down to net realisable value.

**(o) Financial instruments**

*Non-derivative financial assets*

The Group initially recognises loans and receivables and deposits on the date that they are originated. All other financial assets (including assets designated at fair value through profit or loss) are recognised initially on the trade date, which is the date that the Group becomes a party to the contractual provisions of the instrument.

The Group derecognises a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows on the financial asset in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred. Any interest in transferred financial assets that is created or retained by the Group is recognised as a separate asset or liability.

On derecognition, the difference between the carrying amount of the financial asset and proceeds receivable and any prior adjustment to reflect fair value that had been reported in other comprehensive income and accumulated in equity are included in profit or loss for the period.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(o) Financial instruments** *(continued)*

*Non-derivative financial assets (continued)*

The Group's non-derivative financial assets include the following:

- *Financial assets at fair value through profit or loss*

A financial asset is classified at fair value through profit or loss if it is classified as held for trading or is designated as such upon initial recognition. Financial assets are designated as at fair value through profit or loss if the Group manages such investments and makes purchase and sale decisions based on their fair value in accordance with the Group's documented risk management or investment strategy. Attributable transaction costs are recognised in profit or loss as incurred. Financial assets at fair value through profit or loss are measured at fair value and changes therein are recognised in profit or loss.

- *Held-to-maturity investments*

Held to maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturities that the Group's management has the positive intention and ability to hold to maturity and are included in non-current assets, except for those with maturities within 12 months from the reporting date which are classified as current assets. Held to maturity investments are stated at amortised cost less impairment losses.

- *Loans receivable*

Loans receivable are initially measured at fair value plus any directly attributable transaction costs. Subsequent to initial recognition, the loans receivable are measured at amortised cost using the effective interest rate method. Unless otherwise stated, these balances have no fixed terms of repayment and are therefore deemed repayable on demand and deemed to have carrying values equal to their fair values.

- *Trade and other receivables*

Trade and other receivables originated by the Group are stated at their amortised cost less impairment losses, except where the receivables are interest-free loans made to related parties without any fixed repayment terms or the effect of discounting would be immaterial. Appropriate allowances for estimated irrecoverable amounts are recognised in profit or loss when there is objective evidence that the asset is impaired. The allowance recognised is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the effective interest rate computed at initial recognition. Due to the short-term nature of the Group's trade and other receivables, amortised cost approximates fair value.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(o) Financial instruments** *(continued)*

*Non-derivative financial liabilities*

The Group initially recognises debt securities issued on the date that they are originated. All other financial liabilities are recognised initially on the trade date, which is the date that the Group becomes a party to the contractual provisions of the instrument.

The Group derecognises a financial liability when its contractual obligations are discharged, cancelled or expire. On derecognition, the difference between the carrying amount of the financial liability, including related unamortised costs, and the amount paid for it is included in profit or loss.

Non-derivative financial liabilities are recognised initially at fair value less any directly attributable transaction costs. Subsequent to initial recognition, these financial liabilities are measured at amortised cost using the effective interest rate method.

The Group's non-derivative financial liabilities include the following:

- *Trade and other payables*

Trade and other payables are stated at amortised cost. Due to the short-term nature of the Group's trade and other payables, amortised cost approximates fair value.

- *Interest-bearing borrowings*

Interest-bearing borrowings are stated at amortised cost, using the effective interest rate method, with any difference between cost and redemption value being recognised in profit or loss over the period of the borrowings on an effective interest rate basis.

- *Redeemable preference shares*

Redeemable preference shares are classified as a liability if they are redeemable on a specific date or at the option of the preference shareholders, or if dividend payments are not discretionary. The liability is recognised in accordance with the Group's policy for interest-bearing borrowings. Dividends on redeemable preference shares are recognised as a liability and recognised as an interest expense using the effective interest rate method.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(o) Financial instruments** *(continued)*

*Financial liabilities at fair value through profit or loss:*

The Group's financial liabilities at fair value through profit or loss include the following:

- *Hybrid financial liabilities*

A hybrid financial liability includes a non-derivative host contract and one or more embedded derivatives with the effect that some of the cash flows of the instrument vary in a way similar to a stand-alone derivative. The Group designates the entire hybrid liability as a financial liability at fair value through profit or loss unless:

- (a) the embedded derivative(s) does not significantly modify the cash flows that otherwise would be required by the contract; or
- (b) it is clear with little or no analysis when a similar hybrid instrument is first considered that separation of the embedded derivative(s) is prohibited, such as a prepayment option embedded in a loan that permits the holder to prepay the loan for approximately its amortised cost.

Hybrid financial liabilities are recognised initially at fair value. Transaction costs that relate to the issue of the liabilities are recognised immediately in profit or loss. At the end of each reporting period the fair value is re-measured. The gain or loss on re-measurement to fair value is recognised immediately in profit or loss.

- *Derivative financial instruments*

Derivative financial instruments are recognised initially at fair value and any attributable transaction costs are recognised in profit or loss. At the end of each reporting period the fair value is remeasured. The gain or loss on remeasurement to fair value is recognised immediately in profit or loss.

Financial assets and liabilities are offset and the net amount presented in the statement of financial position when, and only when, the Group has a legal right to offset the amounts and intends either to settle on a net basis or to realise the asset and settle the liability simultaneously.

The fair value of financial instruments traded on an organised financial market is measured at the applicable quoted prices. The fair value of financial instruments not traded on an organised financial market is determined using a variety of methods and assumptions that are based on market conditions and risks existing at the reporting date, including independent appraisals and discounted cash flow methods.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(p) Impairment**

*Financial assets*

Financial assets are assessed at each reporting date to determine whether there is any objective evidence that they are impaired. A financial asset is considered to be impaired if objective evidence indicates that a loss event has occurred after the initial recognition and the loss event had a negative effect on the estimated future cash flows of that asset, that can be estimated reliably.

Objective evidence of impairment includes observable data that comes to the attention of the Group about one or more of the following loss events:

- significant financial difficulty of the debtor;
- a breach of contract, such as a default or delinquency in interest or principal payments;
- its becoming probable that the debtor will enter bankruptcy or other financial reorganisation;
- significant changes in the technological, market, economic or legal environment that have an adverse effect on the debtor; and
- a significant or prolonged decline in the fair value of an investment in an equity instrument below its cost.

If any such evidence exists, any impairment loss is determined and recognised as follows:

An impairment loss in respect of a financial asset measured at amortised cost is calculated as the difference between its carrying amount and the present value of the estimated future cash flows discounted at the original effective interest rate. Individually significant financial assets are tested for impairment on an individual basis. The remaining financial assets are assessed collectively in groups that share similar credit risk characteristics.

All impairment losses are recognised in profit or loss and reflected in an allowance account against such financial assets. An impairment loss is reversed if the reversal can be related objectively to an event occurring after the impairment loss was recognised. The reversal is recognised in profit or loss.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(p) Impairment** *(continued)*

*Non-financial assets*

The carrying amounts of the Group's non-financial assets, other than inventories and deferred tax assets, are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable amount is estimated. For goodwill and intangible assets that have indefinite lives or are not yet available for use, the recoverable amount is estimated annually whether or not there is any indication of impairment. An impairment loss is recognised whenever the carrying amount of an asset or its related CGU exceeds its recoverable amount. A CGU is the smallest identifiable asset group that generates cash flows that are largely independent from other assets and groups. Impairment losses are recognised in profit or loss. Impairment losses recognised in respect of CGUs are allocated first to reduce the carrying amount of any goodwill allocated to the CGUs (group of units) and then, to reduce the carrying amount of the other assets in the CGU (group of units) on a pro rata basis.

The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the assets. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash flows from continuing use that are largely independent of the cash inflows of the other assets of the CGU.

For the purposes of goodwill impairment testing, goodwill acquired in a business combination is allocated to groups of CGUs that are expected to benefit from the synergies of the combination.

An impairment loss in respect of goodwill is not reversed. In respect of other assets, impairment losses recognised in prior periods are assessed at each reporting date for any indication that the loss has decreased or no longer exists. An impairment loss is reversed through profit or loss if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

**(q) Provisions**

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events where it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate of the amount of the obligation can be made. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability.

Long-term environmental obligations are based on the Group's environmental management plans, in compliance with the current environmental and regulatory requirements.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(q) Provisions** *(continued)*

Where it is not possible that an outflow of economic benefits will be required, or the amount cannot be estimated reliably, the obligation is disclosed as a contingent liability, unless the probability of outflow of economic benefits is remote. Possible obligations, whose existence will only be confirmed by the occurrence or non-occurrence of one or more future events are disclosed as contingent liabilities unless the probability of outflow of economic benefits is remote.

*Rehabilitation costs*

The net present value of estimated future costs for mine closure and rehabilitation is recognised and provided for in the consolidated financial statements and capitalised within mining assets on initial recognition. Rehabilitation will generally occur on closure or after closure of a mine. Initial recognition of the provision is at the time that the disturbance occurs and thereafter as and when additional disturbances take place.

The estimates are reviewed bi-annually to take into account the effects of inflation and changes in estimates and are discounted using rates that reflect the time value of money. Bi-annual increases in the provision due to the passage of time are recognised in profit or loss as an unwinding of the value of the provision expense. The present value of additional disturbances and changes in the estimate of the rehabilitation liability are taken to inventory as a direct cost against an increase in the rehabilitation provision. The rehabilitation asset is depreciated as per the Group's accounting policy on depreciation (see note 3(l)). Rehabilitation projects undertaken, included in the estimates, are charged to the provision as incurred.

Costs for restoration and rehabilitation which are created on an ongoing basis during production of inventories are provided for at their net present values and included as part of inventory costs. Environmental liabilities, other than rehabilitation costs, which relate to liabilities arising from specific events, are recognised in the consolidated statement of financial position when they are known, probable and may be reasonably estimated.

Gains or losses from the expected disposal of assets are not taken into account when determining the provision.

**(r) Cash and cash equivalents**

Cash and cash equivalents comprise cash at bank and in hand, demand deposits with banks and other financial institutions, and short-term, highly liquid investments that are readily convertible into known amounts of cash and which are subject to an insignificant risk of changes in value, having been within three months of maturity at acquisition.

**(s) Long term deposits**

Long term deposits is cash and cash equivalents restricted and designated as a "debt service reserve account" as required in terms of the senior debt facility.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(t) Share capital**

The share capital is stated at nominal value. The difference between the fair value of the consideration received by the Company and the nominal value of the share capital being issued is taken to the share premium account. Incremental costs directly attributable to the issue of ordinary shares are recognised as a deduction from equity, net of any tax effects.

**(u) Related party transactions**

For the purpose of these consolidated financial statements, a party is considered to be related to the Group if:

- (i)* The party has the ability, directly or indirectly through one or more intermediaries, to control the Group or exercise significant influence over the Group in making financial and operating policy decisions, or has joint control over the Group;
- (ii)* The Group and the party are subject to common control;
- (iii)* The party is an associate of the Group or a joint venture in which the Group is a venturer;
- (iv)* The party is a member of key management personnel of the Group or the Group's parent, or a close family member of such individual, or is an entity under the control, joint control or significant influence of such individuals;
- (v)* The party is a close family member of a party referred to in (i) or is an entity under the control, joint control or significant influence of such individuals; or
- (vi)* The party is a post-employment benefit plan which is for the benefit of employees of the Group or of any entity that is a related party of the Group.

Close family members of an individual are those family members who may be expected to influence, or be influenced by, that individual in their dealings with the Group.

**(v) Comparatives**

Where necessary, comparative figures have been adjusted to conform to changes in presentation in the current year.

**(w) Events after the reporting period**

Assets and liabilities are adjusted for events that occurred during the period from the reporting date to the date of approval of the financial statements by the Board of Directors, when these events provide additional information for the valuation of amounts relating to events existing at the reporting date or imply that the going concern concept in relation to part or whole of the Group is not appropriate.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**4. OPERATING SEGMENTS**

Segmental performance is measured based on segment revenue, cost of sales and gross profit or loss, as included in the internal management reports that are reviewed by the Group's management.

<b>30 September 2015</b>	PGM	Chrome	Total
	US\$'000	US\$'000	US\$'000
Revenue	<u>83 053</u>	<u>163 729</u>	<u>246 782</u>
Cost of sales			
- Cost of sales excluding selling costs	63 674	80 834	144 508
- Selling costs	<u>193</u>	<u>58 991</u>	<u>59 184</u>
	<u>63 867</u>	<u>139 825</u>	<u>203 692</u>
Gross profit	<u>19 186</u>	<u>23 904</u>	<u>43 090</u>

The overhead costs relating to the manufacturing of the PGM and the chrome concentrates are allocated to the relevant products based on the relative sales value per product. The allocated percentage for chrome concentrates and PGM concentrate accounted for this financial year is 50% for each segment. The allocated percentage for chrome concentrates and PGM concentrate accounted for in the previous reporting period was 60% and 40% respectively.

<b>30 September 2014</b>	PGM	Chrome	Total
	US\$'000	US\$'000	US\$'000
Revenue	<u>70 365</u>	<u>170 366</u>	<u>240 731</u>
Cost of sales			
- Cost of sales excluding selling costs	53 347	91 893	145 240
- Selling costs	<u>138</u>	<u>62 741</u>	<u>62 879</u>
	<u>53 485</u>	<u>154 634</u>	<u>208 119</u>
Gross profit	<u>16 880</u>	<u>15 732</u>	<u>32 612</u>

**Geographical information**

The following table sets out information about the geographical location of (i) the Group's revenue from external customers and (ii) the Group's property, plant and equipment and goodwill ("specified non-current assets"). The geographical location analysis of revenue from external customers is based on the country of establishment of each customer. The geographical location of the specified non-current assets is based on the physical location of the asset in the case of property, plant and equipment and the location of the operation to which they are allocated in the case of goodwill.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

4. OPERATING SEGMENTS *(continued)*

Geographical information *(continued)*

	Years ended 30 September	
	<u>2015</u>	<u>2014</u>
	US\$'000	US\$'000
<b>(i) Revenues from external customers</b>		
China	65 432	71 136
South Africa	95 038	94 187
Singapore	7 927	27 220
Hong Kong	55 175	37 653
South Korea	10 673	-
Other countries	<u>12 537</u>	<u>10 535</u>
	<u>246 782</u>	<u>240 731</u>

Revenue represents the sales value of goods supplied to customers, net of value-added tax. The Group had one customer with whom transactions have individually exceeded 10% of the Group's revenues. Revenue from the largest customer of the Group represented approximately US\$82 856 thousand and US\$70 214 thousand for each of the years ended 30 September 2015 and 30 September 2014 respectively and relates to revenues of the PGM segment. Revenue from the second largest customer of the Group represented approximately US\$15 124 thousand and US\$24 508 thousand for each of the years ended 30 September 2015 and 30 September 2014 respectively and relates to revenues of the chrome segment.

	<u>30 September</u>	<u>30 September</u>
	<u>2015</u>	<u>2014</u>
	US\$'000	US\$'000
<b>(ii) Specified non-current assets</b>		
South Africa	215 430	254 547
Cyprus	5	14
China	<u>2</u>	<u>6</u>
	<u>215 437</u>	<u>254 567</u>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

5. OTHER INCOME

	Years ended 30 September	
	<u>2015</u>	<u>2014</u>
	US\$'000	US\$'000
Rental income	30	39
Other income	<u>12</u>	<u>110</u>
	<u>42</u>	<u>149</u>

Rental income relates to the portion of rent recovered by sub tenants and income from houses rented in the area covered by the mining rights.

6. SHARE BASED PAYMENTS

At 30 September 2015, the Company had the following share based payment arrangements:

**First issue - 2014 for Conditional Awards "LTIP" and Appreciation Rights "SARS"**

Conditional Awards is the grant of shares of the Company to employees of the Group and other approved consultants, where the risks and rewards of share ownership will vest on specific vesting dates with the employee subject to certain conditions. As at 30 September 2015, all conditions with regards to the conditional awards of the other approved consultants have been fulfilled. The inaugural award will vest in three equal annual tranches. The award, on vesting, may at the election of the Company, be either cash settled or share settled as provided for in the rules of the Plan. Management has confirmed that the Company has both the ability and the intent to settle these awards by the issue of equity instruments.

Appreciation Rights is the grant of an award in shares of the Company where the employee is, subject to certain conditions, entitled to receive the increase in the market price of the share above the award price. The appreciation in value may, at the election of the Company, be either cash settled or share settled as provided for in the rules of the Plan. The inaugural award is at an award price of ZAR38.00 per share and vests in two equal annual tranches with the ability to exercise the award at any time up to five years from the grant date. Management has confirmed that the Company has both the ability and the intent to settle these awards by the issue of equity instruments.

**Second issue - 2015 for LTIP and SARS**

(1) The Conditional Award and Appreciation Right are contingent on there being no fatality at the Tharisa Mine in the case of Tranche 1 between the date of grant and 30 June 2016 ("1st twelve month period"), in the case of Tranche 2 between 1 July 2016 and 30 June 2017 ("2nd twelve month period") and in the case of Tranche 3 between 1 July 2017 and 30 June 2018 ("3rd twelve month period"). For example if there was a fatality during the 1st twelve month period, the Tranche 1 Conditional Award and Appreciation Right would lapse, however if there was no fatality during the 2nd twelve month period, the Tranche 2 Conditional Award and Appreciation Right would be eligible for vesting subject to the remaining performance conditions below.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

6. **SHARE BASED PAYMENTS** *(continued)*

(2) Subject to there being no fatality during the vesting periods as detailed above, the number of vested allocations will be evaluated as follows:

- 33.34% of each tranche of the Conditional Award and Appreciation Right will be subject to continuing employment in good standing (as determined by the Remuneration Committee) during the applicable vesting period;
- 33.33% of each tranche of the Conditional Award and Appreciation Right will be subject to the production of 144 koz PGMs during the 1st twelve month period, 2nd twelve month period or 3rd twelve month period, respectively. However 16.67% of each such tranche of the Conditional Award and Appreciation Right will vest (subject to paragraph 1 above) if the production during the applicable 12 month period is below 144 koz PGMs but above 136.8koz PGMs. 33.33% of each tranche of the award will be forfeited if production in any applicable 12 month period falls below 136.8 koz PGMs; and
- 33.33% of each tranche of the Conditional Award and Appreciation Right will be subject to the production of 1.5 Mt of chrome concentrates comprising metallurgical grade, foundry grade and chemical grade within contract specifications during the 1st twelve month period, 2nd twelve month period or 3rd twelve month period, respectively. However 16.67% of each tranche of the Conditional Award and Appreciation Right will vest (subject to paragraph 1 above) if the production during the applicable 12 month period is below 1.5 Mt of chrome concentrates but above 1.425 Mt of chrome concentrates. 33.33% of each tranche of the Conditional Award will be forfeited if production in any applicable 12 month period falls below 1.425 Mt of chrome concentrates.

(3) For the avoidance of doubt, if any tranche of the Conditional Award and Appreciation Right is forfeited (either wholly or partially) as a result of failure to achieve the above PGM and chrome production targets in any applicable 12 month period but the said targets (for full or partial vesting) are achieved in subsequent 12 month periods during the applicable vesting periods, provided there has not been a fatality as detailed above, the awards will vest (wholly or partially as applicable) for that period as provided.

The awards are subject to the rules governing the Plan and the final discretion of the Company's Remuneration Committee will prevail should there be any discrepancy.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**6. SHARE BASED PAYMENTS** *(continued)*

A reconciliation of the movement in the Group's LTIP and SARS in the period under review is as follows:

**LTIP**

First issue - 2014 valuation of share option at grant date was ZAR23.11 per share.

Second issue - 2015 valuation of share option at grant date was ZAR6.37 per share.

2015 Ordinary shares	<u>Opening balance</u>	<u>Allocated</u>	<u>Vested</u>	<u>Forfeited</u>	<u>Total</u>
LTIP	3 679 129	2 656 589	(1 191 256)	(1 043 081)	4 101 381
2014 Ordinary shares	<u>Opening balance</u>	<u>Allocated</u>	<u>Vested</u>	<u>Forfeited</u>	<u>Total</u>
LTIP	-	3 679 129	-	-	3 679 129

An expense of US\$2 869 thousand (2014: US\$90 thousand) was recognised in profit or loss. Of the above vested shares, 80 016 were not issued and the respective costs were used to repay associated taxes.

**SARS**

First issue - 2014 valuation of share award at grant date was ZAR4.25 per award.

Second issue - 2015 valuation of share award at grant date was ZAR2.01 per award.

2015 Ordinary shares	<u>Opening balance</u>	<u>Allocated</u>	<u>Vested</u>	<u>Forfeited</u>	<u>Total</u>
SARS	2 051 139	3 556 635	(947 471)	(2 033 302)	2 627 001
2014 Ordinary shares	<u>Opening balance</u>	<u>Allocated</u>	<u>Vested</u>	<u>Forfeited</u>	<u>Total</u>
SARS	-	2 051 139	-	-	2 051 139

An expense of US\$288 thousand (2014: US\$184 thousand) was recognised in profit or loss.

### 6. SHARE BASED PAYMENTS *(continued)*

#### Share Grant

The Company granted shares to employees of the group conditional on listing of its ordinary shares on the JSE. The grant was made to employees with at least 6 months service prior to listing and the number of shares was fixed with an escalation for the number of years in service prior to the grant.

The grant was valued at the private placement share price of ZAR38.00 per share at the time of the listing.

Total number of shares granted by the Company to employees of the Group was 31 635.

An amount of US\$31.64 and US\$115 thousand was charged in share capital and share premium respectively during the year ended 30 September 2014 for the ordinary shares issued with a corresponding increase in the investment in each subsidiary.

An expense of US\$Nil (2014: US\$114 thousand) was recognised in profit or loss.

#### Information on awards granted during the year

Fair values were determined by a Black Scholes model for the LTIP awards and a Binomial tree model for the SARS awards. The following inputs were used:

	2015	2014
• Spot price (second and initial award)	ZAR6.90	ZAR25.00
• Strike price (second and initial award)	ZAR6.44	ZAR38.00
• Expected volatility	33.00%	33.00%
• Dividend yield	4.00%	3.55%
• Risk-free interest rate	Zero coupon fit swap curve	Zero coupon fit swap curve
• Forfeiture assumption	5.00%	5.00%

Given the very limited share price trading history of the Company due to the fact that it listed its ordinary share capital on the JSE on 10 April 2014, management has determined that volatility will be more indicative by calculating an equally weighted volatility based on historical share price data of companies listed on the JSE with very similar portfolios to that of the Group. Based on management calculations, the expected volatility as at 30 September 2015 was 33%.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

### 7. ADMINISTRATIVE EXPENSES

	Years ended 30 September	
	<u>2015</u>	<u>2014</u>
	US\$'000	US\$'000
Directors and staff costs		
Non-Executive Directors	504	598
Executive Directors	1 396	1 498
Other key management	1 000	1 135
Group employees	<u>9 114</u>	<u>10 980</u>
	12 014	14 211
Audit	488	505
Consulting	2 207	1 157
Corporate social investment	309	475
Depreciation	255	365
Discount facility and related fees	366	85
Equity-settled share based expense	3 157	389
Fees for the professional services of the listing	-	2 610
Health and safety	167	43
Impairment losses on property, plant and equipment	3	-
Insurance	856	623
Legal and professional	414	488
Rent and utilities	867	1 624
Security	608	698
Telecommunications and IT related costs	581	617
Training	420	116
Travelling and accommodation	580	767
Sundry expenses	<u>1 485</u>	<u>2 135</u>
	<u>24 777</u>	<u>26 908</u>

During the year ended 30 September 2015, the Group realised a net gain on disposal of US\$376 (2014: US\$Nil) of property, plant and equipment.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**8. NET FINANCE COSTS**

	Years ended 30 September	
	<u>2015</u>	<u>2014</u>
	US\$'000	US\$'000
<b>Finance income</b>		
Interest income	777	897
Net foreign currency gains	408	-
	<u>1 185</u>	<u>897</u>
<b>Finance costs</b>		
Interest expense	(11 754)	(13 400)
Bank charges	(101)	(96)
Net foreign currency losses	-	(500)
	<u>(11 855)</u>	<u>(13 996)</u>
<b>Changes in fair value of financial assets at fair value through profit or loss</b>	<u>(25)</u>	<u>(659)</u>
<b>Changes in fair value of financial liabilities at fair value through profit or loss</b>	<u>1 972</u>	<u>(32 420)</u>
<b>Net finance costs</b>	<u>(8 723)</u>	<u>(46 178)</u>

Following the Company's listing on the JSE, the convertible redeemable preference shares issued in 2011, were converted into fully paid ordinary shares as per the conversion clause detailed in the articles of association of the Company. The fair value of the convertible redeemable preference shares up to the date of listing, and their conversion into ordinary shares was increased using a probability weighted expected return method as set out in note 29 of the consolidated financial statements.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**9. DIRECTORS REMUNERATION**

The remuneration of the Directors for the year ended 30 September 2015 and 2014 is set out below:

**2015 Directors' remuneration**

	Directors' fees	Salary	Expense allowances	Share based payments	Provident fund and risk benefits	Total
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
Loucas Pouroulis	-	512	-	28	-	540
Phoevos Pouroulis	-	393	10	24	24	451
Michael Jones	-	325	-	21	59	405
David Salter	188	-	-	-	-	188
Ioannis Drapaniotis	97	-	-	-	-	97
Antonios Djakouris	129	-	-	-	-	129
Omar Kamal	58	-	-	-	-	58
Brian Chi Ming Cheng	32	-	-	-	-	32
Joanna Ka Ki Cheng	-	-	-	-	-	-
<b>Total</b>	<b>504</b>	<b>1 230</b>	<b>10</b>	<b>73</b>	<b>83</b>	<b>1 900</b>

**2014 Directors' remuneration**

	Directors' fees	Salary	Expense allowances	Share based payments	Provident fund and risk benefits	Total
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
Loucas Pouroulis	-	580	-	-	-	580
Phoevos Pouroulis	-	444	12	-	27	483
Michael Jones	-	360	-	-	75	435
David Salter	262	-	-	-	-	262
Ioannis Drapaniotis	132	-	-	-	-	132
Antonios Djakouris	191	-	-	-	-	191
Omar Kamal	13	-	-	-	-	13
<b>Total</b>	<b>598</b>	<b>1 384</b>	<b>12</b>	<b>-</b>	<b>102</b>	<b>2 096</b>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

9. DIRECTORS REMUNERATION (continued)

Directors' share scheme awards

As at 30 September 2015, the number of Conditional Awards ("LTIP") and Appreciation Rights ("SARS") awarded to the Executive Directors are as follows:

LTIP

2015 Ordinary shares	<u>Opening balance</u>	<u>Allocated</u>	<u>Vested</u>	<u>Forfeited</u>	<u>Total</u>
Loucas Pouroulis	161 052	316 770	(53 684)	(105 590)	318 548
Phoevos Pouroulis	134 210	263 975	(44 737)	(87 992)	265 456
Michael Jones	<u>120 789</u>	<u>237 577</u>	<u>(40 263)</u>	<u>(79 192)</u>	<u>238 911</u>
	<u>416 051</u>	<u>818 322</u>	<u>(138 684)</u>	<u>(272 774)</u>	<u>822 915</u>
2014 Ordinary shares	<u>Opening balance</u>	<u>Allocated</u>	<u>Vested</u>	<u>Forfeited</u>	<u>Total</u>
Loucas Pouroulis	-	161 052	-	-	161 052
Phoevos Pouroulis	-	134 210	-	-	134 210
Michael Jones	<u>-</u>	<u>120 789</u>	<u>-</u>	<u>-</u>	<u>120 789</u>
	<u>-</u>	<u>416 051</u>	<u>-</u>	<u>-</u>	<u>416 051</u>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**9. DIRECTORS REMUNERATION** *(continued)*

**SARS**

2015 Ordinary shares	<u>Opening balance</u>	<u>Allocated</u>	<u>Vested</u>	<u>Forfeited</u>	<u>Total</u>
Loucas Pouroulis	80 526	158 385	(40 263)	(79 193)	119 455
Phoevos Pouroulis	67 105	131 987	(33 553)	(65 994)	99 545
Michael Jones	60 394	118 788	(30 197)	(59 394)	89 591
	<u>208 025</u>	<u>409 160</u>	<u>(104 013)</u>	<u>(204 581)</u>	<u>308 591</u>

2014 Ordinary shares	<u>Opening balance</u>	<u>Allocated</u>	<u>Vested</u>	<u>Forfeited</u>	<u>Total</u>
Loucas Pouroulis	-	80 526	-	-	80 526
Phoevos Pouroulis	-	67 105	-	-	67 105
Michael Jones	-	60 394	-	-	60 394
	<u>-</u>	<u>208 025</u>	<u>-</u>	<u>-</u>	<u>208 025</u>

Details of each scheme are disclosed in note 6 of the consolidated financial statements. The Directors were not awarded any share grants. Non-Executive Directors are not entitled to participate in the Group's share award scheme.

**10. TAX**

	Years ended 30 September	
	<u>2015</u>	<u>2014</u>
	US\$'000	US\$'000
Corporate income tax for the year		
• - Cyprus	240	765
• - South Africa	143	300
Special contribution for defence in Cyprus for the year	3	1
Deferred tax - Origination and reversal of temporary differences (note 22)	<u>3 231</u>	<u>13 482</u>
Tax charge	<u>3 617</u>	<u>14 548</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

### 10. TAX (continued)

The entities within the Group are taxed in the countries in which they are incorporated and operate at the relevant tax rates as follows:

	Country	Years ended 30 September	
		<u>2015</u>	<u>2014</u>
Tharisa plc	Cyprus	12.5%	12.5%
Tharisa Minerals Proprietary Limited	South Africa	28.0%	28.0%
Tharisa Investments Limited	Cyprus	12.5%	12.5%
Arxo Resources Limited	Cyprus	12.5%	12.5%
Tharisa Fujian Industrial Co., Ltd	China	25.0%	25.0%
Arxo Logistics Proprietary Limited	South Africa	28.0%	28.0%
Tharisa Administration Services Limited	Cyprus	12.5%	12.5%
Tharisa Investments (Hong Kong) Limited	Hong Kong	16.5%	16.5%
Arxo Metals Proprietary Limited	South Africa	28.0%	28.0%
Braeston Corporate Consulting Services Proprietary Limited	South Africa	28.0%	28.0%
Dinami Limited	Guernsey	0.0%	0.0%

#### Reconciliation between tax charge and accounting profit/(loss) at applicable tax rates:

	Years ended 30 September	
	<u>2015</u>	<u>2014</u>
	US\$'000	US\$'000
Profit/(loss) before tax	<u>9 632</u>	<u>(40 325)</u>
Notional tax on loss before taxation, calculated at the rates applicable in the jurisdictions concerned	3 695	10 203
Non taxable income	(500)	(556)
Non deductible expenses	1 132	5 138
Recognition of deemed interest income for tax purposes	57	45
Tax losses not recognized for deferred tax purposes	-	288
Special contribution to the defence fund (note (i))	3	1
Deferred tax	<u>(770)</u>	<u>(571)</u>
Tax charge	<u>3 617</u>	<u>14 548</u>

Notes:

(i) Special contribution for defence is provided in Cyprus on certain interest income at the rate of 30%. 100% of such interest income is treated as non taxable in the computation of chargeable income for corporation tax purposes.

(ii) No provision for Chinese income tax was made as Tharisa Fujian Industrial Co. Limited has sustained losses for taxation purposes.

(iii) No provision for Hong Kong profits tax was made as Tharisa Investments (Hong Kong) Limited did not earn any assessable profits.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

### 11. EARNINGS PER SHARE

#### (i) Basic and diluted earnings per share

The calculation of basic and diluted earnings per share has been based on the following profit/(loss) attributable to the ordinary shareholders of the Company and the weighted average number of ordinary shares outstanding.

	Years ended 30 September	
	<u>2015</u>	<u>2014</u>
Profit/(loss) for the year attributable to ordinary shareholders (US\$'000)	<u>4 623</u>	<u>(48 997)</u>
Weighted average number of ordinary shares at 30 September ('000)	<u>255 076</u>	<u>247 879</u>
Basic and diluted earnings per share (US\$ cents)	<u>2</u>	<u>(20)</u>

	Years ended 30 September	
	<u>2015</u>	<u>2014</u>
	Number of	Number of
	shares ('000)	shares ('000)
Weighted average number of ordinary shares at 30 September	<u>255 076</u>	<u>247 879</u>

At 30 September 2014, for the purpose of calculating basic and diluted earnings per share, the weighted average number of ordinary shares used in the above calculations reflects the effect of the bonus issue and the conversion of the redeemable convertible preference shares as if it had occurred at the beginning of the earliest period presented.

At 30 September 2015, LTIP and SARS awards were excluded from the diluted weighted average number of ordinary shares calculation because their effect would have been anti-dilutive. The average market value of the Company's shares for the purposes of calculating the potential dilutive effect of SARS was based on quoted market prices for the year during which the options were outstanding.

#### (ii) Headline and diluted headline earnings per share

The calculation of headline and diluted headline earnings per share has been based on the following headline earnings attributable to the ordinary shareholders and the weighted average number of ordinary shares outstanding.

	Years ended 30 September	
	<u>2015</u>	<u>2014</u>
Headline earnings for the year attributable to the ordinary shareholders (note 11 (iii)) ('000)	<u>4 688</u>	<u>(48 925)</u>
Weighted average number of ordinary shares at 30 September (note 11 (i)) ('000)	<u>255 076</u>	<u>247 879</u>
Headline and diluted headline earnings per share (US\$ cents)	<u>2</u>	<u>(20)</u>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

11. EARNINGS PER SHARE (continued)

(iii) Reconciliation of profit/(loss) to headline earnings

	Years ended 30 September			
		<u>2015</u>		<u>2014</u>
	US\$'000	US\$'000	US\$'000	US\$'000
	Gross	Net	Gross	Net
Profit/(loss) attributable to ordinary shareholders		4 623		(48 997)
Adjustments:				
Impairment losses on goodwill	63	63	72	72
Impairment losses on property, plant and equipment	3	<u>2</u>	-	-
Headline earnings		<u>4 688</u>		<u>(48 925)</u>

12. PROPERTY, PLANT AND EQUIPMENT

	<u>Balance at</u>			<u>Exchange</u>	<u>Balance at</u>
	<u>1 October</u>	<u>Additions</u>	<u>Disposals</u>	<u>differences</u>	<u>30 September</u>
	<u>2014</u>				<u>2015</u>
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
<b>Cost</b>					
Freehold land and buildings	16 798	340	-	(3 368)	13 770
Mining assets and infrastructure	258 988	23 782	(3)	(55 532)	227 235
Leasehold improvements	130	-	-	(17)	113
Computer equipment and software	1 996	249	(3)	(372)	1 870
Motor vehicles	442	155	(4)	(112)	481
Office equipment and furniture, social community and site office improvements	484	65	-	(87)	462
	<u>278 838</u>	<u>24 591</u>	<u>(10)</u>	<u>(59 488)</u>	<u>243 931</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

### 12. PROPERTY, PLANT AND EQUIPMENT (continued)

	<u>Balance at</u> <u>1 October</u> <u>2014</u> US\$'000	<u>Charge for</u> <u>the year</u> US\$'000	<u>Written</u> <u>back on</u> <u>disposals</u> US\$'000	<u>Exchange</u> <u>differences</u> US\$'000	<u>Balance at</u> <u>30 September</u> <u>2015</u> US\$'000
<b>Accumulated depreciation</b>					
Freehold land and buildings	131	116	-	(61)	186
Mining assets and infrastructure	23 850	9 661	-	(5 980)	27 531
Leasehold improvements	100	19	-	(14)	105
Computer equipment and software	992	294	(2)	(177)	1 107
Motor vehicles	117	75	(1)	(34)	157
Office equipment and furniture, social community and site office improvements	292	91	-	(56)	327
	<u>25 482</u>	<u>10 256</u>	<u>(3)</u>	<u>(6 322)</u>	<u>29 413</u>

	<u>Balance at</u> <u>1 October</u> <u>2013</u> US\$'000	<u>Additions</u> US\$'000	<u>Transfers</u> US\$'000	<u>Disposals</u> US\$'000	<u>Exchange</u> <u>differences</u> US\$'000	<u>Balance at</u> <u>30 September</u> <u>2014</u> US\$'000
<b>Cost</b>						
Freehold land and buildings	14 645	1 618	2 295	-	(1 760)	16 798
Mining assets and infrastructure	268 844	22 181	(2 401)	-	(29 636)	258 988
Leasehold improvements	111	2	30	-	(13)	130
Computer equipment and software	1 983	339	(118)	(3)	(205)	1 996
Motor vehicles	280	114	164	(78)	(38)	442
Office equipment and furniture, social community and site office improvements	465	35	30	-	(46)	484
	<u>286 328</u>	<u>24 289</u>	<u>-</u>	<u>(81)</u>	<u>(31 698)</u>	<u>278 838</u>



**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**13. GOODWILL**

**(a) Reconciliation of carrying amount**

	Years ended 30 September	
	<u>2015</u>	<u>2014</u>
	US\$'000	US\$'000
<b>Cost</b>		
Balance at 1 October	1 346	1 502
Effect of movements in exchange rates	<u>(265)</u>	<u>(156)</u>
Balance at 30 September	<u>1 081</u>	<u>1 346</u>
	Years ended 30 September	
	<u>2015</u>	<u>2014</u>
	US\$'000	US\$'000
<b>Accumulated impairment losses</b>		
Balance at 1 October	135	75
Impairment of goodwill	63	72
Effect of movements in exchange rates	<u>(36)</u>	<u>(12)</u>
Balance at 30 September	<u>162</u>	<u>135</u>
<b>Carrying amounts 30 September</b>	<u>919</u>	<u>1 211</u>

**(b) Impairment test for goodwill**

Impairment losses were recognised in relation to goodwill which arose from the acquisition of Arxo Logistics Proprietary Limited and Braeston Corporate Consulting Services Proprietary Limited, as follows:

	Years ended 30 September	
	<u>2015</u>	<u>2014</u>
	US\$'000	US\$'000
Arxo Logistics Proprietary Limited (note 13(b)(i))	48	55
Braeston Corporate Consulting Services Proprietary Limited (note 13(b)(ii))	<u>15</u>	<u>17</u>
<b>Impairment loss</b>	<u>63</u>	<u>72</u>

**(i) Impairment loss on Arxo Logistics Proprietary Limited**

At 30 September 2015, the carrying amount of Arxo Logistics Proprietary Limited CGU exceeded its recoverable amount and thus impairment was recognised to reduce the carrying amount of goodwill. The recoverable amount is determined based on value-in-use calculation. This calculation uses discounted cash flows approved by management.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

### 13. GOODWILL *(continued)*

#### (b) Impairment test for goodwill *(continued)*

##### (ii) Impairment loss on Braeston Corporate Consulting Services Proprietary Limited

At 30 September 2015, the carrying amount of Braeston Corporate Consulting Services Proprietary Limited CGU exceeded its recoverable amount and thus impairment was recognised to reduce the carrying amount of goodwill. The recoverable amount is determined based on value-in-use calculation. This calculation uses discounted cash flows approved by management.

### 14. LONG TERM DEPOSITS

	<u>30 September</u> <u>2015</u>	<u>30 September</u> <u>2014</u>
	US\$'000	US\$'000
Long term deposits	<u>10 656</u>	<u>14 479</u>

As at 30 September 2015 and 30 September 2014, the amounts of US\$10 656 thousand and US\$14 479 thousand respectively were restricted as a security and designated as a “debt service reserve account” as required by the terms of the Common Terms Agreement for the senior debt facility of Tharisa Minerals Proprietary Limited as disclosed within bank borrowings in note 23 of the consolidated financial statements. The amount includes a margin for exchange differences. As at 30 September 2015 and 30 September 2014, long term deposits held by the Company of US\$4 621 thousand and US\$7 389 thousand respectively were deposited in a one month notice account with interest of Nil and 0.01% p.a respectively. As at 30 September 2015 and 30 September 2014, US\$6 035 thousand and US\$7 090 thousand held by Tharisa Minerals Proprietary Limited were deposited in a call account with interest of 5.6% p.a and 2.64% p.a respectively.

### 15. GROUP COMPOSITION

Details of the subsidiaries including direct and indirect holding are disclosed in note 1 of the consolidated financial statements.

The Group holds 100% of the voting rights in all subsidiaries apart from Tharisa Minerals Proprietary Limited.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

15. GROUP COMPOSITION (continued)

The following table summarises the information relating to the Company's subsidiary, Tharisa Minerals Proprietary Limited, that is 74% owned by the Company for the period under review and has material non-controlling interests before any inter-group eliminations:

	<u>2015</u>	<u>2014</u>
	US\$'000	US\$'000
Non-current assets	207 749	249 667
Current assets	46 366	40 571
Borrowings	2 047	2 217
Secured bank borrowing	50 675	81 232
Net assets	(159 567)	(132 998)
Carrying amount of non-controlling interest	<u>(41 487)</u>	<u>(34 397)</u>
Revenue	240 338	226 987
Net profit after tax	(63 141)	(55 766)
Non-controlling interest	<u>(16 417)</u>	<u>(14 499)</u>
Cash flows from operating activities	62 130	26 989
Cash flows from investing activities	(21 505)	(27 209)
Cash flows from financing activities	<u>(23 887)</u>	<u>(2 871)</u>
Net change in cash and cash equivalents	<u>16 738</u>	<u>(3 091)</u>

16. OTHER FINANCIAL ASSETS

	<u>Fair value</u>	<u>30 September</u>	<u>30 September</u>
	<u>hierarchy</u>	<u>2015</u>	<u>2014</u>
		US\$'000	US\$'000
<i>Non-current assets:</i>			
Investments in cash funds and income funds (note 16(a))	Level 2	1 632	4 969
Interest rate caps (note 16(b))	Level 2	<u>4</u>	<u>39</u>
		<u>1 636</u>	<u>5 008</u>
<i>Current assets:</i>			
Investments at fair value through profit or loss (note 16(c))	Level 1	55	86
Discount facility (note 16(d))	Level 2	<u>-</u>	<u>356</u>
		<u>55</u>	<u>442</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

**16. OTHER FINANCIAL ASSETS** *(continued)*

(a) The investments in cash funds and income funds are unsecured and held at fair value through profit or loss (designated) (note 29(e)).

During the year ended 30 September 2014, the investment managed by a collective investment entity namely Stanlib Collective Investments was ceded to Lombard Insurance Group ("Lombard") against the guarantee issued by Lombard to the Department of Minerals Resources ("DMR") for the rehabilitation provision. During the year ended 30 September 2015, a portion of the investment was withdrawn and the remaining balance of the investment totalling US\$960 thousand is ceded to Lombard against the guarantee issued by Lombard on behalf of Arxo Logistics Proprietary Limited to Transnet Freight Rail, a division of Transnet SOC Limited to the value of ZAR12 000 thousand.

Investment in Money Market and Current Accounts totalling US\$672 thousand (2014: US\$Nil) is managed by Guardrisk Insurance Company Limited ("Guardrisk") against the guarantee issued by Guardrisk to the DMR for the rehabilitation provision. The guarantee issued by Guardrisk has a fixed cover period from 1 December 2014 to 30 November 2017.

The underlying investments are in money market and other funds and the fair value has been determined by reference to their quoted prices.

(b) Interest rate caps were obtained from a consortium of financial institutions, against the floating 3 month Johannesburg Interbank Agreed Rate (JIBAR) on 25% of the secured bank borrowing (note 23(a)). The interest rate caps have a strike rate of 7.5% against the current JIBAR rate of 6.31% (2014: 5.83%) and terminate on 31 March 2017. The balance is held at fair value through profit or loss (held for trading) (note 29(e)).

(c) Investments at fair value through profit or loss are valued based on quoted market prices at the end of the reporting period without any deduction for transaction costs (note 29(e)).

(d) Discount facility relates to fair value adjustments on the limited recourse disclosed receivables discounting facility with ABSA, Nedbank and HSBC in terms of which 98% of the sales of platinum, palladium and gold (included in PGM) are discounted at JIBAR (3 month) + 200 basis points. The facility is for an amount of ZAR300 000 thousand. The balance is held at fair value through profit or loss (designated) (note 29(e)).

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**17. INVENTORIES**

	<u>30 September</u> <u>2015</u>	<u>30 September</u> <u>2014</u>
	US\$'000	US\$'000
Finished products	4 283	6 891
Ore stockpile	1 257	1 517
Work in progress	195	3 011
Consumables	<u>3 216</u>	<u>3 148</u>
Total carrying amount	<u><u>8 951</u></u>	<u><u>14 567</u></u>

Inventories are stated at the lower of cost and net realisable value.

Inventories are subject to a general notarial bond in favour of the lenders of the senior debt facility as referred to in note 23(a) of the consolidated financial statements.

In 2015, a provision for obsolescence of US\$106 thousand (2014: US\$Nil) was recognised as an expense and an amount of US\$111 thousand (2014: US\$1 195 thousand) which represents the net realisable value write down for the period included in cost of sales. For the year ended 30 September 2015, inventories of US\$105 thousand were written down to net realisable value (2014:US\$ 2 909 thousand).

**18. TRADE AND OTHER RECEIVABLES**

	<u>30 September</u> <u>2015</u>	<u>30 September</u> <u>2014</u>
	US\$'000	US\$'000
Trade receivables		
- Third parties	32 918	27 679
- Related parties (note 30)	1	55
Deposits, prepayments and other receivables	1 479	2 495
Accrued income	1 432	-
Value added tax recoverable	<u>2 149</u>	<u>2 286</u>
	<u><u>37 979</u></u>	<u><u>32 515</u></u>

Trade and other receivables of the Group are expected to be recoverable within one year from each reporting date.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**18. TRADE AND OTHER RECEIVABLES** *(continued)*

The ageing of trade receivables was as follows:

	<u>30 September</u> <u>2015</u>	<u>30 September</u> <u>2014</u>
	US\$'000	US\$'000
Current	32 800	27 456
Less than 90 days past due but not impaired	46	196
Greater than 90 days past due but not impaired	<u>73</u>	<u>82</u>
	<u><u>32 919</u></u>	<u><u>27 734</u></u>

Trade and other receivables which are less than 90 days past due are not considered to be impaired. Trade and other receivables which are more than 90 days past due are assessed for recoverability with reference to past default experience of the counterparty's current financial position.

At 30 September 2015 an amount of US\$Nil (2014: US\$Nil), of the Group's trade receivables was determined to be impaired. Based on past experience, management believes that no impairment allowance is necessary in respect of the remaining trade and other receivables as there has not been a significant change in credit quality and the balances are still considered fully recoverable. The Group does not hold any collateral over these balances.

The exposure of the Group to credit risk and impairment losses in relation to trade and other receivables is reported in note 29(a) of the consolidated financial statements.

**19. CASH AND CASH EQUIVALENTS**

Cash balances are analysed as follows:

	<u>30 September</u> <u>2015</u>	<u>30 September</u> <u>2014</u>
	US\$'000	US\$'000
Bank balances	24 005	19 370
Call deposits	<u>260</u>	<u>259</u>
	<u><u>24 265</u></u>	<u><u>19 629</u></u>

As at 30 September 2015 and 30 September 2014, an amount of US\$1 605 thousand and US\$1 997 thousand respectively was provided as security for a bank guarantee issued in favour of a trade creditor of the Group, an amount of US\$2 500 thousand and US\$2 500 thousand respectively was placed as security against a credit facility of a subsidiary of the Company (note 23(c)) and US\$327 thousand and US\$327 thousand respectively was provided as security against certain credit facilities of the Group.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

**20. SHARE CAPITAL AND RESERVES**

**(a) Share capital**

At 30 September 2015, the authorised ordinary share capital of the Company consisted of 10 000 000 thousand ordinary shares of US\$0.001 each (2014: 10 000 000 thousand ordinary shares) and 1 051 convertible redeemable preference shares of US\$1 each (2014: 1 051 convertible redeemable preference shares).

During the year ended 30 September 2015, 1 111 thousand ordinary shares were issued and allotted in terms of the Company share award scheme for 2014 which vested with first tranche of the Conditional Awards made on 9 April 2014, as reported in note 6 of the consolidated financial statements.

During the year ended 30 September 2014, the following changes took place:

- Issue of an additional 154 248 thousand ordinary shares as a bonus issue of 25 ordinary shares for each share held.
- Issue of 13 158 thousand new ordinary shares for cash at a price of ZAR38 per share with a par value of US\$0.001 per share.
- Issue of 81 174 thousand new ordinary shares to holders of the convertible redeemable preference shares of the Company on their conversion in terms of the Articles of Association.
- Issue of 32 thousand new ordinary shares as share grants at nil consideration awarded to the Group's management and staff.

The issued and fully paid share capital of the Company as at 30 September 2015 consisted of 255 892 thousand ordinary shares of US\$0.001 each (2014: 254 781 thousand ordinary shares of US\$0.001 each).

All shares rank equally with regard to the Company's residual assets. The holders of ordinary shares are entitled to receive dividends as declared from time to time and are entitled to one vote per share at meetings of the Company.

**(b) Nature and purpose of reserves**

*(i) Share premium*

The share premium reserve represents the excess of the issuance price of ordinary shares over their nominal value, to the extent that it is registered at the Registrar of Companies in Cyprus. The share premium reserve is not distributable for dividend purposes.

During the year ended 30 September 2015, an amount of US\$149 thousand resulting from the issue and allotment of 1 111 thousand shares, was recognised as an increase in the share premium account. During the year ended 30 September 2014, the Company issued new ordinary shares following its listing on the JSE. Share issue expenses totalling US\$1 416 thousand have been recognised as a deduction from the share premium account.

**20. SHARE CAPITAL AND RESERVES** *(continued)*

*(ii) Other reserve*

Other reserve represents the excess of the issuance price of the Company's ordinary shares over the sum of their nominal value and share premium arising from such issuance, as registered with the Registrar of Companies in Cyprus.

*(iii) Foreign currency translation reserve*

The foreign currency translation reserve comprises all foreign currency differences arising from the translation of the financial statements of foreign operations.

*(iv) Revenue reserve*

The revenue reserve includes the accumulated retained profit and losses of the Group. The revenue reserve is distributable for dividend purposes.

**(c) Capital management**

The Group's target is to maintain a strong capital base so as to maintain investor, creditor and market confidence and to sustain future development of the business in a way that optimises the cost of capital and matches the current strategic business plan. The Board of Directors monitors both the demographic spread of shareholders, as well as the return on capital. Capital is defined as total shareholders' equity, excluding non-controlling interests. Management is aware of the risks associated to capital management. Capital needs are monitored on a regular basis and whenever needed management takes steps in an attempt to effectively manage any corresponding risks.

**(d) Non-controlling interests**

During the year ended 30 September 2015, the Company reassessed its interpretation and application of IFRS 10: *Consolidated Financial Statements*. Consequently the treatment of intergroup funding transactions on a consolidated level and the impact of these transactions on the non-controlling interests were reconsidered. This resulted in a reclassification from non-controlling interest to the revenue reserves.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**21. PROVISIONS**

	Years ended 30 September	
	<u>2015</u>	<u>2014</u>
	US\$'000	US\$'000
<b>Provision for rehabilitation</b>		
Balance at 1 October	4 452	4 738
Capitalised to inventories	413	(137)
Capitalised to mining assets and infrastructure	(186)	2
Recognised in profit or loss	375	355
Exchange differences	<u>(966)</u>	<u>(506)</u>
Balance at 30 September	<u>4 088</u>	<u>4 452</u>

As detailed in note 3(q) of the consolidated financial statements, the Group has a legal obligation to rehabilitate the site where the Group's mine is located, once the mining operations cease.

An insurance company has provided a guarantee to the Department of Mineral Resources to satisfy the requirements of the Mineral and Petroleum Resources Development Act with respect to environmental rehabilitation and the Group has pledged as collateral its investments in interest-bearing debt instruments to the insurance company to support this guarantee (note 16(a)).

The current estimated rehabilitation cost to be incurred mostly at the end of the life of mine taking escalation factors into account is US\$8 994 thousand (ZAR126 138 thousand) (2014: US\$9 917 thousand (ZAR111 683 thousand)).

The interest rate used for estimating future costs is the long-term risk free rate as indicated by the R186 government bond of South Africa, which was 8.45% and 8.33% as at 30 September 2015 and 2014, respectively at the time of the calculations. The net present value of the current rehabilitation estimate is based on the average of the long-term inflation target range of the South African Reserve Bank of 4.5% (2014: 4.5%).

The Group expects that the timing of outflows relating to the provision for rehabilitation is uncertain at this stage but it estimates that it will probably take place at the end of the life of the mine and infrastructure which is currently estimated to be 21 years.

**22. DEFERRED TAX**

Deferred tax balances are analysed as follows:

	<u>30 September</u>	<u>30 September</u>
	<u>2015</u>	<u>2014</u>
	US\$'000	US\$'000
Deferred tax assets	1 954	5 970
Deferred tax liabilities	<u>(13)</u>	<u>(20)</u>
	<u>1 941</u>	<u>5 950</u>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

22. DEFERRED TAX (continued)

	Years ended 30 September	
	<u>2015</u>	<u>2014</u>
	US\$'000	US\$'000
<b>Recognised deferred tax assets/(liabilities)</b>		
Balance at 1 October	<u>5 950</u>	<u>20 623</u>
Temporary differences recognised in profit or loss in relation to:		
- Capital allowances on property, plant and equipment	2 380	122
- Provisions	168	81
- Tax losses	(956)	3 548
- Others	<u>(3 311)</u>	<u>(17 233)</u>
	<u>(1 719)</u>	<u>(13 482)</u>
Exchange difference	(2 290)	(1 191)
Balance at 30 September	<u>1 941</u>	<u>5 950</u>

In the prior year, the Group derecognised a portion of the deferred tax asset relating to exchange losses on the inter group preference share funding arrangements due to the cash flow projections in the prior year which indicated that the earliest redemption date of the preference shares was unlikely to be in the near term. The determination of the deductibility of the exchange losses on the preference shares will only be finally determined on the redemption of the preference shares and in the light of this uncertainty, management have decided to treat these differences as non deductible until such time as the preference share liability is settled and the final determination on the deductibility of the realised losses at that date have been determined.

In assessing the recoverability of the deferred tax recognised, management is satisfied that the subsidiary in South Africa that substantially all the deferred tax assets relate to, will generate sufficient taxable income against which the recognised deferred tax asset on the tax losses and deductive temporary differences can be utilised.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

**23. BORROWINGS**

	<u>30 September</u> <u>2015</u> US\$'000	<u>30 September</u> <u>2014</u> US\$'000
<i>Non-current:</i>		
Secured bank borrowing (note 23(a))	36 329	63 333
Other borrowings - loan payable to third party (note 23(b))	-	890
	<u>36 329</u>	<u>64 223</u>
<i>Current:</i>		
Secured bank borrowing (note 23(a))	14 346	17 899
Other borrowings - loan payable to third party (note 23(b))	-	1 095
Other borrowings - bank credit and other facility (note 23(c))	17 298	9 775
Other borrowings - obligations under new loan (note 23(d))	164	-
Other borrowings - loan payable to related party (note 30)	1 884	2 217
	<u>33 692</u>	<u>30 986</u>

(a) During the year ended 30 September 2012 the Group obtained financing of ZAR1 billion from a consortium of banks in South Africa, to finance the expansion projects of its mining activities. The financing is for a period of 7 years and is repayable in 22 equal quarterly instalments, with the first repayment date at 31 December 2013. The financing was obtained by Tharisa Minerals Proprietary Limited, a subsidiary of the Group.

Repayments are subject to a cash sweep which will reduce the repayment period to a minimum of five years. Tharisa Minerals Proprietary Limited is required to maintain funds in a debt service reserve account, refer to note 14, and may utilize funds in this account, with the prior written consent of the lenders for the purpose of making a repayment in the event that Tharisa Minerals Proprietary Limited does not have the necessary funds available to make the debt repayment. The financing bears interest at 3 month JIBAR + 4.9% per annum. The financing is secured by the assets of the subsidiary and by the shares of the Company in the subsidiary and is also guaranteed by the Company.

The loan contains the following financial covenants:

- Debt service cover ratio ("DSCR") at a level greater than 1.4 times
- Loan life cover ratio at a level greater than 1.6 times
- Debt/equity ratio at a level greater than 1.5 times
- Reserve tail ratio at a level of 30% or greater.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

### 23. BORROWINGS (continued)

As at 30 September 2015 Tharisa Minerals Proprietary Limited complied with all covenant ratios. As at 30 September 2014, Tharisa Minerals Proprietary Limited complied with all covenant ratios, except for the historic DSCR which was calculated as -0.36. The historic DSCR is calculated as the cash flow available for repayment divided by the actual repayment for the six month period preceding the covenant measurement date. The lenders granted a waiver on the requirement as at 30 September 2014. Repayment terms were not renegotiated but the interest rate was increased by 1% to JIBAR + 4.9% prior to technical completion. The technical completion date was extended to 28 November 2016 as disclosed in note 35 of the consolidated financial statements. The company hedges a portion of the facility for interest rate risk via an interest rate cap.

(b) During the year ended 30 September 2012 a subsidiary of the Group obtained a credit facility of ZAR35 000 thousand from a third party. The facility was payable in 36 equal monthly instalments commencing 7 months after the first draw down. Interest on the facility utilized as at the prevailing South African prime interest rate. The financing was obtained by Arxo Metals Proprietary Limited, a subsidiary of the Group, and was secured by the assets of the subsidiary. The loan was repaid in full during the current reporting period.

(c) During the year ended 30 September 2013 the Group obtained a US\$12 500 thousand bank credit facility that allows the Group to receive a percentage of trade receivables on receipt of an acceptable letter of credit which results in shortening of the customer credit period. This facility has a tenor of 60 days and is secured by cash and cash equivalents of the Group of US\$2 500 thousand and is also guaranteed by the Company. The other facility relates to the discounting of the letters of credits by the Group's banks following performance of the letter of credit conditions by the Group which results in funds being received in advance of the normal payment date. Interest on these facilities ranges from US Libor + 1.5% to 2.5%.

(d) During the year ended 30 September 2015, Tharisa Minerals Proprietary Limited obtained a new loan for the amount of ZAR13 340 thousand repayable in twelve monthly instalments commencing 1 December 2014. The loan is guaranteed by the Company for an amount of ZAR14 000 thousand and bears interest at a rate of 7.92% p.a.

### 24. OTHER FINANCIAL LIABILITIES

	<u>Fair value hierarchy</u>	<u>30 September 2015</u>	<u>30 September 2014</u>
		US\$'000	US\$'000
Discount facility	Level 2	<u>388</u>	<u>-</u>

Discount facility relates to fair value adjustments on the limited recourse disclosed receivables discounting facility ("discount facility") with ABSA, Nedbank and HSBC in terms of which 98% of the sales of platinum, palladium and gold (included in PGM) are discounted at JIBAR (3 month) + 200 basis points. The discount facility is for an amount of ZAR300 000 thousand. The balance is held at fair value through profit or loss (designated) (note 29(e)).

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**25. CURRENT TAXATION**

Current taxation in the statement of financial position represents:

	<u>30 September</u> <u>2015</u>	<u>30 September</u> <u>2014</u>
	US\$'000	US\$'000
Corporate income tax recoverable (note 25(a))	<u>144</u>	<u>3</u>
Corporate income tax payable (note 25(b))	97	421
Special contribution to the defence fund (note 25(b))	<u>1</u>	<u>-</u>
	<u>9</u>	<u>42</u>

(a) The above amounts are provided in Cyprus.

(b) The above amounts are provided in Cyprus and South Africa.

**26. TRADE AND OTHER PAYABLES**

	<u>30 September</u> <u>2015</u>	<u>30 September</u> <u>2014</u>
	US\$'000	US\$'000
Trade payables - third parties	20 743	10 366
Amount due to related parties (note 30)	110	108
Other payables	1 111	466
Accruals	11 062	15 524
Leave pay provision	1 445	1 700
Operating lease payable	19	9
Interest bearing - accrued dividends	4 568	5 433
Value added tax payable	115	209
Income received in advance	<u>8 348</u>	<u>3 409</u>
	<u>47 521</u>	<u>37 224</u>

Dividends accrued bear interest at South African prime interest rate + 2% and are repayable quarterly.

The above amounts are payable within one year from the reporting period.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**27. PARTICIPATION OF DIRECTORS IN THE COMPANY'S SHARE CAPITAL**

The percentage of share capital of the Company held directly or indirectly by each member of the Board of Directors, as at 30 September 2015 and 30 September 2014 were as follows:

	<u>30 September</u> <u>2015</u>	<u>30 September</u> <u>2014</u>
	%	%
Loucas Pouroulis	0.02	-
Phoevos Pouroulis	2.72	2.62
Michael Jones	0.02	-
Omar Kamal	<u>0.12</u>	<u>0.12</u>
Total	<u>2.88</u>	<u>2.74</u>

Where a member of the Board of Directors holds no direct or indirect interest, the director is not reflected in the table above.

Omar Kamal's interest in the shares of the Company represent shares that are indirectly owned by one of Omar Kamal's parents.

There has been no change in the Directors' interests in the share capital of the Company between the end of the financial year and the date of the approval of the consolidated financial statements.

**28. ANALYSIS OF SHAREHOLDERS**

The shareholders holding directly or indirectly more than 5% of the share capital and their respective number of shares as at 30 September 2015 and 30 September 2014 are as follows:

		<u>30 September</u> <u>2015</u>		<u>30 September</u> <u>2014</u>
	No of shares	%	No of shares	%
Medway Developments Limited	119 030 073	46.52	119 030 073	46.72
LCC Pershing	40 548 241	15.85	40 548 241	15.91
Fujian Wuhang Stainless Steel Products Co. Limited	28 070 211	10.97	28 070 211	11.02
Maaden Invest Limited	<u>14 985 577</u>	<u>5.86</u>	<u>14 985 577</u>	<u>5.88</u>

There has been no significant change in the shareholders holding more than 5% of the share capital of the Company between the end of the financial year and the date of the approval of the consolidated financial statements.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**28. ANALYSIS OF SHAREHOLDERS** *(continued)*

An analysis of the public and non-public shareholders of the Company as at 30 September 2015 and 30 September 2014 are as follows:

<b>2015</b>	<u>Number of shareholders</u>	<u>Number of shares</u>	<u>% of issued share capital</u>
Public	660	61 034 745	23.85
Non-public:			
- Directors and associates of the Company and its subsidiaries	16	7 208 616	2.82
- Persons interested (other than directors), directly or indirectly, in 10% or more	<u>3</u>	<u>187 648 525</u>	<u>73.33</u>
	<u>679</u>	<u>255 891 886</u>	<u>100.00</u>

<b>2014</b>	<u>Number of shareholders</u>	<u>Number of shares</u>	<u>% of issued share capital</u>
Public	110	60 159 025	23.61
Non-public:			
- Directors and associates of the Company and its subsidiaries	2	6 973 096	2.74
- Persons interested (other than directors), directly or indirectly, in 10% or more	<u>3</u>	<u>187 648 525</u>	<u>73.65</u>
	<u>115</u>	<u>254 780 646</u>	<u>100.00</u>

**29. FINANCIAL RISK MANAGEMENT**

In the ordinary course of business the Group is exposed to credit risk, liquidity risk, and market risk. This note presents information about the Group's exposure to each of the above risks and its objectives, policies and processes for measuring and managing risks. Further quantitative disclosures are included throughout this note.

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

The Board of Directors has overall responsibility for the establishment and oversight of the Group's risk management framework.

For the year ended 30 September 2015

**29. FINANCIAL RISK MANAGEMENT** *(continued)*

**(a) Credit risk**

Credit risk is the risk of financial loss to the Group if a customer or a counterparty to a financial instrument fails to meet its contractual obligations and arises principally from the Group's trade and other receivables and cash and cash equivalents and long term deposits.

*Trade and other receivables*

The Group's exposure to credit risk is influenced mainly by the individual characteristics of each customer. However, management also considers the demographics of the Group's customer base, including the default risk of the industry and country, in which customers operate, as these factors may have an influence on credit risk. In monitoring customer credit risk, management reviews on a regular basis the ageing of trade and other receivables to obtain comfort that there are no past due amounts.

The Group establishes an allowance for credit losses that represents its estimate of incurred losses in respect of trade and other receivables. The main component of this allowance is a specific loss component that relates to individually significant exposures. As at 30 September 2015 and 30 September 2014, none of the carrying amounts of trade and other receivables is either past due or impaired, for which an allowance for credit losses is necessary. Receivables that were neither past due nor impaired relate to customers for whom there was no recent history of default and who have a good track record with the Group.

The allowance for credit losses in respect of trade and other receivables is used to record credit losses unless management is satisfied that no recovery of the amount owing is possible and at that point the amount considered irrecoverable is written off against the financial asset directly.

The most significant exposure of the Group to credit risk is represented by the carrying amount of trade receivables. The Board of Directors performs regular ageing reviews of trade receivables to identify any doubtful balances. Based on the review performed for the reporting period, the Board of Directors concluded that no additional allowance for credit losses is necessary in respect of trade receivables. 35% and 41% of the trade receivables were due from the Group's largest customer as at 30 September 2015 and 30 September 2014, respectively.

*Cash and cash equivalents and long term deposits:*

The Group limits its exposures on cash and cash equivalents and long term deposits by dealing only with well-established financial institutions of high quality credit standing. The majority of the Group's cash resources were deposited with HSBC based in Hong Kong and South Africa.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**29. FINANCIAL RISK MANAGEMENT** *(continued)*

**(a) Credit risk** *(continued)*

The maximum exposure to credit risk at the reporting date of the consolidated financial statements was:

	<u>30 September</u> <u>2015</u>	<u>30 September</u> <u>2014</u>
	US\$'000	US\$'000
Trade and other receivables	37 979	32 515
Cash and cash equivalents	24 265	19 629
Long term deposits	<u>10 656</u>	<u>14 479</u>
	<u>72 900</u>	<u>66 623</u>

**(b) Liquidity risk**

Liquidity risk is the risk that the Group will encounter difficulties in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation. Management is aware of the above risk. Liquidity risk is monitored on a regular basis and management is taking steps deemed necessary in an attempt to manage the corresponding risk. This excludes the potential impact of extreme circumstances that cannot reasonably be predicted, such as natural disasters. In addition, financial risk management may not be possible for instances where weakened commodity prices persist, forecast production not being achieved and further funding is not raised as discussed in note 2(d) of the consolidated financial statements, which circumstances may create a material uncertainty in relation to the going concern of the Group.

The following table shows the remaining contractual maturities of the Group's financial liabilities at the end of the reporting period, which are based on contractual undiscounted cash flows (including interest payments computed using contractual rates or, if floating, based on rates current at the end of the reporting period) and the earliest date the Group can be required to pay:

**30 September 2015**

	<u>Contractual undiscounted cash outflow</u>				Total US\$'000	Carrying amount US\$'000
	Within 1 year or on demand US\$'000	More than 1 year but less than 2 years US\$'000	More than 2 years but less than 5 years US\$'000	More than 5 years US\$'000		
Borrowings	39 060	18 078	24 198	-	81 336	70 021
Trade and other payables	<u>47 521</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>47 521</u>	<u>47 521</u>
	<u>86 581</u>	<u>18 078</u>	<u>24 198</u>	<u>-</u>	<u>128 857</u>	<u>117 542</u>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**29. FINANCIAL RISK MANAGEMENT** *(continued)*

**(b) Liquidity risk** *(continued)*

**30 September 2014**

	Contractual undiscounted cash outflow					Carrying amount US\$'000
	Within 1 year or on demand US\$'000	More than 1 year but less than 2 years US\$'000	More than 2 years but less than 5 years US\$'000	More than 5 years US\$'000	Total US\$'000	
Borrowings	39 851	25 437	52 647	-	117 935	95 209
Trade and other payables	<u>37 224</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>37 224</u>	<u>37 224</u>
	<u>77 075</u>	<u>25 437</u>	<u>52 647</u>	<u>-</u>	<u>155 159</u>	<u>132 433</u>

**(c) Market risk**

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates, will affect the Group's income and the values of its financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return.

*(i) Currency risk*

Currency risk is the risk that the value of financial instruments will fluctuate due to changes in foreign exchange rates. Currency risk arises when future commercial transactions and recognised assets and liabilities are denominated in a currency that is not the Group's functional currency.

The Group is exposed to currency risk on transactions that are denominated in a currency other than the respective functional currency of the Group entities. These currency risk exposures arise primarily from exchange rate movements in ZAR, Euro (€), British Sterling (STG) and US\$.

Management is aware of the above risk. Currency risk arising from currency fluctuations is monitored on a regular basis and management is taking steps deemed necessary in an attempt to manage the corresponding risk. Financial risk management may not be possible for instances where weakened commodity prices persist, forecast production not being achieved and further funding is not raised, as discussed in note 2(d) to the consolidated financial statements, which circumstances may create a material uncertainty in relation to the going concern of the Group.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

**29. FINANCIAL RISK MANAGEMENT** *(continued)*

(c) **Market risk** *(continued)*

(i) *Currency risk (continued)*

The following table details the Group's exposure at the end of each reporting period to currency risk arising from recognised assets and liabilities denominated in a currency other than the functional currency of the entity to which they relate. Exposures in US\$ relate to recognized assets and liabilities denominated in US\$ of entities of the Group that have a functional currency other than US\$. For presentation purposes, the amounts of the exposure are shown in US\$, translated using the spot rate at the reporting date. The spot rates used at the reporting date against the US\$ are a) US\$:ZAR, 14.03 (2014: 11.26); b) US\$:EUR, 0.89 (2014: 0.79) and c) US\$:STG, 0.66 (2014: 0.62). Differences resulting from the translation of the financial statements of foreign operations into the Group's presentation currency are excluded.

At the reporting date the Group's exposure to currency risk was as follows:

Amounts in US\$'000	<u>30 September 2015</u>				<u>30 September 2014</u>			
	US\$	ZAR	€	STG	US\$	ZAR	€	STG
Other financial assets	-	-	55	-	-	-	86	-
Trade and other receivables	753	5	108	2	-	12	91	-
Cash and cash equivalents	11 994	14	27	4	4 226	2 726	67	2
Trade and other payables	(1 314)	(119)	(323)	(14)	-	(35)	(355)	(1)
Current taxation	-	-	38	-	-	-	(371)	-
	<u>11 433</u>	<u>(100)</u>	<u>(95)</u>	<u>(8)</u>	<u>4 226</u>	<u>2 703</u>	<u>(482)</u>	<u>1</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

### 29. FINANCIAL RISK MANAGEMENT *(continued)*

#### (c) Market risk *(continued)*

##### (i) Currency risk *(continued)*

A 10% strengthening of the US\$ against the above currencies at the reporting date would have changed profits/(losses) and equity by the amounts shown below. This analysis assumes that all other variables, and in particular interest rates, remain constant. The analysis has been performed on the same basis for each reporting date.

	<u>30 September</u> <u>2015</u>	<u>30 September</u> <u>2014</u>
	<u>Increase/(decrease)</u> <u>in profit for the year</u> <u>and accumulated</u> <u>losses</u>	<u>(Decrease)/increase</u> <u>in loss for the year</u> <u>and accumulated</u> <u>losses</u>
	US\$'000	US\$'000
ZAR	9	(246)
€	9	44
US\$	(748)	(488)
STG	1	-

A 10% weakening of the US\$ against the above currencies at each reporting date would have had an equal but opposite effect to the amounts shown above, on the basis that all other variables remain constant.

##### (ii) Interest rate risk

Interest rate risk is the Group's exposure to adverse movements in interest rates. It arises as a result of timing differences on the repricing of assets and liabilities. Management is aware of the above risk. Interest rate risk is monitored on a regular basis and management is taking steps deemed necessary in an attempt to manage the corresponding risk.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

**29. FINANCIAL RISK MANAGEMENT** *(continued)*

(c) **Market risk** *(continued)*

(ii) *Interest rate risk (continued)*

As at the reporting date, the interest rate profile of the Group was as follows :

	<u>30 September</u> <u>2015</u> %	<u>30 September</u> <u>2014</u> %	<u>30 September</u> <u>2015</u> US\$'000	<u>30 September</u> <u>2014</u> US\$'000
<b>Variable rate financial assets</b>				
Investments in cash funds and income funds	3.5%	3.5%	1 632	4 969
Cash and cash equivalents	5.5%-5.7%	4.6%-5.3%	<u>18 525</u>	<u>7 828</u>
			<u>20 157</u>	<u>12 797</u>
<b>Variable rate financial liabilities</b>				
Secured bank borrowing	JIBAR + 4.9%	JIBAR + 3.9%	50 675	81 232
Other borrowings - loan payable to third party	ZAR prime	ZAR prime	-	1 985
Other borrowings - bank credit and other facility	US libor +1.5% -2.5%	US libor +1.5% -2.5%	17 298	9 775
Other borrowings - loans payable to related parties	ZAR prime + 2%	ZAR prime + 2%	1 884	2 217
Interest bearing - accrued dividends	ZAR prime + 2%	ZAR prime + 2%	4 568	5 433
Other borrowings - obligation under new loan	7.92%		<u>164</u>	<u>-</u>
			<u>74 589</u>	<u>100 642</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

### 29. FINANCIAL RISK MANAGEMENT *(continued)*

#### (c) Market risk *(continued)*

##### (ii) Interest rate risk *(continued)*

A change of 100 basis points in interest rates at each reporting date would have changed profits/(losses) and equity by the amounts shown below. This analysis assumes that all other variables, and in particular foreign currency rates, remain constant. The analysis has been performed on the same basis for each reporting date.

	<u>30 September</u> <u>2015</u>	<u>30 September</u> <u>2014</u>
	<u>Increase/(decrease)</u> <u>in profit for the year</u> <u>and accumulated</u>	<u>Increase/(decrease)</u> <u>in loss for the year</u> <u>and accumulated</u>
	<u>losses</u>	<u>losses</u>
	US\$'000	US\$'000
Investments in cash funds and income funds	12	36
Cash and cash equivalents	133	64
Secured bank borrowing	(365)	(585)
Other borrowings - loan payable to third party	-	(14)
Other borrowings - bank credit and other facility	(151)	(86)
Other borrowings - loans payable to related parties	(14)	(16)
Interest bearing - accrued dividends	(33)	(39)
Other borrowings - obligations under new loan	(1)	-
	<u>(419)</u>	<u>(640)</u>

A decrease of 100 basis points in interest rates at each reporting date would have had an equal but opposite effect to the amounts shown above, on the basis that all other variables remain constant.

#### (d) Fair values

The Board of Directors considers that the fair values of significant financial assets and financial liabilities approximate to their carrying values at each reporting date.

*Financial instruments carried at fair value:*

The following table presents the carrying values of financial instruments measured at fair value at the end of each reporting period across the three levels of the fair value hierarchy defined in IFRS 13, *Fair Value Measurement*, with the fair value of each financial instrument categorised in its entirety based on the lowest level of input that is significant to that fair value measurement.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**29. FINANCIAL RISK MANAGEMENT** *(continued)*

**(d) Fair values** *(continued)*

The levels are defined as follows:

- Level 1 (highest level): fair values measured using quoted prices (unadjusted) in active markets for identical financial instruments
- Level 2: fair values measured using quoted prices in active markets for similar financial instruments, or using valuation methodologies in which all significant inputs are directly or indirectly based on observable market data
- Level 3: fair values measured using valuation methodologies in which any significant inputs are not based on observable market data.

**30 September 2015**

	Level 1 US\$'000	Level 2 US\$'000	Level 3 US\$'000
Financial assets			
– Investments in cash funds and income funds	-	1 632	-
– Interest rate caps	-	4	-
– Investments at fair value through profit or loss	55	-	-
	<u>55</u>	<u>1 636</u>	<u>-</u>
Financial liabilities			
– Obligations under new loan	-	164	-
– Discount facility	-	388	-
	<u>-</u>	<u>552</u>	<u>-</u>

**30 September 2014**

	Level 1 US\$'000	Level 2 US\$'000	Level 3 US\$'000
Financial assets			
– Investments in cash funds and income funds	-	4 969	-
– Interest rate caps	-	39	-
– Investments at fair value through profit or loss	86	-	-
– Discount facility	-	356	-
	<u>86</u>	<u>5 364</u>	<u>-</u>
Financial liabilities			
– Obligations under new loan	-	-	-
– Discount facility	-	-	-
	<u>-</u>	<u>-</u>	<u>-</u>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

**29. FINANCIAL RISK MANAGEMENT** *(continued)*

**(d) Fair values** *(continued)*

The movement during the years ended 30 September 2015 and 2014 in the balance of Level 3 fair value measurements is as follows:

	Years ended 30 September	
	<u>2015</u>	<u>2014</u>
	US\$'000	US\$'000
<i>Convertible redeemable preference shares</i>		
Balance at 1 October	-	260 291
Changes in fair value of financial liabilities at fair value through profit or loss	-	32 420
Conversion of redeemable convertible preference shares into ordinary shares	-	<u>(292 711)</u>
Balance at 30 September	<u>-</u>	<u>-</u>
Total gains or losses for the year included in profit or loss	<u>-</u>	<u>32 420</u>

**(e) Estimation of fair values**

The following summarises the major methods and assumptions used in estimating the fair values of financial instruments.

*(i) Investments in cash funds and income funds, investments at fair value through profit or loss, forward exchange contracts and interest rate caps*

Fair values are based on quoted market prices at the end of the reporting period without any deduction for transaction costs.

*(ii) Discount facility*

The fair values are calculated by multiplying the actual metal quantities per discounted invoice with the difference between the hedged metal price per discounted invoice and the average spot metal price translated to ZAR using the average monthly rate.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**29. FINANCIAL RISK MANAGEMENT** *(continued)*

**(e) Estimation of fair values** *(continued)*

*(iii) Convertible redeemable preference shares*

On 10 April 2014, following the Company's listing on the JSE, the convertible redeemable preference shares were converted into fully paid ordinary shares as disclosed in note 8 of the consolidated financial statements. Prior to their conversion, the Company's convertible redeemable preference shares were categorised as level 3. As at 30 September 2014, changes in fair values of the convertible redeemable preference shares of US\$32 420 thousand measured before their conversion, was determined using the probability weighted expected return method, which values the financial liability based on the likelihood and expected settlement values of the respective expected settlement scenarios, discounted to their present value at the valuation date.

**30. RELATED PARTY TRANSACTIONS**

The balances with related parties at each reporting date were as follows:

	<u>30 September</u> <u>2015</u> US\$'000	<u>30 September</u> <u>2014</u> US\$'000
<b>Trade and other receivables (note 18)</b>		
Kameni Management Services Proprietary Limited	-	17
Salene Mining Proprietary Limited	-	9
Kameni Proprietary Limited	-	22
Keaton Administrative and Technical Services Proprietary Limited	<u>1</u>	<u>7</u>
	<u>1</u>	<u>55</u>
<b>Loans payable to related parties (note 23)</b>		
Langa Trust	<u>1 884</u>	<u>2 217</u>

Loan funding provided by Langa Trust has been subordinated in favour of the lenders of the senior debt facility and may only be repaid either out of additional equity invested into the subsidiary or from the cash flow waterfall as provided for in the financing agreements. The loan has no fixed repayment date and bears interest at South African prime interest rate + 2%.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**30. RELATED PARTY TRANSACTIONS (continued)**

	<u>30 September</u> <u>2015</u> US\$'000	<u>30 September</u> <u>2014</u> US\$'000
<b>Amounts due to related parties (note 26)</b>		
Kameni Management Services Proprietary Limited	-	2
Antonios Djakouris	23	32
David Salter	42	37
Ioannis Drapaniotis	21	26
Omar Kamal	14	11
Brian Chi Ming Cheng	<u>10</u>	<u>-</u>
	<u>110</u>	<u>108</u>

The above amounts are unsecured, interest free and with no fixed repayment dates.

	Years ended 30 September	
	<u>2015</u> US\$'000	<u>2014</u> US\$'000
<b>Interest bearing - accrued dividends to related parties</b>		
Arti Trust	2 396	2 849
Ditodi Trust	204	243
Makhaye Trust	204	243
The Phax Trust	408	485
The Rowad Trust	204	243
Moira June Jacquet-Briner	<u>204</u>	<u>243</u>
	<u>3 620</u>	<u>4 306</u>

Significant transactions carried at arm's length with related parties during the year were as follows:

	Years ended 30 September	
	<u>2015</u> US\$'000	<u>2014</u> US\$'000
<b>Interest expense</b>		
Langa Trust	245	285
Arti Trust	286	515
Ditodi Trust	24	44
Makhaye Trust	24	44
The Phax Trust	49	88
The Rowad Trust	24	44
Moira June Jacquet-Briner	<u>24</u>	<u>44</u>
	<u>676</u>	<u>1 064</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

### 30. RELATED PARTY TRANSACTIONS *(continued)*

Compensation to key management of the Company for the year ended 30 September 2015 and 2014 are set out in the tables below:

#### 2015 Compensation to key management

	Salary and fees US\$'000	Expense allowances US\$'000	Provident fund and risk benefits US\$'000	Share based payments US\$'000	Total US\$'000
Non-Executive Directors' remuneration	504	-	-	-	504
Executive Directors' remuneration	1 230	10	83	73	1 396
Other key management remuneration	817	32	109	42	1 000
<b>Total</b>	<b>2 551</b>	<b>42</b>	<b>192</b>	<b>115</b>	<b>2 900</b>

#### 2014 Compensation to key management

	Salary and fees US\$'000	Expense allowances US\$'000	Provident fund and risk benefits US\$'000	Share based payments US\$'000	Total US\$'000
Non-Executive Directors' remuneration	598	-	-	-	598
Executive Directors' remuneration	1 384	12	102	-	1 498
Other key management remuneration	1 007	-	125	3	1 135
<b>Total</b>	<b>2 989</b>	<b>12</b>	<b>227</b>	<b>3</b>	<b>3 231</b>

Share based awards to the Directors are disclosed in note 9 of the consolidated financial statements. Awards to the other key management in the period under review are as follows:

2015	<u>Opening</u>				
Ordinary shares	<u>balance</u>	<u>Allocated</u>	<u>Vested</u>	<u>Forfeited</u>	<u>Total</u>
LTIP	239 841	474 701	(79 946)	(158 234)	476 362
2014	<u>Opening</u>				
Ordinary shares	<u>balance</u>	<u>Allocated</u>	<u>Vested</u>	<u>Forfeited</u>	<u>Total</u>
LTIP	-	239 841	-	-	239 841

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**30. RELATED PARTY TRANSACTIONS (continued)**

**SARS**

2015	<u>Opening</u>				
Ordinary shares	<u>balance</u>	<u>Allocated</u>	<u>Vested</u>	<u>Forfeited</u>	<u>Total</u>
SARS	165 946	333 310	(82 973)	(166 655)	249 628
2014	<u>Opening</u>				
Ordinary shares	<u>balance</u>	<u>Allocated</u>	<u>Vested</u>	<u>Forfeited</u>	<u>Total</u>
SARS	-	165 946	-	-	165 946

Details of the conditions of the share awards are disclosed in note 6 of the consolidated financial statements.

***Relationships between parties:***

***Kameni Management Services Proprietary Limited (“Kameni”)***

A director of the holding company of Kameni is also a director of Tharisa Minerals Proprietary Limited and of the Company. In addition, a director of the holding company of Kameni is also a director of the Company.

***Kameni Proprietary Limited***

A director of Kameni Proprietary Limited is also a director of Tharisa Minerals Proprietary Limited and of the Company. In addition a director of Kameni Proprietary Limited is also a director of the Company.

***Salene Mining Proprietary Limited***

A director of Salene Mining Proprietary Limited is also a director of Tharisa Minerals Proprietary Limited and the Company. In addition a director of Salene Mining Proprietary Limited is also a director of the Company.

***Keaton Administrative and Technical Services Proprietary Limited (“Keaton”)***

Two of the directors of the holding company of Keaton are also directors of Tharisa Minerals Proprietary Limited and the Company.

***Langa Trust***

One of the directors of the Company who is also a director of Tharisa Minerals Proprietary Limited is a beneficiary of this trust.

**30. RELATED PARTY TRANSACTIONS** *(continued)*

***Arti Trust***

One of the directors of the Company who is also a director of Tharisa Minerals Proprietary Limited is a beneficiary of this trust.

***Ditodi Trust***

The non-controlling interest of Tharisa Minerals Proprietary Limited is a beneficiary of this trust.

***Makhaye Trust***

The non-controlling interest of Tharisa Minerals Proprietary Limited is a beneficiary of this trust.

***The Phax Trust***

One of the directors of the Company who is also a director of Tharisa Minerals Proprietary Limited is a beneficiary of this trust.

***The Rowad Trust***

One of the directors of the Company who is also a director of Tharisa Minerals Proprietary Limited is a beneficiary of this trust.

***Moira June Jacquet-Briner***

Moira June Jacquet-Briner is a director of Tharisa Minerals Proprietary Limited and is a shareholder in the non-controlling interest of Tharisa Minerals Proprietary Limited.

***Fujian Wuhang Stainless Steel Products Co. Limited***

Fujian Wuhang Stainless Steel Products Co. Limited is a shareholder of the Company.

***Antonios Djakouris***

Antonios Djakouris is a director of the Company.

***David Salter***

David Salter is a director of the Company.

***Ioannis Drapaniotis***

Ioannis Drapaniotis is a director of the Company.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**30. RELATED PARTY TRANSACTIONS** *(continued)*

***Omar Kamal***

Omar Kamal is a director of the Company.

***Brian Chi Ming Cheng***

Brian Chi Ming Cheng is a director of the Company

***Joanna Ka Ki Cheng***

Joanna Ka Ki Cheng is an alternate director of Brian Chi Ming Cheng

**31. CONTINGENT LIABILITIES**

During the year ended 30 September 2015, the Company received a "letter before action" from a firm of solicitors representing a shareholder which asserts intended claims against, inter alia, the Company for damages purporting to arise in the context of the listing of the Company on the JSE and the compulsory conversion of the convertible redeemable preference shares held by that shareholder in the Company into ordinary shares as provided for in the terms of the convertible redeemable preference shares. The matter is subject to the contractual arbitration proceedings agreed between the parties. The shareholder has as yet not invoked the arbitration proceedings.

In accordance with paragraph 92 of IAS 37 *Provisions, contingent liabilities and contingent assets* no further information is disclosed in relation to the subject matter on the grounds that it may prejudice the position of the Company in a dispute with other parties.

**32. CAPITAL COMMITMENTS**

(a) Capital commitments of the Group in respect of property, plant and equipment outstanding at the reporting period not provided for in the consolidated financial statements were as follows:

	<u>30 September</u> <u>2015</u>	<u>30 September</u> <u>2014</u>
	US\$'000	US\$'000
Contracted for	1 421	4 411
Authorised but not contracted for	<u>10</u>	<u>-</u>
	<u>1 431</u>	<u>4 411</u>

(b) The Company holds an indirect 100% equity interest in Tharisa Fujian Industrial Co. Ltd, the registered capital of which is US\$10 000 thousand. Up to 30 September 2015, US\$5 950 thousand has been paid up. The remaining US\$4 050 thousand needs to be paid up by 14 February 2021.

(c) The Company issued a guarantee to ABSA Bank Limited which guarantees the payment of certain liabilities of Arxo Logistics Proprietary Limited to Transnet totalling ZAR19 400 thousand.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2015

**32. CAPITAL COMMITMENTS** *(continued)*

(d) A guarantee was issued by Arxo Logistics Proprietary Limited to Lombard Insurance Company Limited which guarantees the payment of certain liabilities of Arxo Logistics Proprietary Limited to Transnet totalling ZAR12 000 thousand.

(e) The Company issued a guarantee to a third party customer of Arxo Resources Limited for a maximum of US\$10 000 thousand as security for pre shipment advances made by the customer to Arxo Resources Limited.

**33. OPERATING LEASES**

Non-cancellable operating lease rentals are payable as follows:

	<u>30 September</u> <u>2015</u>	<u>30 September</u> <u>2014</u>
	US\$'000	US\$'000
Less than one year	329	228
Between one and five years	<u>190</u>	<u>390</u>
	<u>519</u>	<u>618</u>

The Group leases a number of office facilities under operating leases. The leases typically run for a period of two to three years. A portion of lease payments are increased every year to reflect market rentals. The amounts recognised as an expense in profit or loss in respect of operating leases for the years ended 30 September 2015 and 30 September 2014 are US\$404 thousand and US\$425 thousand respectively.

Since the property titles did not pass to the Group, the Group determined that the leased office facilities are operating leases. The rents paid to landlords are increased to market rents at regular intervals and the Group does not participate in the residual value of the buildings therefore it was determined that substantially all the risks and rewards of the buildings are with the landlords.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2015

**34. COMPARATIVE FIGURES**

The following reclassifications have been made to the comparative figures:

	Years ended 30 September	
	<u>2015</u>	<u>2014</u>
	US\$'000	US\$'000
<b>Consolidated statement of profit or loss and other comprehensive income</b>		
Cost of sales	-	(1 304)
Administrative expenses	-	1 304
	<u>30 September 2015</u>	<u>30 September 2014</u>
	US\$'000	US\$'000
<b>Consolidated statement of financial position: Trade and other payables note</b>		
Trade payables- third parties	-	(3 409)
Income received in advance	-	3 409

**35. EVENTS AFTER THE REPORTING PERIOD**

Subsequent to the financial year end, Tharisa Minerals Proprietary Limited terminated the services of a mining contractor based on non-performance and instructed its attorney to institute proceedings to recover damages arising from the non-performance. The contractor has, as a consequence of the termination of the contract, instituted legal proceedings against Tharisa Minerals Proprietary Limited claiming unlawful dispossession of the mine or alternatively those parts of the mine which it was working at the time of termination. The Board of Directors of Tharisa Minerals Proprietary Limited has taken legal advice and, based on the advice received, is of the view that the mining contractor's case has no merit and Tharisa Minerals Proprietary Limited will defend itself against any action taken against it.

The terms of the senior debt facility require the completion of technical tests by 28 November 2015. The tests commenced on 1 August 2015. As a consequence of certain stoppages as instructed by the Department of Mineral Resources in terms of the Mine Health and Safety Act, Tharisa Minerals Proprietary Limited was not in a position to complete the technical tests and the tests were halted on 28 October 2015. The senior debt providers have extended the date by which the technical tests need to be completed to 28 November 2016.

Other than the matters referred to above, the Board of Directors are not aware of any matter or circumstance arising since the end of the financial year that will impact these financial results.

The consolidated financial statements were authorized for issue by the Board of Directors on 7 December 2015.



**Reports and Consolidated Financial Statements for the year ended 30 September 2014**



REPORTS AND  
CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

REPORTS AND  
CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

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**Board of Directors**

**Loucas Pouroulis** - Chairman

**Phoevos Pouroulis** - Chief Executive Officer

**Michael Jones** - Chief Finance Officer

**John David Salter** - Independent Non Executive Director

**Ioannis Drapaniotis** - Independent Non Executive Director

**Antonios Djakouris** - Independent Non Executive Director

**Omar Kamal** - Non Executive Director (*appointed on 11 June 2014*)

**Company Secretaries**

**Lysandros Lysandrides**

**Sanet de Witt**

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## BOARD OF DIRECTORS, PROFESSIONAL ADVISERS AND CORPORATE INFORMATION (continued)

<b>Independent Auditors</b>	<b>KPMG Limited</b>
<b>Group bankers</b>	<b>The Hong Kong and Shanghai Banking Corporation Limited</b> <b>Nedbank Limited</b> <b>ABSA Capital- member of the Barclays Group</b> <b>Bank of Cyprus Public Company Limited</b> <b>Standard Bank Limited</b> <b>China Construction Bank Limited</b> <b>Industrial and Commercial Bank of China Limited</b> <b>Barclays Bank Plc</b>
<b>Address of registered office</b>	<b>Sofoklis Pittokopitis Business Centre, Offices 108-110</b> <b>17 Neophytou Nicolaides and Kilkis Street</b> <b>8011 Paphos</b> <b>Cyprus</b>
<b>Registration number</b>	<b>HE223412</b>

## **Board of Directors' Report**

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The Board of Directors of **Tharisa plc** (“the Company”) presents to the members its report together with the audited consolidated financial statements of the Company and its subsidiaries (together with the Company, “the Group”) for the year ended 30 September 2014.

### **PRINCIPAL ACTIVITY**

The principal activity of the Company, which remained the same as last year, is that of an investment holding company with controlling interests in platinum group metals (“PGM”) and chrome mining and processing operations and associated sales and logistics operations. The Group operates the Tharisa Mine, a co-producing, open pit PGM and chrome mine located in the Bushveld Complex of South Africa.

### **FINANCIAL RESULTS**

The results of the Group are disclosed in the consolidated statement of profit or loss and other comprehensive income on page 8. The loss of the Group for the year before income tax amounted to US\$40 325 thousand (2013: US\$62 968 thousand). The loss for the year amounted to US\$54 873 thousand (2013: US\$47 443 thousand). The Board of Directors recommends that the loss for the year is transferred to revenue reserve.

### **DIVIDENDS**

In view of the loss incurred by the Group, the Board of Directors does not recommend the payment of dividends. The dividend policy of the Company is to pay a dividend of 10% of consolidated net profit after tax.

### **SHARE CAPITAL**

During the year ended 30 September 2014, changes were made to the issued share capital of the Company. On 10 April 2014, the Company listed its ordinary share capital on the Johannesburg Stock Exchange (“JSE”). These changes in the ordinary share capital are disclosed in note 19 of the consolidated financial statements.

### **MAIN RISKS**

The main financial risks faced by the Group are disclosed in note 2(d) (going concern) and 29 of the consolidated financial statements.

### **FUTURE DEVELOPMENT**

The Board of Directors does not anticipate significant changes in the operations of the Group in the foreseeable future.

### **BRANCHES**

During the year the Group did not operate any branches.

**BOARD OF DIRECTORS**

The members of the Group's Board of Directors as at 30 September 2014 and as at the date of this report are disclosed on page 1. There were no significant changes in the assignment of responsibilities of the Board of Directors.

**EVENTS AFTER THE REPORTING PERIOD**

Events after the reporting period are disclosed in note 34 of the consolidated financial statements.

**INDEPENDENT AUDITORS**

The independent auditors, KPMG Limited, have expressed their willingness to continue in office and a resolution fixing their remuneration will be submitted at the Annual General Meeting.

On behalf of the Board of Directors

**Phoevos Pouroulis**

**Michael Jones**

Paphos, Cyprus  
15 December 2014

## **Independent Auditors' report**

### **To the Members of Tharisa plc**

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#### **REPORT ON THE CONSOLIDATED FINANCIAL STATEMENTS**

We have audited the consolidated financial statements of Tharisa plc ("the Company") and its subsidiaries (together with the Company, the "Group") on pages 8 to 81 which comprise the consolidated statement of financial position as at 30 September 2014, and the consolidated statements of profit or loss and other comprehensive income, changes in equity and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

#### **BOARD OF DIRECTORS' RESPONSIBILITY**

The Board of Directors is responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards and the requirements of the Cyprus Companies Law, Cap. 113, and for such internal control as the Board of Directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

#### **AUDITORS' RESPONSIBILITY**

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation of consolidated financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the Board of Directors as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

# **Independent Auditors' report**

## **To the Members of Tharisa plc**

### **OPINION**

In our opinion, the consolidated financial statements give a true and fair view of the financial position of the Group as at 30 September 2014, and of its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards and the requirements of the Cyprus Companies Law, Cap. 113.

### **EMPHASIS OF MATTER**

We draw attention to note 2(d) of the consolidated financial statements which indicates that the Group incurred a loss of US\$54 873 thousand for the year ended 30 September 2014 and, as at that date its current liabilities exceeded its current assets by US\$1 475 thousand. The note states that should the forecast production not be achieved and/or South African Rand commodity prices weaken, a material uncertainty exists which may cast doubt on the Group's ability to continue as a going concern. Our opinion is not qualified in respect of this matter.

### **REPORT ON OTHER LEGAL REQUIREMENTS**

Pursuant to the additional requirements of the Auditors and Statutory Audits of Annual and Consolidated Accounts Laws of 2009 and 2013, we report the following:

- We have obtained all the information and explanations we considered necessary for the purposes of our audit.
- In our opinion, proper books of account have been kept by the Company, so far as appears from our examination of those books.
- The consolidated financial statements are in agreement with the books of account.
- In our opinion and to the best of our information and according to the explanations given to us, the consolidated financial statements give the information required by the Cyprus Companies Law, Cap. 113, in the manner so required.
- In our opinion, the information given in the report of the Board of Directors on pages 3 and 4 is consistent with the consolidated financial statements.

# **Independent Auditors' report**

## **To the Members of Tharisa plc**

### **OTHER MATTER**

This report, including the opinion, has been prepared for and only for the Company's members as a body in accordance with Section 34 of the Auditors and Statutory Audits of Annual and Consolidated Accounts Laws of 2009 and 2013 and for no other purpose. We do not, in giving this opinion, accept or assume responsibility for any other purpose or to any other person to whose knowledge this report may come to.

Michael M. Antoniadis FCA

Certified Public Accountant and Registered Auditor

for and on behalf of

**KPMG Limited**

Certified Public Accountants and Registered Auditors

14 Esperidon Street

1087 Nicosia

Cyprus

15 December 2014

## CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the year ended 30 September 2014

	Note	Years ended 30 September	
		<u>2014</u>	<u>2013</u>
		US\$'000	US\$'000
Revenue		240 731	215 455
Cost of sales		<u>(206 815)</u>	<u>(189 570)</u>
<b>Gross profit</b>		33 916	25 885
Other income	5	149	48
Administrative expenses		<u>(28 212)</u>	<u>(26 596)</u>
<b>Results from operating activities</b>	9	<u>5 853</u>	<u>(663)</u>
Finance income	7	897	863
Finance costs	7	(14 655)	(14 744)
Changes in fair value of financial liabilities at fair value through profit or loss	7	<u>(32 420)</u>	<u>(48 424)</u>
<b>Net finance costs</b>		<u>(46 178)</u>	<u>(62 305)</u>
<b>Loss before tax</b>		(40 325)	(62 968)
Tax	10	<u>(14 548)</u>	<u>15 525</u>
<b>Net loss for the year</b>		<u>(54 873)</u>	<u>(47 443)</u>
<b>Other comprehensive income</b>			
<i>Items that will not be classified subsequently to profit or loss</i>		-	-
<i>Items that may be classified subsequently to profit or loss:</i>			
Foreign currency translation differences for foreign operations, net of tax		<u>(21 162)</u>	<u>(38 781)</u>
<b>Other comprehensive income, net of tax</b>		<u>(21 162)</u>	<u>(38 781)</u>
<b>Total comprehensive expense for the year</b>		<u>(76 035)</u>	<u>(86 224)</u>
<b>Net loss for the year attributable to:</b>			
Owners of the Company		(48 997)	(48 347)
Non-controlling interests		<u>(5 876)</u>	<u>904</u>
		<u>(54 873)</u>	<u>(47 443)</u>
<b>Total comprehensive expense for the year attributable to:</b>			
Owners of the Company		(66 188)	(75 989)
Non-controlling interests		<u>(9 847)</u>	<u>(10 235)</u>
		<u>(76 035)</u>	<u>(86 224)</u>
<b>Loss per share</b>			
Basic and diluted loss per share (US\$)	11	<u>(0.20)</u>	<u>(0.20)</u>

The notes on pages 15 to 81 are an integral part of these financial statements.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 30 September 2014

		<u>30 September</u>	<u>30 September</u>
		<u>2014</u>	<u>2013</u>
	Note	US\$'000	US\$'000
<b>Assets</b>			
Property, plant and equipment	12	253 356	269 130
Goodwill	13	1 211	1 427
Other financial assets	15	5 008	3 774
Long term deposits	14	14 479	7 708
Deferred tax assets	22	<u>5 970</u>	<u>20 623</u>
<b>Non-current assets</b>		<u>280 024</u>	<u>302 662</u>
Inventories	16	14 567	24 043
Trade and other receivables	17	32 515	29 123
Other financial assets	15	442	311
Current taxation	24	3	-
Cash and cash equivalents	18	<u>19 629</u>	<u>28 017</u>
<b>Current assets</b>		<u>67 156</u>	<u>81 494</u>
<b>Total assets</b>		<u>347 180</u>	<u>384 156</u>
<b>Equity</b>			
Share capital	19	255	6
Share premium	19	452 363	113 342
Other reserve	19	47 245	47 245
Foreign currency translation reserve	19	(47 361)	(30 170)
Revenue reserve	19	<u>(216 596)</u>	<u>(167 859)</u>
<b>Equity attributable to owners of the Company</b>		235 906	(37 436)
<b>Non-controlling interests</b>		<u>(26 052)</u>	<u>(16 205)</u>
<b>Total equity</b>		<u>209 854</u>	<u>(53 641)</u>

The notes on pages 15 to 81 are an integral part of these financial statements.

**CONSOLIDATED STATEMENT OF FINANCIAL POSITION**

As at 30 September 2014

		<u>30 September</u>	<u>30 September</u>
		<u>2014</u>	<u>2013</u>
	Note	US\$'000	US\$'000
<b>Liabilities</b>			
Provisions	21	4 452	4 738
Borrowings	23	64 223	92 812
Deferred tax liabilities	22	<u>20</u>	<u>-</u>
<b>Non-current liabilities</b>		<u>68 695</u>	<u>97 550</u>
Convertible redeemable preference shares	20	-	260 291
Class B preference shares	20	-	12 171
Borrowings	23	30 986	36 688
Current taxation	24	421	294
Trade and other payables	25	<u>37 224</u>	<u>30 803</u>
<b>Current liabilities</b>		<u>68 631</u>	<u>340 247</u>
<b>Total liabilities</b>		<u>137 326</u>	<u>437 797</u>
<b>Total equity and liabilities</b>		<u>347 180</u>	<u>384 156</u>

The consolidated financial statements were authorized for issue by the Board of Directors on 15 December 2014.

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**Phoevos Pouroulis**

Director

.....

**Michael Jones**

Director

The notes on pages 15 to 81 are an integral part of these financial statements.

**CONSOLIDATED STATEMENT OF CHANGES IN EQUITY**

For the year ended 30 September 2014

Attributable to owners of the Company

		Share capital US\$'000	Share premium US\$'000	Other reserve US\$'000	Foreign currency translation reserve US\$'000	Revenue reserve US\$'000	Total US\$'000	Non-control ling interests US\$'000	Total equity US\$'000
<b>Balance at 1 October 2013</b>	Note	6	113 342	47 245	(30 170)	(167 859)	(37 436)	(16 205)	(53 641)
<b>Total comprehensive income for the year</b>									
Net loss for the year		-	-	-	-	(48 997)	(48 997)	(5 876)	(54 873)
Other comprehensive income:									
Foreign currency translation differences		-	-	-	(17 191)	-	(17 191)	(3 971)	(21 162)
<b>Total comprehensive income for the year</b>		-	-	-	(17 191)	(48 997)	(66 188)	(9 847)	(76 035)
<b>Transactions with owners, recognized directly in equity</b>									
Share issue expenses	19(c)	-	(1 416)	-	-	-	(1 416)	-	(1 416)
Equity settled share based payments		-	-	-	-	260	260	-	260
Issue of ordinary shares for cash	19(b)	13	47 847	-	-	-	47 860	-	47 860
Issue of ordinary shares to employees resulting from share grants	19(b)	-	115	-	-	-	115	-	115
Issue of ordinary shares from bonus issue	19(b)	154	(154)	-	-	-	-	-	-
Issue of ordinary shares from conversion of redeemable convertible preference shares	19(b)	82	292 629	-	-	-	292 711	-	292 711
Contributions by owners		249	339 021	-	-	260	339 530	-	339 530
Total transactions with owners of the Company		249	339 021	-	-	260	339 530	-	339 530
<b>Balance at 30 September 2014</b>		255	452 363	47 245	(47 361)	(216 596)	235 906	(26 052)	209 854

The notes on pages 15 to 81 are an integral part of these financial statements.

**CONSOLIDATED STATEMENT OF CHANGES IN EQUITY**

For the year ended 30 September 2014

<b>Balance at 1 October 2012</b>	<u>6</u>	<u>113 342</u>	<u>47 245</u>	<u>(2 528)</u>	<u>(119 512)</u>	<u>38 553</u>	<u>(5 970)</u>	<u>32 583</u>
<b>Total comprehensive income for the year</b>								
Net loss for the year	-	-	-	-	(48 347)	(48 347)	904	(47 443)
Other comprehensive income:								
Foreign currency translation differences	-	-	-	(27 642)	-	(27 642)	(11 139)	(38 781)
<b>Total comprehensive income for the year</b>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(27 642)</u>	<u>(48 347)</u>	<u>(75 989)</u>	<u>(10 235)</u>	<u>(86 224)</u>
<b>Transactions with owners of the Company, recorded directly in equity</b>								
Contributions by owners	-	-	-	-	-	-	-	-
Total transactions with owners of the Company	-	-	-	-	-	-	-	-
<b>Balance at 30 September 2013</b>	<u>6</u>	<u>113 342</u>	<u>47 245</u>	<u>(30 170)</u>	<u>(167 859)</u>	<u>(37 436)</u>	<u>(16 205)</u>	<u>(53 641)</u>

The notes on pages 15 to 81 are an integral part of these financial statements.

**CONSOLIDATED STATEMENT OF CASH FLOWS**

For the year ended 30 September 2014

	Note	Years ended 30 September	
		<u>2014</u>	<u>2013</u>
		US\$'000	US\$'000
<b>Cash flows from operating activities</b>			
Net loss for the year		(54 873)	(47 443)
Adjustments for:			
Depreciation of property, plant and equipment	9	10 764	12 438
Amounts written off directly in profit or loss	9	-	81
Write off of property, plant and equipment	9	25	-
Impairment loss of property, plant and equipment	9	-	2 097
Impairment loss of goodwill	9	72	75
Allowance for inventory obsolescence		1 195	-
Changes in fair value of financial liabilities at fair value through profit or loss		32 420	48 424
Interest income	7	(897)	(607)
Changes in fair value of financial assets at fair value through profit or loss		659	54
Interest expense	7	13 400	14 336
Tax		14 548	(15 525)
Equity-settled share based payments		389	-
		<u>17 702</u>	<u>13 930</u>
Changes in:			
- Inventories		8 144	4 254
- Trade and other receivables		(3 392)	(11 076)
- Trade and other payables		996	(4 384)
- Provisions	21	<u>(152)</u>	<u>(5 000)</u>
Cash from/(used in) operations		23 298	(2 276)
Income tax paid		<u>(942)</u>	<u>(680)</u>
<b>Net cash flows from/(used in) operating activities</b>		<u>22 356</u>	<u>(2 956)</u>
<b>Cash flows from investing activities</b>			
Interest received		699	399
Acquisition of subsidiaries, net of cash acquired	28	-	154
Additions to property, plant and equipment	12	(24 289)	(24 316)
Proceeds from disposal of property, plant and equipment		37	-
Additions of other financial assets		<u>(1 606)</u>	<u>(850)</u>
<b>Net cash flows used in investing activities</b>		<u>(25 159)</u>	<u>(24 613)</u>

The notes on pages 15 to 81 are an integral part of these financial statements.

**Cash flows from financing activities**

Proceeds from issue of ordinary shares	47 860	-
Establishment of long term deposits	(6 771)	(7 708)
Proceeds from borrowings, net of transaction costs	(2 835)	16 073
Repayment of borrowings	(30 989)	(368)
Interest paid	(349)	(248)
Redemption of Class B preference shares	(6 818)	-
Share issue expenses capitalised to share premium	(1 416)	-
<b>Net cash flows (used in)/from financing activities</b>	<u>(1 318)</u>	<u>7 749</u>

**Net decrease in cash and cash equivalents**

	(4 121)	(19 820)
<b>Cash and cash equivalents at the beginning of the year</b>	28 017	52 805
Effect of exchange rate fluctuations on cash held	<u>(4 267)</u>	<u>(4 968)</u>
<b>Cash and cash equivalents at the end of the year</b>	18 <u>19 629</u>	<u>28 017</u>

The notes on pages 15 to 81 are an integral part of these financial statements.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2014

**1. BACKGROUND**

Tharisa plc (“the Company”) was incorporated in Cyprus on 20 February 2008 under registration number HE 223412. The name of the Company was changed from Tharisa Limited to Tharisa plc on 19 January 2012. On 10 April 2014, the Company listed its ordinary share capital on the JSE.

Its registered office is at Sofoklis Pittokopitis Business Centre, Offices 108-110, 17 Neophytou Nicolaides and Kilkis Street, 8011 Paphos, Cyprus.

On 9 February 2009, the Company acquired 74% of the share capital of Tharisa Minerals Proprietary Limited, a company established in South Africa. The principal activity of Tharisa Minerals Proprietary Limited is PGM and chrome mining and processing.

On 2 November 2010, the Company incorporated Tharisa Investments Limited, a company established in Cyprus. The principal activity of Tharisa Investments Limited is that of investment holding. On 15 February 2012, Tharisa Investments Limited incorporated Tharisa Fujian Industrial Co., Ltd, a company established in the People’s Republic of China (“PRC”). The principal activity of Tharisa Fujian Industrial Co., Ltd is that of ferrochrome smelting. Tharisa Fujian Industrial Co., Ltd has not commenced operations up to the date of this report. During April 2011, Tharisa Investments Limited issued additional shares representing 15% of its expanded share capital to Fujian Wuhang Stainless Steel Products Co., Ltd (“Fujian”). On 22 November 2011, the Company and Fujian signed an agreement, according to which Fujian transferred its 15% equity interests in Tharisa Investments Limited to the Company. The consideration for this transfer was the par value of the shares transferred of US\$22.5 and a call option written by the Company which conferred to Fujian a right to purchase 15% of the equity capital of Tharisa Fujian Industrial Co., Ltd at Chinese Yuan Renminbi (“YUAN”) 100 any time after 31 December 2012. As at 30 September 2014, the call option had yet to be exercised. On 24 August 2011, Tharisa Investments Limited incorporated Tharisa Investments (Hong Kong) Limited, a company established in Hong Kong. Tharisa Investments (Hong Kong) Limited has not commenced operations up to the date of this report.

On 4 February 2011, the Company incorporated Arxo Resources Limited, a company established in Cyprus. The principal activity of Arxo Resources Limited is the selling and distribution of chrome concentrate. On 7 December 2011, Arxo Resources Limited incorporated Arxo Metals Proprietary Limited, a company established in South Africa. The principal activity of Arxo Metals Proprietary Limited is metal processing and currently produces foundry and chemical grade chrome concentrates.

On 1 March 2011, the Company acquired 100% of the share capital of Arxo Logistics Proprietary Limited, a company established in South Africa. The principal activity of Arxo Logistics Proprietary Limited is the provision of logistics services.

On 31 May 2011, the Company incorporated Tharisa Administration Services Limited, a company established in Cyprus. Tharisa Administration Services Limited provides management and administration services to the Group. On 1 April 2013, Tharisa Administration Services Limited, acquired Braeston Corporate Consulting Services Proprietary Limited, a company established in South Africa. The principal activity of Braeston Corporate Consulting Services Proprietary Limited is the provision of management services to the Group.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

**1. BACKGROUND** (*continued*)

On 30 May 2013, the Company incorporated Dinami Limited, a company established in Guernsey. The principal activity of Dinami Limited is the provision of consultancy services in relation to the sale of the Group's foundry and chemical chrome concentrate products.

**2. BASIS OF PREPARATION**

**(a) Statement of compliance**

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRSs") and the requirements of the Cyprus Companies Law, Cap.113.

**(b) Basis of measurement**

The consolidated financial statements are prepared on the historical cost basis except as otherwise stated in the accounting policies set out below.

**(c) Functional and presentation currency**

The consolidated financial statements are presented in United States Dollars (US\$) and are rounded to the nearest thousand.

**(d) Going concern basis**

The Group incurred a loss for the year ended 30 September 2014 of US\$54 873 thousand (2013: US\$47 443 thousand) and, as at that date its current liabilities exceeded its current assets by US\$1 475 thousand (2013: US\$258 753 thousand).

The short term cash flow forecasts of the Group reflect a positive cash flow position sufficient to meet the operational cash flows, the approved capital expenditure and the debt repayments. Achievement of the short term cash flow forecast is dependent on the planned production levels being achieved and/or no weakening in future South African Rand commodity prices. Should forecast production not be achieved and/or South African Rand commodity prices weaken, this may result in a shortfall in cash. Certain capital expenditure can be postponed in such event and alternative funding options are being evaluated including the release of the environmental rehabilitation guarantee collateral included in "other financial assets" in note 15 which would then be available for operational cash requirements.

During the financial year, insufficient correct reef layers were exposed as a result of waste and interburden stripping being below plan because of contractor mining equipment availability being below industry norms. Following a strategic review, an additional mining contractor has been appointed to undertake the more specialised blasting and extraction of the reef layers and removal of interburden. The existing mining contractor will focus on bulk waste removal.

**2. BASIS OF PREPARATION** (*continued*)

**(d) Going concern basis** (*continued*)

The Group experienced ramp-up problems typical of large complex concentrators coupled with mechanical failure of certain key equipment. De-bottlenecking and process optimisation together with equipment re-engineering have overcome these problems. Initiatives to improve recoveries and yields are ongoing.

The senior debt providers have waived certain facility covenants relating to the debt service cover ratio as at 30 September 2014, and have extended the date for completion of the technical completion tests to 28 November 2015.

Should the forecast production not be achieved and/or South African Rand commodity prices weaken, a material uncertainty exists which may cast doubt on the ability of the Group to continue as a going concern and it may be unable to realise its assets and settle its liabilities in the normal course of business without additional fund raising.

The financial statements however continue to be prepared on the going concern basis.

**(e) Use of estimates and judgments**

The preparation of the consolidated financial statements in conformity with IFRS requires management to make judgements, estimates and assumptions that affect the application of accounting policies and reported amounts of assets, liabilities, income and expenses. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Judgements made by management in the application of IFRS that have significant effect on the consolidated financial statements and major sources of estimation uncertainty are as follows:

*Impairment of assets*

The recoverable amount of each non-financial asset or cash-generating-unit (“CGU”) is determined as the higher of the value-in-use and fair value less costs to sell, in accordance with the Group's accounting policies (see note 3(o)). Determination of the value-in-use of an asset or CGU based on a discounted cash flow model requires the use of estimates and assumptions, including: the appropriate rate at which to discount the cash flows, the timing of cash flows and expected life of the asset or CGU, exchange rates, commodity prices, ore reserves, future capital requirements and future operating performance. Changes in these estimates and assumptions impact the recoverable amount of the asset or the CGU and, accordingly, could result in an adjustment to the carrying amount of that asset or CGU. Refer to note 13.

**2. BASIS OF PREPARATION** (*continued*)

**(e) Use of estimates and judgments** (*continued*)

*Mineral reserves*

Economically recoverable ore reserves represent the estimated quantity of product in an area of interest that can be expected to be profitably extracted, processed and sold under current and foreseeable economic conditions. The determination of ore reserves includes estimates and assumptions about a range of geological, technical and economic factors, including: quantities, grades, production techniques, recovery rates, production costs, transport costs, commodity demand, commodity prices and exchange rates. Changes in ore reserves impact the assessment of recoverability of exploration and evaluation assets, property, plant and equipment, the carrying amount of assets depreciated on a units-of-production basis, provision for site rehabilitation and the recognition of deferred tax assets, including tax losses. Refer to note 12.

*Rehabilitation provision*

The Group's mining and exploration activities are subject to various laws and regulations governing the protection of the environment. The Group recognises management's best estimate for asset retirement obligations in the period in which they are incurred. Actual costs incurred in future periods can differ materially from these estimates. Additionally, future changes to environmental laws and regulations, life of mine estimates and discount rates can affect the carrying amount of the provision. The estimated long-term environmental provision, comprising rehabilitation and mine closure is based on the Group's environmental policy taking into account the current technological, environmental and regulatory requirements. The provision for future rehabilitation was determined using calculations which required the use of estimates. Refer to note 21.

*Inventories*

Net realisable value tests are performed at least annually based on the estimated future sales price of the products based on prevailing metal prices, less estimated costs to complete production and bring the product to sale. The nature of the net realisable value test inherently limits the ability to precisely monitor recoverability levels and may result in additional write-downs of inventories in future periods. Refer to note 16.

**(f) New and revised International Financial Reporting Standards and Interpretations**

As from 1 October 2013, the Group adopted all changes to International Financial Reporting Standards ("IFRSs"), which are relevant to its operations. This adoption did not have a material effect on the accounting policies of the Group.

The following Standards, Amendments to Standards and Interpretations have been issued but are not yet effective for annual periods beginning on 1 October 2013. The Board of Directors is currently evaluating the impact of these on the Group.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

**2. BASIS OF PREPARATION** *(continued)***(f) New and revised International Financial Reporting Standards and Interpretations** *(continued)*Standards and Interpretations

- IFRS 10 "Consolidated Financial Statements" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2014).
- IFRS 11 "Joint Arrangements" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2014).
- IFRS 12 "Disclosure of Interests in Other Entities" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2014).
- Transition Guidance for IFRS 10, 11 & 12 (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2014).
- Investment Entities amendments to IFRS 10, IFRS 12, and IAS 27 (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2014).
- IAS 27 (Revised) "Separate Financial Statements" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2014).
- IAS 28 (Revised) "Investments in Associates and Joint ventures" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2014).
- IAS 32 (Amendments) "Offsetting Financial Assets and Financial Liabilities" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2014).
- IAS 36 (Amendments) "Recoverable Amount - Disclosures for Non-Financial Assets" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2014).
- IAS 39 (Amendments) "Financial Instruments: Recognition and Measurement", Novation of Derivatives and Continuation of Hedge Accounting (effective for annual periods beginning on or after 1 January 2014).
- IFRIC 21 "Levies" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2014).
- IFRS 9 "Financial Instruments" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2018).
- IFRS 11 (Amendments) "Accounting for Acquisitions of Interests in Joint Operations" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2016).
- IFRS 14 "Regulatory Deferral Accounts" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2016).
- IFRS 15 "Revenue from Contracts with Customers" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2017).
- Amendments to IAS 16 and IAS 38 - Clarification of Acceptable Methods of Depreciation and Amortisation (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2016).
- Amendments to IAS 16 and IAS 41 - Agriculture: Bearer Plants (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2016).

### 2. BASIS OF PREPARATION *(continued)*

#### (f) New and revised International Financial Reporting Standards and Interpretations *(continued)*

##### Standards and Interpretations *(continued)*

- IAS 19 (Amendments) "Defined Benefit Plans: Employee Contributions" (effective the latest as from the commencement date of its first annual period beginning on or after 1 July 2014).
- IAS 27 (Amendments) "Equity method in separate financial statements" (effective the latest as from the commencement date of its first annual period beginning on or after 1 January 2016).
- Annual Improvements to IFRSs 2010–2012 Cycle (issued on 12 December 2013) (effective the latest as from the commencement date of its first annual period beginning on or after 1 July 2014)
- Annual Improvements to IFRSs 2011–2013 Cycle (issued on 12 December 2013) (effective the latest as from the commencement date of its first annual period beginning on or after 1 July 2014)

### 3. SIGNIFICANT ACCOUNTING POLICIES

#### (a) Basis of consolidation

The consolidated financial statements include, on a line by line basis, the financial statements of all subsidiaries.

The following policies have been applied during the consolidation process:

##### *Business combinations*

The Group has applied the acquisition method for the business combinations disclosed in note 28.

Goodwill represents the excess of:

- (i) The aggregate of the fair value of the consideration transferred, the amount of any non-controlling interest in the acquiree and the fair value of the Group's previously held equity interest in the acquiree; over
- (ii) The net fair value of the acquiree's identifiable assets and liabilities measured as at the acquisition date.

When (ii) is greater than (i), then this excess is recognised immediately in profit or loss as a gain on a bargain purchase.

Goodwill is stated at cost less accumulated impairment losses. Goodwill arising on a business combination is allocated to each CGU, or groups of CGUs, that is expected to benefit from the synergies of the combination and is tested annually for impairment (see note 3(o)).

On disposal of a CGU during the year, any attributable amount of purchased goodwill is included in the calculation of the profit or loss on disposal.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(a) Basis of consolidation** *(continued)*

*Subsidiaries and non-controlling interests*

Subsidiaries are entities controlled by the Group. Control exists when the Group has the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities. In assessing control, potential voting rights that currently are exercisable are taken into account. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

Non-controlling interests represent the equity in a subsidiary not attributable directly or indirectly to the Company, and in respect of which the Group has not agreed any additional terms with the holders of those interests which would result in the Group as a whole having a contractual obligation in respect of those interests that meets the definition of a financial liability. For each business combination, the Group can elect to measure any non-controlling interests either at fair value or at their proportionate share of the subsidiary's net identifiable assets.

Non-controlling interests are presented in the consolidated statement of financial position within equity, separately from equity attributable to the owners of the Company. Non-controlling interests in the results of the Group are presented on the face of the consolidated statement of profit or loss and other comprehensive income as an allocation of the total profit or loss and total comprehensive income for the year between non-controlling interests and the owners of the Company.

Changes in the Group's interests in a subsidiary that do not result in a loss of control are accounted for as equity transactions, whereby adjustments are made to the amounts of controlling and non-controlling interests within consolidated equity to reflect the change in relative interests, but no adjustments are made to goodwill and no gain or loss is recognised.

When the Group loses control of a subsidiary, it is accounted for as a disposal of the entire interest in that subsidiary, with a resulting gain or loss being recognised in profit or loss. Any interest retained in that former subsidiary at the date when control is lost is recognised at fair value and this amount is regarded as the fair value on initial recognition of a financial asset.

*Transactions eliminated on consolidation*

Intra-Group balances and transactions and any unrealised income and expenses arising from intra-Group transactions are eliminated in preparing the consolidated financial statements. Unrealised losses resulting from intra-Group transactions are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(a) Basis of consolidation** (continued)

*Foreign operations*

The assets and liabilities of foreign operations including goodwill and fair value adjustments arising on acquisition, are translated to the presentation currency at exchange rates at the end of each reporting period. The income and expenses of foreign operations are translated to the presentation currency using the average rate for the year. Foreign currency differences are recognised in other comprehensive income and presented in the foreign currency translation reserve in equity. When a foreign operation is disposed of, the cumulative amount of the exchange differences relating to that foreign operation are transferred to profit or loss as part of the profit or loss on disposal.

**(b) Revenue**

Revenue is measured at the fair value of the consideration received or receivable. Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Group and the revenue can be reliably measured. The following specific recognition criteria must also be met before revenue is recognised:

*Sale of chrome concentrate*

The Group enters into contracts for the sale of chrome concentrate. Revenue arising from chrome sales under these contracts is recognised when the price is determinable, the product has been delivered in accordance with the terms of the contract, the significant risks and rewards of ownership have been transferred to the customer, collection of the sale price is probable and associated costs can be reliably estimated. These criteria may vary per contract. As sales from chrome contracts are subject to a customer survey adjustment with regards to quality, sales are initially recorded on a provisional basis using management's best estimate of the chrome quality. Subsequent adjustments are recorded in revenue to take into account final adjustments, if different from the initial estimates.

*Sale of PGM*

Revenue from PGM is initially recognised at the estimated fair value of the consideration receivable at the date of delivery. Adjustments to the sale price occur based on movements in the metal market price and currency up to the date of final pricing. Final pricing is based on the monthly average market price in the month of settlement. The period between initial recognition and final pricing is typically 4 months. The revenue adjustment mechanism embedded within the sale arrangement has the characteristics of a commodity derivative. Accordingly the fair value of the final sales price adjustment is re estimated continuously and changes in fair value are recognised as a re estimated adjustment to revenue in profit or loss and trade receivables in the statement of financial position.

*Rental income*

Rental income is recognised in profit or loss on a straight line basis over the term of the lease. Lease incentives granted are recognised as an integral part of the total rental income, over the term of the lease.

For the year ended 30 September 2014

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(c) Segmental reporting**

Operating segments, and the amounts of each segment item reported in the consolidated financial statements, are identified from the financial information provided regularly to the Group's management for the purposes of allocating resources to, and assessing the performance of, the Group's various lines of business and geographical locations. The Board of Directors is of the view that the Group had two operating segments during the reporting period, the PGM segment and the chrome segment.

**(d) Lease payments**

Payments under leases which do not transfer substantially all the risks and rewards of ownership to the Group are classified as operating leases. Operating lease payments are recognised in profit or loss on a straight line basis over the term of the lease. Lease incentives received are recognised as an integral part of the total lease expense, over the term of the lease.

**(e) Foreign currency transactions**

Transactions in foreign currencies are translated to the respective functional currencies of Group entities at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated to the functional currency at the foreign exchange rate at that date. The foreign currency gain or loss on monetary items is the difference between amortised cost in the functional currency at the beginning of the year, adjusted for effective interest and payments during the year, and the amortised cost in foreign currency translated at the exchange rate at the end of the year.

Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currency at the exchange rate at the date that the fair value was determined. Non-monetary items in a foreign currency that are measured in terms of historical cost are translated using the exchange rate at the date of the transaction. Foreign currency differences arising on retranslation are recognised in profit or loss.

**(f) Finance income and finance costs**

Finance income comprises interest income on funds invested, gains on initial recognition and modification of interest-free loans at fair value and net foreign currency gains. Interest income is recognised in profit or loss as it accrues using the effective interest method.

Finance costs comprise interest expense on borrowings, dividends on preference shares classified as liabilities, unwinding of the discount on provisions, impairment losses recognised on financial assets (other than trade receivables) and net foreign currency losses. Borrowing costs that are not directly attributable to the acquisition, construction or production of a qualifying asset (see note 3(k)) are recognised in profit or loss using the effective interest method.

Foreign currency gains and losses are reported on a net basis.

For the year ended 30 September 2014

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(g) Employee benefits**

*Provident funds*

The Group's salaried employees in South Africa are members of defined contribution retirement benefit plans. The contributions to the plans range from a minimum of 3% to a maximum of 15% of staff's pensionable salary. Contributions to the plans vest immediately. Contributions are accrued in the year in which the associated services are rendered by employees.

The Group's employees in Cyprus and the PRC do not participate in retirement benefit plans.

*Share based payment transactions*

Equity settled share based payments to employees and others providing similar services are measured at the fair value of the equity instruments at the grant date. Details regarding the determination of the fair value of equity settled share based transactions are set out in the supporting notes.

The fair value determined at the grant date of the equity settled share based payments is expensed on a straight line basis over the vesting period, based on the company's estimate of equity instruments that will eventually vest, with a corresponding increase in the equity. At the end of each reporting period, the company revises its estimate of the number of equity instruments expected to vest. The amount recognized as an expense is adjusted to reflect the revision of the original estimate.

Equity settled share based payment transactions with parties other than the employees are measured at fair value of the goods and services received, except where that fair value cannot be estimated reliably, in which case they are measured at the fair value of the equity instruments granted, measured at the date the entity obtains the goods or the counterparty renders the service.

Where the company has the right to elect settlement either equity settled or cash settled, the share based payment transactions will be treated as equity settled share based payments.

*Short term benefits*

Liabilities for employee benefits for wages, salaries, annual leave and sick leave that are expected to be settled within 12 months from the reporting date are calculated at undiscounted amounts based on remuneration wage and salary rates that the Group expects to pay as at the reporting date including related on-costs, such as workers compensation insurance and payroll tax. Non-accumulating monetary benefits such as medical care and motor vehicle expenses are expensed as the benefits are taken by the employees.

*Termination benefits*

Termination benefits are recognised when, and only when, the Group demonstrably commits itself to terminate employment or to provide benefits as a result of voluntary redundancy by having a detailed formal plan which is without realistic possibility of withdrawal.

For the year ended 30 September 2014

**3. SIGNIFICANT ACCOUNTING POLICIES** (*continued*)

**(h) Tax**

Income tax comprises current and deferred taxes. Income tax is recognised in profit or loss except to the extent that it relates to items recognised in other comprehensive income or directly in equity, in which case it is recognised in other comprehensive income or directly in equity, respectively.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustments to tax payable in respect of previous years.

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the reporting date.

Apart from certain limited exceptions, all deferred tax liabilities and all deferred tax assets, to the extent that it is probable that future taxable profits will be available against which the asset can be utilised, are recognised. Future taxable profits that may support the recognition of deferred tax assets arising from deductible temporary differences include those that will arise from the reversal of existing taxable temporary differences, provided those differences relate to the same taxation authority and the same taxable entity, and are expected to reverse either in the same period as the expected reversal of the deductible temporary difference or in periods into which a tax loss arising from the deferred tax asset can be carried back or forward. The same criteria are adopted when determining whether existing taxable temporary differences support the recognition of deferred tax assets arising from unused tax losses and credits, that is, those differences are taken into account if they relate to the same taxation authority and the same taxable entity, and are expected to reverse in a period, or periods, in which the tax loss or credit can be utilised.

The limited exceptions to recognition of deferred tax assets and liabilities are those temporary differences arising from goodwill not deductible for tax purposes, the initial recognition of assets or liabilities that affect neither accounting nor taxable profit (provided they are not part of a business combination), and temporary differences relating to investments in subsidiaries to the extent that, in the case of taxable differences, the Group controls the timing of the reversal and it is probable that the differences will not reverse in the foreseeable future, or in the case of deductible differences, unless it is probable that they will reverse in the future.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but which they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realised simultaneously.

A deferred tax asset is recognised for unused tax losses, tax credits and deductible temporary differences, to the extent that it is probable that future taxable profits will be available against which they can be utilised. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(h) Tax** *(continued)*

Additional income taxes that arise from the distribution of dividends are recognised at the same time as the liability to pay the related dividend is established.

In determining the amount of current and deferred tax, the Group takes into account the impact of uncertain tax positions and whether additional taxes and interest may be due. This assessment relies on estimates and assumptions and may involve a series of judgements about future events. New information may become available that causes the Group to change its judgement regarding the adequacy of existing tax liabilities; such changes to tax liabilities will impact tax expense in the period that such a determination is made.

**(i) Earnings per share**

The Group presents basic and diluted earnings per share data for its ordinary shares. Basic earnings per share is calculated by dividing the profit or loss attributable to ordinary shareholders of the Company by the weighted average number of ordinary shares outstanding during the period. Diluted earnings per share is determined by adjusting the profit or loss attributable to ordinary shareholders and the weighted average number of ordinary shares outstanding for the effects of all dilutive potential ordinary shares, which comprise instruments convertible into ordinary shares and share options granted to employees. The Group also presents headline earnings per share according to the JSE requirements, by adjusting the earnings as determined in International Accounting Standard 33, excluding separate identifiable re-measurements, net of related tax (current and deferred) and related non controlling interests other than re-measurements specifically included in headline earnings ("included re-measurements").

If the number of ordinary or potential ordinary shares outstanding increases as a result of capitalisation, a bonus issue or a share split, or decreases as a result of a reverse share split before the consolidated financial statements are authorised for issue, the calculation of basic and diluted earnings per share for all periods presented are adjusted retrospectively, as if such changes to share capital had been effective since the beginning of the earliest period presented.

**(j) Dividends**

Dividends are recognised as a liability in the period they are declared according to International Accounting Standard 10.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(k) Property, plant and equipment**

*Mining assets and infrastructure*

Mining assets and infrastructure typically include those costs incurred for the development of the mine, including the design of the mine plan, constructing and commissioning the facilities and preparation of the mine and necessary infrastructure for production. The mine development phase generally begins after completion of a feasibility study and ends upon the commencement of commercial production. Mining assets are recorded at cost less accumulated depreciation and any accumulated impairment losses. Expenditure, including evaluation costs, incurred to establish or expand productive capacity, to support and maintain that productive capacity prior to the commencement of commercial levels of production, are capitalised as mine development assets under construction and transferred to mining assets and infrastructure when the mining venture reaches commercial production. Development costs incurred to maintain current production are expensed.

*Deferred stripping costs*

All stripping costs incurred (costs incurred in removing overburden to expose the ore) during the production phase of a mine are treated as variable production costs and as a result are included in the cost of inventory produced during the period in which the stripping costs are incurred. However, any costs of overburden stripping in excess of the expected open-pit life average stripping ratio are deferred. Any costs deferred are capitalised to property, plant and equipment. This asset is depreciated using the units of production method based on the estimated resource.

*General*

Other items of property, plant and equipment are measured at cost less accumulated depreciation and accumulated impairment losses. The cost of self-constructed assets includes the cost of materials, direct labour and an appropriate portion of normal production overheads. Directly attributable expenses relating to major capital projects and site preparation are capitalised until the asset is brought to a working condition for its intended use. These costs include dismantling and site restoration costs to the extent that these are recognised as a provision. Administrative and other general overhead costs are expensed as incurred. Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

Borrowing costs directly attributable to the construction or acquisition of qualifying assets are capitalised directly to the cost of the qualifying asset. To the extent that funds are borrowed specifically for the purpose of obtaining a qualifying asset, these borrowing costs shall be determined as the actual borrowing costs incurred on that borrowing.

To the extent that funds are borrowed generally and used for the purpose of obtaining a qualifying asset, the amount of borrowing costs shall be determined by applying a capitalisation rate to the expenditure on that asset. Borrowing costs specifically to finance the establishment of qualifying mining assets are capitalised until commercial levels of production are achieved. Otherwise, capitalisation of borrowing costs ceases when the asset is substantially complete.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(k) Property, plant and equipment** *(continued)*

Where an item of property, plant and equipment comprises major components with different useful lives, the components are accounted for as separate items of property, plant and equipment.

Expenditure incurred to replace a component of an item of property, plant and equipment that is accounted for separately, including major inspection and overhaul expenditure, is capitalised when the costs can be reliably measured and if it is probable that the future economic benefits embodied within the component will flow to the Group. The carrying amount of the replaced component, if any, is derecognised and charged against profit or loss.

Maintenance and day to day servicing and repairs, which neither materially add to the value of assets nor appreciably prolong their useful lives, are charged against profit or loss.

Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of the item and are recognised net within 'other income' in the statement of profit or loss and other comprehensive income.

*Government grants*

Government grants are recognized as a deduction in the carrying amount of the item of property, plant and equipment they relate to, when there is reasonable assurance that they will be received, and the Group will comply with the conditions associated with the grant.

*Depreciation*

Depreciation of mining assets and infrastructure is calculated using the units-of-production method based on estimated economically recoverable proved and probable mineral reserves. Proved and probable reserves reflect estimated quantities of economically recoverable resources which can be recovered in the future from known mineral deposits. Depreciation is first charged on mining assets and infrastructure from the date on which they are available for use.

For other property, plant and equipment, depreciation is recognised in profit or loss on a straight-line basis at rates that will reduce the carrying amounts to estimated residual values over the estimated useful lives of the assets as follows. Leasehold improvements on premises occupied under operating leases are written off over the shorter of the lease term and the useful lives.

Depreciation, unless otherwise stated, is calculated as follows:

- buildings at 10% per annum
- motor vehicles at 20% per annum
- computer equipment and software at 33.3% per annum
- office equipment between 10% and 33.3% per annum
- furniture at 20% per annum

No depreciation is provided on freehold land and mine development assets under construction.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(k) Property, plant and equipment** *(continued)*

Depreciation methods, residual values and useful lives are reviewed at least annually, and adjusted if appropriate, at each reporting date.

**(l) Intangible exploration and evaluation assets**

Exploration and evaluation costs, including the costs of acquiring prospecting rights and directly attributable exploration expenditure, are capitalised as intangible exploration and evaluation assets on a project-by-project basis, pending determination of the technical feasibility and commercial viability. Costs are recognised as exploration and evaluation costs from the date of granting a prospecting right. The capitalised costs are presented as intangible exploration and evaluation assets as a result of the nature of the assets acquired.

The technical feasibility and commercial viability of extracting a mineral resource is considered to be determinable when proved reserves are determined to exist. Upon determination of proved reserves, intangible exploration and evaluation assets attributable to those reserves are first tested for impairment and then reclassified from intangible exploration and evaluation assets to other appropriate categories of non-current assets.

Depreciation or amortisation of these assets commences once these assets are appropriately reclassified and are in commercial production.

Intangible exploration and evaluation assets are assessed for impairment in accordance with the Group's accounting policy (note 3(o)).

Also, additional guidance is provided by IFRS 6 "*Exploration for and Evaluation of Mineral Resources*" on indicators of impairment, examples of which are as follows:

- The period to explore, as granted under the prospecting rights acquired, has expired during the period; or will expire in the near future; or is not expected to be renewed;
- Further exploration on the project is neither budgeted nor planned for in the near future;
- A decision was made not to develop a project; and
- There is an indication that the carrying amount of the intangible exploration and evaluation asset is unlikely to be recovered in full from a successful development or the sale of the project.

If a project is abandoned, the related costs are expensed in profit or loss immediately.

**(m) Inventories**

Inventories comprising PGM and chrome concentrate, ore stockpiled, in-process metal contained in ore and consumable items are measured at the lower of cost and net realisable value. The cost is determined using the weighted average method. and includes direct mining expenditure and an appropriate portion of overhead expenditure. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and costs to sell. Obsolete, redundant and slow moving inventories are identified and written down to net realisable value.

For the year ended 30 September 2014

**3. SIGNIFICANT ACCOUNTING POLICIES** (*continued*)

**(n) Financial instruments**

*Non-derivative financial assets*

The Group initially recognises loans and receivables and deposits on the date that they are originated. All other financial assets (including assets designated at fair value through profit or loss) are recognised initially on the trade date, which is the date that the Group becomes a party to the contractual provisions of the instrument.

The Group derecognises a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows on the financial asset in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred. Any interest in transferred financial assets that is created or retained by the Group is recognised as a separate asset or liability.

On derecognition, the difference between the carrying amount of the financial asset and proceeds receivable and any prior adjustment to reflect fair value that had been reported in other comprehensive income and accumulated in equity are included in profit or loss for the period.

The Group's non-derivative financial assets include the following:

- *Financial assets at fair value through profit or loss*

A financial asset is classified at fair value through profit or loss if it is classified as held for trading or is designated as such upon initial recognition. Financial assets are designated as at fair value through profit or loss if the Group manages such investments and makes purchase and sale decisions based on their fair value in accordance with the Group's documented risk management or investment strategy. Attributable transaction costs are recognised in profit or loss as incurred. Financial assets at fair value through profit or loss are measured at fair value and changes therein are recognised in profit or loss.

- *Held-to-maturity investments*

Held to maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturities that the Group's management has the positive intention and ability to hold to maturity and are included in non-current assets, except for those with maturities within 12 months from the reporting date which are classified as current assets. Held to maturity investments are stated at amortised cost less impairment losses.

- *Loans receivable*

Loans receivable are stated at amortised cost less impairment losses. Unless otherwise stated, these balances have no fixed terms of repayment and are therefore deemed repayable on demand and deemed to have carrying values equal to their fair values.

For the year ended 30 September 2014

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(n) Financial instruments** (continued)

*Non-derivative financial assets* (continued):

- *Trade and other receivables*

Trade and other receivables originated by the Group are stated at their amortised cost less impairment losses, except where the receivables are interest-free loans made to related parties without any fixed repayment terms or the effect of discounting would be immaterial. Appropriate allowances for estimated irrecoverable amounts are recognised in profit or loss when there is objective evidence that the asset is impaired. The allowance recognised is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the effective interest rate computed at initial recognition. Due to the short-term nature of the Group's trade and other receivables, amortised cost approximates fair value.

*Non-derivative financial liabilities*

The Group initially recognises debt securities issued on the date that they are originated. All other financial liabilities are recognised initially on the trade date, which is the date that the Group becomes a party to the contractual provisions of the instrument.

The Group derecognises a financial liability when its contractual obligations are discharged, cancelled or expire. On derecognition, the difference between the carrying amount of the financial liability, including related unamortised costs, and the amount paid for it is included in profit or loss.

Non-derivative financial liabilities are recognised initially at fair value less any directly attributable transaction costs. Subsequent to initial recognition, these financial liabilities are measured at amortised cost using the effective interest rate method.

The Group's non-derivative financial liabilities include the following:

- *Trade and other payables*

Trade and other payables are stated at amortised cost. Due to the short-term nature of the Group's trade and other payables, amortised cost approximates fair value.

- *Interest-bearing borrowings*

Interest-bearing borrowings are stated at amortised cost, using the effective interest rate method, with any difference between cost and redemption value being recognised in profit or loss over the period of the borrowings on an effective interest rate basis.

For the year ended 30 September 2014

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(n) Financial instruments** *(continued)*

*Non-derivative financial liabilities* *(continued)*:

- *Redeemable preference shares*

Redeemable preference shares are classified as a liability if they are redeemable on a specific date or at the option of the preference shareholders, or if dividend payments are not discretionary. The liability is recognised in accordance with the Group's policy for interest-bearing borrowings. Dividends on redeemable preference shares are recognised as a liability and recognised as an interest expense using the effective interest rate method.

*Financial liabilities at fair value through profit or loss*:

The Group's financial liabilities at fair value through profit or loss include the following:

- *Hybrid financial liabilities*

A hybrid financial liability includes a non-derivative host contract and one or more embedded derivatives with the effect that some of the cash flows of the instrument vary in a way similar to a stand-alone derivative. The Group designates the entire hybrid liability as a financial liability at fair value through profit or loss unless:

- (a) the embedded derivative(s) does not significantly modify the cash flows that otherwise would be required by the contract; or
- (b) it is clear with little or no analysis when a similar hybrid instrument is first considered that separation of the embedded derivative(s) is prohibited, such as a prepayment option embedded in a loan that permits the holder to prepay the loan for approximately its amortised cost.

Hybrid financial liabilities are recognised initially at fair value. Transaction costs that relate to the issue of the liabilities are recognised immediately in profit or loss. At the end of each reporting period the fair value is re-measured. The gain or loss on re-measurement to fair value is recognised immediately in profit or loss.

- *Derivative financial instruments*

Derivative financial instruments are recognised initially at fair value. At the end of each reporting period the fair value is re-measured. The gain or loss on re-measurement to fair value is recognised immediately in profit or loss.

Financial assets and liabilities are offset and the net amount presented in the statement of financial position when, and only when, the Group has a legal right to offset the amounts and intends either to settle on a net basis or to realise the asset and settle the liability simultaneously.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(n) Financial instruments** *(continued)*

*Financial liabilities at fair value through profit or loss* *(continued):*

The fair value of financial instruments traded in an organised financial market is measured at the applicable quoted prices. The fair value of financial instruments not traded in an organised financial market is determined using a variety of methods and assumptions that are based on market conditions and risks existing at the reporting date, including independent appraisals and discounted cash flow methods.

**(o) Impairment**

*Financial assets*

Financial assets are assessed at each reporting date to determine whether there is any objective evidence that they are impaired. A financial asset is considered to be impaired if objective evidence indicates that a loss event has occurred after the initial recognition and the loss event had a negative effect on the estimated future cash flows of that asset, that can be estimated reliably.

Objective evidence of impairment includes observable data that comes to the attention of the Group about one or more of the following loss events:

- significant financial difficulty of the debtor;
- a breach of contract, such as a default or delinquency in interest or principal payments;
- its becoming probable that the debtor will enter bankruptcy or other financial reorganisation;
- significant changes in the technological, market, economic or legal environment that have an adverse effect on the debtor; and
- a significant or prolonged decline in the fair value of an investment in an equity instrument below its cost.

If any such evidence exists, any impairment loss is determined and recognised as follows:

An impairment loss in respect of a financial asset measured at amortised cost is calculated as the difference between its carrying amount and the present value of the estimated future cash flows discounted at the original effective interest rate. Individually significant financial assets are tested for impairment on an individual basis. The remaining financial assets are assessed collectively in groups that share similar credit risk characteristics.

All impairment losses are recognised in profit or loss and reflected in an allowance account against such financial assets. An impairment loss is reversed if the reversal can be related objectively to an event occurring after the impairment loss was recognised. The reversal is recognised in profit or loss.

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(o) Impairment** *(continued)*

*Non-financial assets*

The carrying amounts of the Group's non-financial assets, other than inventories and deferred tax assets, are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable amount is estimated. For goodwill and intangible assets that have indefinite lives or are not yet available for use, the recoverable amount is estimated annually whether or not there is any indication of impairment. An impairment loss is recognised whenever the carrying amount of an asset or its related CGU exceeds its recoverable amount. A CGU is the smallest identifiable asset group that generates cash flows that are largely independent from other assets and groups. Impairment losses are recognised in profit or loss. Impairment losses recognised in respect of CGUs are allocated first to reduce the carrying amount of any goodwill allocated to the CGUs (group of units) and then, to reduce the carrying amount of the other assets in the CGU (group of units) on a pro rata basis.

The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the assets. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash flows from continuing use that are largely independent of the cash inflows of the other assets of the CGU.

For the purposes of goodwill impairment testing, goodwill acquired in a business combination is allocated to groups of CGUs that are expected to benefit from the synergies of the combination.

An impairment loss in respect of goodwill is not reversed. In respect of other assets, impairment losses recognised in prior periods are assessed at each reporting date for any indication that the loss has decreased or no longer exists. An impairment loss is reversed through profit or loss if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

**(p) Provisions**

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events where it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate of the amount of the obligation can be made. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability.

Long-term environmental obligations are based on the Group's environmental management plans, in compliance with the current environmental and regulatory requirements.

For the year ended 30 September 2014

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(p) Provisions** *(continued)*

Where it is not possible that an outflow of economic benefits will be required, or the amount cannot be estimated reliably, the obligation is disclosed as a contingent liability, unless the probability of outflow of economic benefits is remote. Possible obligations, whose existence will only be confirmed by the occurrence or non-occurrence of one or more future events are disclosed as contingent liabilities unless the probability of outflow of economic benefits is remote.

*Rehabilitation costs*

The net present value of estimated future costs for mine closure and rehabilitation is recognised and provided for in the consolidated financial statements and capitalised within mining assets on initial recognition. Rehabilitation will generally occur on closure or after closure of a mine. Initial recognition of the provision is at the time that the disturbance occurs and thereafter as and when additional disturbances take place.

The estimates are reviewed annually to take into account the effects of inflation and changes in estimates and are discounted using rates that reflect the time value of money. Annual increases in the provision due to the passage of time are recognised in profit or loss as an unwinding of the value of the provision expense. The present value of additional disturbances and changes in the estimate of the rehabilitation liability is capitalised to mining assets against an increase in the rehabilitation provision. The rehabilitation asset is depreciated as per the Group's accounting policy on depreciation (see note 3(k)). Rehabilitation projects undertaken, included in the estimates, are charged to the provision as incurred.

Costs for restoration and rehabilitation which are created on an ongoing basis during production of inventories are provided for at their net present values and included as part of inventory costs. Environmental liabilities, other than rehabilitation costs, which relate to liabilities arising from specific events, are recognised in the consolidated statement of financial position when they are known, probable and may be reasonably estimated.

Gains or losses from the expected disposal of assets are not taken into account when determining the provision.

**(q) Cash and cash equivalents**

Cash and cash equivalents comprise cash at bank and on hand, demand deposits with banks and other financial institutions, and short-term, highly liquid investments that are readily convertible into known amounts of cash and which are subject to an insignificant risk of changes in value, having been within three months of maturity at acquisition.

**(r) Long term deposits**

Long term deposits is cash and cash equivalents restricted and designated as a "debt service reserve account" as required in terms of the senior debt facility as referred to in note 14.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

**3. SIGNIFICANT ACCOUNTING POLICIES** *(continued)*

**(s) Share capital**

The share capital is stated at nominal value. The difference between the fair value of the consideration received by the Company and the nominal value of the share capital being issued is taken to the share premium account. Incremental costs directly attributable to the issue of ordinary shares are recognised as a deduction from equity, net of any tax effects.

**(t) Related party transactions**

For the purpose of these consolidated financial statements, a party is considered to be related to the Group if:

- (i) The party has the ability, directly or indirectly through one or more intermediaries, to control the Group or exercise significant influence over the Group in making financial and operating policy decisions, or has joint control over the Group;
- (ii) The Group and the party are subject to common control;
- (iii) The party is an associate of the Group or a joint venture in which the Group is a venturer;
- (iv) The party is a member of key management personnel of the Group or the Group's parent, or a close family member of such individual, or is an entity under the control, joint control or significant influence of such individuals;
- (v) The party is a close family member of a party referred to in (i) or is an entity under the control, joint control or significant influence of such individuals; or
- (vi) The party is a post-employment benefit plan which is for the benefit of employees of the Group or of any entity that is a related party of the Group.

Close family members of an individual are those family members who may be expected to influence, or be influenced by, that individual in their dealings with the Group.

**(u) Comparatives**

Where necessary, comparative figures have been adjusted to conform to changes in presentation in the current year.

**(v) Events after the reporting period**

Assets and liabilities are adjusted for events that occurred during the period from the reporting date to the date of approval of the financial statements by the Board of Directors, when these events provide additional information for the valuation of amounts relating to events existing at the reporting date or imply that the going concern concept in relation to part or whole of the Group is not appropriate.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

### 4. OPERATING SEGMENTS

The Group has two reportable segments, the chrome segment and the PGM segment. Information regarding the results of each reportable segment is included below. Performance is measured based on segment revenue, cost of sales and gross profit, as included in the internal management reports that are reviewed by the Group's management. Segment revenue, cost of sales and gross profit are used to measure performance as management believes that such information is the most relevant in evaluating the results of each segment.

#### 30 September 2014

	Chrome US\$'000	PGM US\$'000	Total US\$'000
Revenue	170 366	70 365	240 731
Cost of sales	<u>(153 330)</u>	<u>(53 485)</u>	<u>(206 815)</u>
Gross profit	<u>17 036</u>	<u>16 880</u>	<u>33 916</u>

#### 30 September 2013

	Chrome US\$'000	PGM US\$'000	Total US\$'000
Revenue	161 184	54 271	215 455
Cost of sales	<u>(139 074)</u>	<u>(50 496)</u>	<u>(189 570)</u>
Gross profit	<u>22 110</u>	<u>3 775</u>	<u>25 885</u>

#### Geographical Information

The following table sets out information about the geographical location of (i) the Group's revenue from external customers and (ii) the Group's property, plant and equipment and goodwill ("specified non-current assets"). The geographical location analysis of revenue from external customers is based on the country of establishment of each customer. The geographical location of the specified non-current assets is based on the physical location of the asset in the case of property, plant and equipment, and the location of the operation to which they are allocated in the case of goodwill.

	Years ended 30 September	
	<u>2014</u> US\$'000	<u>2013</u> US\$'000
<b>(i) Revenues from external customers</b>		
The PRC	71 136	93 509
South Africa	94 187	55 011
Singapore	27 220	36 820
Hong Kong	37 653	28 174
Other countries	<u>10 535</u>	<u>1 941</u>
	<u>240 731</u>	<u>215 455</u>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2014

**4. OPERATING SEGMENTS** *(continued)*

**Geographical Information** (continued)

Revenue represents the sales value of goods supplied to customers, net of value-added tax. The Group had two customers with whom transactions have individually exceeded 10% of the Group's revenues. Revenue from the largest customer of the Group represented approximately US\$70 214 thousand and US\$54 104 thousand for each of the years ended 30 September 2014 and 30 September 2013 and corresponds to revenues of the PGM segment and of the chrome segment respectively. Revenue from the second largest customer of the Group represented approximately US\$24 508 thousand and US\$33 414 thousand for each of the years ended 30 September 2014 and 30 September 2013 and corresponds to revenues of the chrome segment and of the PGM segment respectively.

	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>
	US\$'000	US\$'000
<b>(ii) Specified non-current assets</b>		
South Africa	254 547	270 441
Cyprus	14	61
The PRC	<u>6</u>	<u>55</u>
	<u>254 567</u>	<u>270 557</u>

**5. OTHER INCOME**

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
Rental income	39	-
Other income	<u>110</u>	<u>48</u>
	<u>149</u>	<u>48</u>

Rental income relates to the portion of rent recovered by sub tenants and income from houses rented in the area covered by the mining rights.

For the year ended 30 September 2014

**6. SHARE BASED PAYMENTS**

At 30 September 2014, the Company had the following share based payment arrangements:

**Share grant**

The Company granted shares to the employees of the Group conditional on listing of the ordinary shares on the JSE. The grant was made to employees with at least 6 months service prior to listing and the number of shares was fixed with an escalation for the number of years of service prior to the grant. The grant was valued at the private placement price of ZAR38 per share at the time of listing of the Company. Total number of shares granted by the Company to the employees of the Group was 31 635.

An amount of US\$31.64 and US\$115 thousand was charged in share capital and share premium respectively for the ordinary shares issued.

An expense of US\$114 thousand was recognised in profit or loss.

**Conditional Awards "LTIP"**

Conditional Awards are the grant of shares of the Company to employees of the Group and other approved consultants, where the risks and rewards of share ownership will vest on specific vesting dates with the employee subject to certain conditions. As at 30 September 2014, all conditions with regards to the conditional awards of the other approved consultants have been fulfilled. The inaugural award will vest in three equal annual tranches starting one year after grant date. The award, on vesting, may at the election of the Company, be either cash settled or share settled as provided for in the rules of the Plan. Management has confirmed that the Company has both the ability and the intent to settle these awards by the issue of equity instruments.

**Appreciation Awards "SARS"**

Appreciation Rights are the grant of an award in shares of the Company, where the employee is, subject to certain conditions, entitled to receive the increase in the market price of the share above the award price. The appreciation in value may, at the election of the Company, be either cash settled or share settled as provided for in the rules of the Plan. The inaugural award is at an award price of ZAR38 per share and vests in two equal annual tranches with the ability to exercise the award at any time up to five years after the grant date after which it will lapse. Management has confirmed that the Company has both the ability and the intent to settle these awards by the issue of equity instruments.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2014

**6. SHARE BASED PAYMENTS** *(continued)*

<b>Conditional awards issued for the Group</b>	<b>Number</b>
Granted during the year	3 679 129
Outstanding at the end of the year	3 679 129
An expense of US\$90 thousand was recognised in profit or loss.	
Valuation of share option at grant date was ZAR1.64 per share.	

<b>Appreciation rights issued for the Group</b>	<b>Number</b>
Granted during the year	2 051 139
Outstanding at the end of the year	2 051 139
An expense of US\$185 thousand was recognised in profit or loss.	
Valuation of share award at grant date was ZAR4.04 per share.	

**Information on awards granted during the year**

Fair values were determined by a Black Scholes model for the LTIP awards and a Binomial tree model for the SARS awards. The following inputs were used:

• Spot price	ZAR25.00
• Strike price	ZAR38.00
• Expected volatility	33%
• Dividend yield	3.55%
• The risk-free interest rate	Zero coupon swap curve
• Forfeiture assumption	5%

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

### 7. NET FINANCE COSTS

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
<b>Finance income</b>		
Interest income	897	607
Changes in fair value gains on financial assets at fair value through profit or loss	-	256
	<u>897</u>	<u>863</u>
<b>Finance costs</b>		
Changes in fair value gains on financial assets at fair value through profit or loss	(659)	-
Interest expense	(13 400)	(14 336)
Bank charges	(96)	(158)
Net foreign currency losses	(500)	(250)
	<u>(14 655)</u>	<u>(14 744)</u>
<b>Changes in fair value of financial liabilities at fair value through profit or loss</b>	<u>(32 420)</u>	<u>(48 424)</u>
<b>Net finance costs</b>	<u>(46 178)</u>	<u>(62 305)</u>

### 8. DIRECTORS REMUNERATIONS

The remuneration of the directors of the Company for the year ended 30 September 2014 and 2013 is set out in the tables below:

#### 2014 Directors' remuneration

	Directors' fees	Salary	Expense allowance	Other material benefits received	Pension scheme	Total
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
Loucas Pouroulis	-	580	-	-	-	580
Phoevos Pouroulis	-	444	12	14	13	483
Michael Jones	-	360	-	21	54	435
John David Salter	262	-	-	-	-	262
Ioannis Drapaniotis	132	-	-	-	-	132
Antonios Djakouris	191	-	-	-	-	191
Omar Kamal	13	-	-	-	-	13
<b>Total</b>	<u>598</u>	<u>1 384</u>	<u>12</u>	<u>35</u>	<u>67</u>	<u>2 096</u>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2014

**8. DIRECTORS REMUNERATIONS** *(continued)*

**2013 Directors' remuneration**

	Directors' fees	Salary	Expense allowance	Other material benefits received	Pension scheme	Total
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
Loucas Pouroulis	-	715	-	-	-	715
Phoevos Pouroulis	-	538	13	17	16	584
Michael Jones	-	439	-	21	66	526
John David Salter	252	-	-	-	-	252
Ioannis Drapaniotis	155	-	-	-	-	155
Antonios Djakouris	235	-	-	-	-	235
Omar Kamal	-	-	-	-	-	-
Evi Papacleovoulou	50	-	-	-	-	50
Carman Wah Man Chan	40	-	-	-	-	40
<b>Total</b>	<u>732</u>	<u>1 692</u>	<u>13</u>	<u>38</u>	<u>82</u>	<u>2 557</u>

**Share scheme awards offered to the Directors**

During the year ended 30 September 2014, the number of share grants, conditional awards (“LTIPs”) and appreciation rights (“SARS”) awarded to the Directors of the Company is as follows:

	Grants Number	LTIPs Number	SARS Number	Total Number
Loucas Pouroulis	-	161 052	80 526	241 578
Phoevos Pouroulis	-	134 211	67 105	201 316
Michael Jones	-	120 789	60 394	181 183
John David Salter	-	-	-	-
Ioannis Drapaniotis	-	-	-	-
Antonios Djakouris	-	-	-	-
Omar Kamal	-	-	-	-
<b>Total</b>	<u>-</u>	<u>416 052</u>	<u>208 025</u>	<u>624 077</u>

Details of each scheme are disclosed in note 6 of the consolidated financial statements. There were no share award schemes offered by the Group to the Directors for the year ended 30 September 2013.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

### 9. LOSS BEFORE TAX

Loss before tax is arrived at after charging:

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
<b>(a) Staff costs</b>		
Directors' fees	598	732
Directors' salaries and other benefits	1 430	1 742
Salaries, wages and other benefits	19 682	20 005
Contributions to defined contribution retirement plans	1 623	1 540
Equity settled share based payment expense	389	-
	<u>23 722</u>	<u>24 019</u>
<b>(b) Other items</b>		
Allowance for inventory obsolescence (note 16)	1 195	-
Fair value charge of financial assets	-	310
Impairment loss of goodwill (note 13)	72	75
Amounts written off directly in profit or loss	-	81
Impairment loss of property, plant and equipment (note 12)	-	2 097
Write off of property, plant and equipment	25	-
Depreciation (note 12)	10 764	12 438
Fees for professional services for the listing	2 610	3 126
Independent auditors' remuneration	504	608
Operating lease payments	425	342
Marketing fees	1 304	-

### 10. TAX

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
Corporate income tax for the year		
• - Cyprus	765	991
• - South Africa	300	94
Special contribution for defence in Cyprus for the year	1	3
Deferred tax -origination and reversal of temporary differences (note 22)	<u>13 482</u>	<u>(16 613)</u>
Tax charge/(credit)	<u>14 548</u>	<u>(15 525)</u>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

**10. TAX** (continued)

The entities within the Group are taxed in the countries in which they are incorporated and operate at the relevant tax rates as follows:

	Country	Years ended 30 September	
		<u>2014</u>	<u>2013</u>
Tharisa plc	Cyprus	12.5%	12.5%
Tharisa Minerals Proprietary Limited	South Africa	28.0%	28.0%
Tharisa Investments Limited	Cyprus	12.5%	12.5%
Arxo Resources Limited	Cyprus	12.5%	12.5%
Tharisa Fujian Industrial Co., Ltd	The PRC	25.0%	25.0%
Arxo Logistics Proprietary Limited	South Africa	28.0%	28.0%
Tharisa Administration Services Limited	Cyprus	12.5%	12.5%
Tharisa Investments (Hong Kong) Limited	Hong Kong	16.5%	16.5%
Arxo Metals Proprietary Limited	South Africa	28.0%	28.0%
Braeston Corporate Consulting Services Proprietary Limited	South Africa	28.0%	28.0%
Dinami Limited	Guernsey	0.0%	0.0%

Tax rates are not disclosed for the years when subsidiaries were not yet acquired or established by the Group.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2014

**10. TAX (continued)**

**Reconciliation between tax credit and accounting loss at applicable tax rates:**

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
Loss before tax	<u>(40 325)</u>	<u>(62 968)</u>
Notional tax on loss before taxation, calculated at the rates applicable in the jurisdictions concerned	10 203	(25 582)
Non taxable income	(556)	(580)
Non deductible expenses	5 138	10 155
Recognition of deemed interest income for tax purposes	45	171
Tax losses not recognized for deferred tax purposes	288	308
Special contribution to the defence fund (note (i))	1	3
Deferred tax	<u>(571)</u>	<u>-</u>
Tax charge/(credit)	<u>14 548</u>	<u>(15 525)</u>

Notes:

- (i) Special contribution for defence is provided in Cyprus on certain interest income at the rate of 30% (15% until 29 April 2013). 100% of such interest income is treated as non taxable in the computation of chargeable income for corporation tax purposes.
- (ii) No provision for PRC Income Tax was made as the PRC subsidiary has sustained losses for taxation purposes.
- (iii) No provision for Hong Kong Profits Tax was made as the Hong Kong subsidiary did not earn any assessable profits.

**11. LOSS PER SHARE**

**(i) Basic and diluted loss per share**

The calculation of basic and diluted loss per share has been based on the following loss attributable to the ordinary shareholders and the weighted average number of ordinary shares outstanding.

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
Loss for the year attributable to ordinary shareholders	<u>(48 997)</u>	<u>(48 347)</u>
Weighted average number of ordinary shares at 30 September ('000)	<u>247 879</u>	<u>241 591</u>
Basic and diluted loss per share (US\$)	<u>(0.20)</u>	<u>(0.20)</u>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

**11. LOSS PER SHARE** *(continued)*

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	Number of shares ('000)	Number of shares ('000)
Issued ordinary shares at beginning of year	6 170	6 170
Effect of bonus issue of ordinary shares	154 247	154 247
Effect of convertible redeemable preference shares converted into ordinary shares	81 174	81 174
Effect of new issue of ordinary shares including share grants	<u>6 288</u>	<u>-</u>
Weighted average number of ordinary shares at 30 September	<u>247 879</u>	<u>241 591</u>

For the purpose of calculating basic and diluted loss per share, the weighted average number of ordinary shares used in the above calculations reflects the effect of the bonus issue and the conversion of the redeemable convertible preference shares (as disclosed in note 20 of the consolidated financial statements) as if it had occurred at the beginning of the earliest period presented.

At 30 September 2014, LTIP and SARS awards were excluded from the diluted weighted average number of ordinary shares calculation because their effect would have been anti dilutive. The average market value of the Company's shares for the purposes of calculating the potential dilutive effect of SARS was based on quoted market prices for the year during which the options were outstanding.

**(ii) Headline and diluted headline loss per share**

The calculation of headline and diluted headline loss per share has been based on the following headline loss attributable to the ordinary shareholders and the weighted average number of ordinary shares outstanding.

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
Headline loss for the year attributable to the ordinary shareholders (note 11(iii))	<u>(48 925)</u>	<u>(46 762)</u>
Weighted average number of ordinary shares at 30 September (note 11(i)) ('000)	<u>247 879</u>	<u>241 591</u>
Headline and diluted headline loss per share (US\$)	<u>(0.20)</u>	<u>(0.19)</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

### 11. LOSS PER SHARE (continued)

#### (iii) Reconciliation of loss to headline loss

	Years ended 30 September			
	2014		2013	
	US\$'000	US\$'000	US\$'000	US\$'000
	Gross	Net	Gross	Net
Loss attributable to ordinary shareholders of the Company		(48 997)		(48 347)
Adjustments:				
IAS 33 losses				
Impairment of goodwill	72	72	75	75
Impairment loss of PPE - mining assets and infrastructure	-	-	2 097	1 510
Headline loss		<u>(48 925)</u>		<u>(46 762)</u>

### 12. PROPERTY, PLANT AND EQUIPMENT

	<u>Balance at</u>		<u>Additions</u>	<u>Transfers</u>	<u>Disposals</u>	<u>Exchange differences</u>	<u>Balance at</u>	
	<u>1 October</u>						<u>30 September</u>	
	<u>2013</u>	<u>2014</u>					<u>2013</u>	<u>2014</u>
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	
<b>Cost</b>								
Freehold land and buildings	14 645	1 618	2 295	-	(1 760)	16 798		
Mining assets and infrastructure	268 844	22 181	(2 401)	-	(29 636)	258 988		
Leasehold improvements	111	2	30	-	(13)	130		
Computer equipment and software	1 983	339	(118)	(3)	(205)	1 996		
Motor vehicles	280	114	164	(78)	(38)	442		
Office equipment and furniture, social community and site office improvements	465	35	30	-	(46)	484		
	<u>286 328</u>	<u>24 289</u>	<u>-</u>	<u>(81)</u>	<u>(31 698)</u>	<u>278 838</u>		

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

### 12. PROPERTY, PLANT AND EQUIPMENT (continued)

	<u>Balance at</u> <u>1 October</u> <u>2013</u> US\$'000	<u>Charge for</u> <u>the year</u> US\$'000	<u>Written</u> <u>back on</u> <u>disposals</u> US\$'000	<u>Exchange</u> <u>differences</u> US\$'000	<u>Balance at</u> <u>30 September</u> <u>2014</u> US\$'000
<b>Accumulated depreciation</b>					
Freehold land and buildings	11	129	-	(9)	131
Mining assets and infrastructure	16 132	10 023	-	(2 305)	23 850
Leasehold improvements	83	27	-	(10)	100
Computer equipment and software	661	407	(1)	(75)	992
Motor vehicles	98	74	(44)	(11)	117
Office equipment and furniture, social community and site office improvements	213	104	-	(25)	292
	<u>17 198</u>	<u>10 764</u>	<u>(45)</u>	<u>(2 435)</u>	<u>25 482</u>

	<u>Balance at</u> <u>1 October</u> <u>2012</u> US\$'000	<u>Additions</u> US\$'000	<u>Transfers</u> US\$'000	<u>Impairment</u> US\$'000	<u>Exchange</u> <u>differences</u> US\$'000	<u>Balance at</u> <u>30 September</u> <u>2013</u> US\$'000
<b>Cost</b>						
Freehold land and buildings	16 251	1 363	-	-	(2 969)	14 645
Mine development assets under construction	136 718	-	(126 450)	-	(10 268)	-
Mining assets and infrastructure	169 606	21 874	124 681	(2 097)	(45 220)	268 844
Leasehold improvements	77	2	56	-	(24)	111
Computer equipment and software	1 341	932	-	-	(290)	1 983
Motor vehicles	254	60	-	-	(34)	280
Office equipment and furniture, social community and site office improvements	514	85	(56)	-	(78)	465
	<u>324 761</u>	<u>24 316</u>	<u>(1 769)</u>	<u>(2 097)</u>	<u>(58 883)</u>	<u>286 328</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

### 12. PROPERTY, PLANT AND EQUIPMENT (continued)

	<u>Balance at</u> <u>1 October</u> <u>2012</u> US\$'000	<u>Charge for</u> <u>the year</u> US\$'000	<u>Exchange</u> <u>differences</u> US\$'000	<u>Balance at</u> <u>30 September</u> <u>2013</u> US\$'000
<b>Accumulated depreciation</b>				
Freehold land and buildings	-	12	(1)	11
Mining assets and infrastructure	5 965	11 786	(1 619)	16 132
Leasehold improvements	40	55	(12)	83
Computer equipment and software	281	447	(67)	661
Motor vehicles	64	43	(9)	98
Office equipment and furniture, social community and site office improvements	148	95	(30)	213
	<u>6 498</u>	<u>12 438</u>	<u>(1 738)</u>	<u>17 198</u>
		<u>30 September</u> <u>2014</u> US\$'000	<u>30 September</u> <u>2013</u> US\$'000	<u>1 October</u> <u>2012</u> US\$'000
<b>Net book value</b>				
Freehold land and buildings		16 667	14 634	16 251
Mine development assets under construction		-	-	136 718
Mining assets and infrastructure		235 138	252 712	163 641
Leasehold improvements		30	28	37
Computer equipment and software		1 004	1 322	1 060
Motor vehicles		325	182	190
Office equipment and furniture, social community and site office improvements		192	252	366
		<u>253 356</u>	<u>269 130</u>	<u>318 263</u>

All of the Group's land is freehold and located on the farms 342 JQ and Elandsdrift 467 JQ, North West Province. All farms are situated in the North West Province, Registration Division JQ, South Africa.

At 30 September 2014, all of the property, plant and equipment of subsidiary company Tharisa Minerals Proprietary Limited, the carrying amount of which amounted to US\$249 083 thousand (2013: US\$264 357 thousand) is pledged as security against the secured bank borrowing (note 23(a)).

As at 30 September 2014, all of the plant and equipment of a subsidiary company, Arxo Metals Proprietary Limited, the carrying amount of which amounted to US\$3 799 thousand (2013: US\$4 189 thousand) is pledged as security against a third party borrowing (note 23(b)).

There was a change in accounting estimate in the units of production method used to calculate the depreciation on mine assets and infrastructure due to a change in Tharisa Minerals Proprietary Limited's estimated economically recoverable proved and probable reserve from 105.0 Mt to 125.9 Mt during the year, which gave rise to a change in accounting estimate. This change was recognised prospectively. The estimated value of the effect in future periods is US\$1 207 thousand.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2014

**13. GOODWILL**

**(a) Reconciliation of carrying amount**

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
<b>Cost</b>		
Balance at 1 October	1 502	1 384
Acquisition through business combination (note 28)	-	396
Effect of movements in exchange rates	<u>(156)</u>	<u>(278)</u>
Balance at 30 September	<u>1 346</u>	<u>1 502</u>

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
<b>Accumulated impairment losses</b>		
Balance at 1 October	75	-
Impairment of goodwill	72	75
Effect of movements in exchange rates	<u>(12)</u>	<u>-</u>
Balance at 30 September	<u>135</u>	<u>75</u>
<b>Carrying amounts 30 September</b>	<u>1 211</u>	<u>1 427</u>

**(b) Impairment test for goodwill**

Impairment losses were recognised in relation to goodwill which arose from the acquisition of Arxo Logistics Proprietary Limited and Braeston Corporate Consulting Services Proprietary Limited, as follows:

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
Arxo Logistics Proprietary Limited (note 13(b)(i))	55	57
Braeston Corporate Consulting Services Proprietary Limited (note 13(b)(ii))	<u>17</u>	<u>18</u>
<b>Impairment loss</b>	<u>72</u>	<u>75</u>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

**13. GOODWILL** *(continued)*

**(b) Impairment test for goodwill** *(continued)*

**(i) Impairment loss on Arxo Logistics Proprietary Limited**

At 30 September 2014, the carrying amount of Arxo Logistics Proprietary Limited CGU exceeded its recoverable amount and thus impairment was recognised to reduce the carrying amount of goodwill. The recoverable amount is determined based on value-in-use calculation. This calculation uses cash flow projections approved by management covering a thirty one-year period. The growth rates used do not exceed the long-term average growth rates for the business in which the CGU operates. The cash flows are discounted using a nominal discount rate of 11.53%. The discount rate used is a pre-tax nominal rate and reflects specific risks relating to the relevant segment.

**(ii) Impairment loss on Braeston Corporate Consulting Services Proprietary Limited**

At 30 September 2014, the carrying amount of Braeston Corporate Consulting Services Proprietary Limited CGU exceeded its recoverable amount and thus impairment was recognised to reduce the carrying amount of goodwill. The recoverable amount is determined based on value-in-use calculation. This calculation uses cash flow projections approved by management covering a thirty one-year period. The growth rates used do not exceed the long-term average growth rates for the business in which the CGU operates. The cash flows are discounted using a nominal discount rate of 11.53%. The discount rate used is a pre-tax nominal rate and reflects specific risks relating to the relevant segment.

**14. LONG TERM DEPOSITS**

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
Long term deposits	<u>14 479</u>	<u>7 708</u>

As at 30 September 2014 and 30 September 2013, the amounts of US\$14 479 thousand and US\$7 708 thousand respectively were restricted as a security for bank guarantee for the “debt service reserve account” as required within the terms of the Common Terms Agreement for the project financing of Tharisa Minerals Proprietary Limited as disclosed in note 23. This amount will be reduced by the additional amount, if any transferred to Tharisa Minerals Proprietary Limited to its debt service reserve account. The amount of security includes a 10% margin for exchange differences. As at 30 September 2014 and 30 September 2013, long term deposits held by the Company of US\$7 389 thousand and US\$Nil respectively were deposited in a one month notice account with interest of 0.01% p.a and US\$7 090 thousand and US\$7 708 thousand held by Tharisa Minerals Proprietary Limited were deposited in a one month notice account with interest of 2.64% p.a and Nil% p.a respectively.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

### 15. OTHER FINANCIAL ASSETS

	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>
	US\$'000	US\$'000
<i>Non-current:</i>		
Investments in cash funds and income funds (note 15(a))	4 969	3 656
Interest rate caps (note 15(b))	<u>39</u>	<u>118</u>
	<u>5 008</u>	<u>3 774</u>
<i>Current:</i>		
Investments at fair value through profit or loss	86	86
Discount facility (note 15(c))	<u>356</u>	<u>225</u>
	<u>442</u>	<u>311</u>

(a) The investment in cash funds and income funds is provided to Lombard Insurance Group as collateral against the guarantee issued by Lombard Insurance Group to the Department of Mineral Resources of South Africa in the amount of ZAR100.5 million (see note 21). The balance is unsecured and is considered as level 2 in the fair value hierarchy and held at fair value through profit or loss (designated), (note 29(d)).

(b) Interest rate caps were obtained from a consortium of financial institutions, against the floating 3 month Johannesburg Interbank Agreed Rate ("JIBAR") on 25% of the secured bank borrowing (note 23(a)). The interest rate caps have a strike rate of 7.5% and terminate on 31 March 2017. The balance is considered as level 2 in the fair value hierarchy and held at fair value through profit or loss (held for trading), (note 29(d)).

(c) Discount facility relates to fair value adjustments on the limited recourse disclosed receivables discounting facility ("Discount facility") with ABSA, Nedbank and HSBC in terms of which 98% of the sales of platinum, palladium and gold (included in PGM) is sold at an effective finance cost of JIBAR (3 month) + 2%. The facility is for an amount of ZAR300 million. The balance is considered as level 2 in the fair value hierarchy and held at fair value through profit or loss (designated), (note 29(d)).

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2014

**16. INVENTORIES**

	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>
	US\$'000	US\$'000
Finished products	6 891	13 037
Ore stockpile	1 517	1 247
In progress metal	3 011	6 841
Consumables	<u>3 148</u>	<u>2 918</u>
	<u>14 567</u>	<u>24 043</u>

Inventories are stated at the lower of cost and net realisable value.

Inventories have a general notarial bond in favour of the lenders of the senior debt facility as referred to in note 23(a) of the consolidated financial statements.

The analysis of the amount of inventories recognised as an expense and included in profit or loss is as follows:

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
Carrying amount of inventories sold	140 240	120 214
Allowance for inventory obsolescence	<u>1 195</u>	<u>-</u>
	<u>141 435</u>	<u>120 214</u>

All amounts of inventories are expected to be recovered within one year from each reporting date.

**17. TRADE AND OTHER RECEIVABLES**

	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>
	US\$'000	US\$'000
Trade receivables		
- Third parties	27 679	21 140
- Related parties (note 30)	55	55
Deposits, prepayments and other receivables	2 495	1 637
Value added tax recoverable	<u>2 286</u>	<u>6 291</u>
	<u>32 515</u>	<u>29 123</u>

Trade and other receivables of the Group are expected to be recoverable within one year from each reporting date.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2014

**17. TRADE AND OTHER RECEIVABLES** *(continued)*

The ageing of trade receivables after allowance for credit losses was as follows:

	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>
	US\$'000	US\$'000
Current	27 456	21 108
Past due but not impaired	<u>278</u>	<u>87</u>
	<u><u>27 734</u></u>	<u><u>21 195</u></u>

The movement in allowance for credit losses in respect of trade and other receivables of the Group during the year was as follows:

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
Balance at 1 October	-	163
Amounts written off during the year directly against the financial asset	-	(147)
Exchange differences	<u>-</u>	<u>(16)</u>
Balance at 30 September	<u><u>-</u></u>	<u><u>-</u></u>

Trade and other receivables which are less than 90 days past due are not considered to be impaired. Trade and other receivables which are more than 90 days past due are assessed for recoverability with reference to past default experience of the counterparty's current financial position.

At 30 September 2014 an amount of US\$Nil (2013: US\$Nil), of the Group's trade receivables was determined to be impaired. Based on past experience, management believes that no impairment allowance is necessary in respect of the remaining trade and other receivables as there has not been a significant change in credit quality and the balances are still considered fully recoverable. The Group does not hold any collateral over these balances.

The exposure of the Group to credit risk and impairment losses in relation to trade and other receivables is reported in note 29 of the consolidated financial statements.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

### 18. CASH AND CASH EQUIVALENTS

Cash balances are analysed as follows:

	<u>30 September</u> 2014	<u>30 September</u> 2013
	US\$'000	US\$'000
Bank balances	19 370	27 472
Call deposits	<u>259</u>	<u>545</u>
	<u>19 629</u>	<u>28 017</u>

As at 30 September 2014 and 30 September 2013, an amount of US\$1 997 thousand and US\$2 331 thousand respectively was provided as security for a bank guarantee issued in favour of a trade creditor of the Group, an amount of US\$2 500 thousand and US\$2 500 thousand respectively was placed as security against a credit facility of a subsidiary of the Company (note 23(c)) and US\$327 thousand and US\$327 thousand respectively was provided as security against certain credit facilities of the Group.

### 19. SHARE CAPITAL AND RESERVES

#### (a) Movements in components of equity

The reconciliation between the opening and closing balances of each component of the Group's consolidated equity is set out in the consolidated statement of changes in equity.

#### (b) Share capital

At 30 September 2014, the authorised ordinary share capital of the Company consisted of 10 000 000 thousand ordinary shares of US\$0.001 each (2013: 10 000 000 thousand ordinary shares) and 1 051 convertible redeemable preference shares of US\$1 each (2013: 1 051 convertible redeemable preference shares).

During the year ended 30 September 2014 the following changes took place:

- Issue of an additional 154 248 thousand ordinary shares as a bonus issue of 25 ordinary shares for each share held.
- Issue of 13 158 thousand new ordinary shares for cash at a price of ZAR38 per share with a par value of US\$0.001 per share.
- Issue of 81 174 thousand new ordinary shares to holders of the convertible redeemable preference shares of the Company on their conversion in terms of the Articles of Association.
- Issue of 32 thousand new ordinary shares as share grants at nil consideration awarded to the Group's management and staff.

The issued and fully paid share capital of the Company consisted of 254 781 thousand ordinary shares of US\$0.001 each (2013: 6 170 thousand ordinary shares).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

**19. SHARE CAPITAL AND RESERVES** *(continued)*

All shares rank equally with regard to the Company's residual assets. The holders of ordinary shares are entitled to receive dividends as declared from time to time and are entitled to one vote per share at meetings of the Company.

No changes were made to the share capital of the company during the year ended 30 September 2013.

**(c) Nature and purpose of reserves**

*(i) Share premium*

The share premium reserve represents the excess of the issuance price of shares over their nominal value to the extent that it is registered at the Register of Companies of Cyprus. The share premium reserve is not distributed for dividend purposes. During the year the Company issued new share capital following its listing on the JSE. Share issue expenses totalling US\$1 416 thousand have been recognised as a deduction from the share premium account.

*(ii) Other reserve*

Other reserve represents the excess of the issuance price of the Company's ordinary shares over the sum of their nominal value and share premium arising from such issuance as registered with the Registrar of Companies in Cyprus.

*(iii) Foreign currency translation reserve*

The foreign currency translation reserve comprises all foreign currency differences arising from the translation of the financial statements of foreign operations.

*(iv) Revenue reserve*

The revenue reserve includes the accumulated retained profit and losses of the Group. The revenue reserve is distributable for dividend purposes.

**(d) Capital management**

The Company manages its capital to ensure that it will be able to continue as a going concern, while maximising the return to the owners through the optimisation of the debt and equity balance. The policy of the the Board of Directors is to maintain a strong capital base to sustain future development of the business. The Company is not exposed to externally imposed capital requirements.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

### 20. REDEEMABLE PREFERENCE SHARES

	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>
	US\$'000	US\$'000
Convertible redeemable preference shares of the Company (note 20(a))	-	<u>260 291</u>
Class B preference shares of a subsidiary (note 20(b))	-	<u>12 171</u>
<b>(a) Terms of convertible redeemable preference shares of the Company</b>		

Convertible redeemable preference shares relate to convertible redeemable preference shares of the Company. The authorised convertible redeemable preference share capital of the Company was US\$1 051 at 30 September 2014 and 30 September 2013, divided into 1 051 shares of US\$1.00 each. The issued convertible redeemable preference share capital of the Company consisted of Nil and 1 051 shares at 30 September 2014 and 30 September 2013 respectively. All shares were issued on 14 April 2011, at a price of US\$142 857 each and were fully paid. Convertible redeemable preference shares rank before ordinary shares with respect to the return of the nominal value of capital and share premium but rank equally with ordinary shares with respect to the Company's residual assets after return of the nominal amount of capital and share premium. The holders of convertible redeemable preference shares were entitled to receive dividends as declared from time to time and are entitled to one vote per share at meetings of the Company.

Following the Company's listing on the JSE, the convertible redeemable preference shares were converted into fully paid ordinary shares.

The conversion was calculated as per the conversion clause described in the Articles of Association at the higher of the following:

- (i) 1 420 ordinary shares for every one convertible redeemable preference share; or
- (ii) The number of ordinary shares calculated by dividing the notional return amount by the offer price per ordinary share in an IPO, or on the sale of any of the shares in the capital of the Company which will result in the purchaser of those shares acquiring control of the Company or in the sale of all or substantially all assets of the Company and its subsidiaries.

The notional return amount is the amount calculated by applying to the subscription price for each convertible redeemable preference share an internal rate of return ("IRR") of 25%, taking into account any cash dividends which have been paid by the Company to the holders of the convertible redeemable preference shares between the subscription date and the conversion date.

Applying the conversion provisions, the convertible redeemable preference shares were converted into 81 174 thousand ordinary shares as also detailed in note 19.

The fair value of the convertible redeemable preference shares up to the date of the listing and their conversion into ordinary shares is measured using a probability weighted expected return method as set out in note 29(e)(iii).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

**20. REDEEMABLE PREFERENCE SHARES** *(continued)*

**(b) Terms of Class B preference shares of a subsidiary**

Class B preference shares relate to cumulative redeemable preference shares of Tharisa Minerals Proprietary Limited.

Pursuant to the terms of Class B preference shares and following the listing of the Company on the JSE, the capital portion of the Class B preference shares was redeemed on 16 May 2014. Dividends accruing but not paid to the Class B preference shareholders have been reclassified under trade and other payables and bear interest at the South African prime bank overdraft rate + 2%.

**21. PROVISIONS**

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
<b>Provision for future rehabilitation</b>		
Balance at 1 October	4 738	11 391
Capitalised to inventories	(137)	(3 774)
Capitalised to mining assets and infrastructure	2	(1 653)
Recognised in profit or loss	355	354
Exchange differences	<u>(506)</u>	<u>(1 580)</u>
Balance at 30 September	<u>4 452</u>	<u>4 738</u>

As detailed in (note 3(p)), the Group has a legal obligation to rehabilitate the site where the Group's mine is located, once the mining operations cease which would be when the current mine life of the project expires.

An insurance company has provided a guarantee to the Department of Mineral Resources of South Africa to satisfy the requirements of the Mineral and Petroleum Resources Development Act with respect to environmental rehabilitation and the Group has pledged as collateral its investments in interest-bearing debt instruments to the insurance company to support this guarantee (see note 15(a)).

The interest rate used for estimating future costs is the long-term risk free rate as indicated by the R186 government bond of South Africa, which was 8.33% and 7.92% as at 30 September 2014 and 2013, respectively. The net present value of the current rehabilitation estimate is based on the average of the long-term inflation target range of the South African Reserve Bank of 4.5% (2013: 4.5%).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

22. DEFERRED TAX

Deferred tax balances are analysed as follows:

	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>
	US\$'000	US\$'000
Deferred tax assets	5 970	20 623
Deferred tax liabilities	<u>(20)</u>	<u>-</u>
	<u>5 950</u>	<u>20 623</u>
	<u>Years ended 30 September</u> <u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
<b>Recognised deferred tax assets/ (liabilities)</b>		
Balance at 1 October	<u>20 623</u>	<u>6 403</u>
Temporary differences recognised in profit or loss in relation to:		
- Capital allowances on property, plant and equipment	122	(731)
- Provisions	81	(1 420)
- Tax losses	3 548	15 401
- Others	<u>(17 233)</u>	<u>3 363</u>
	<u>(13 482)</u>	<u>16 613</u>
Exchange difference	(1 191)	(2 393)
Balance at 30 September	<u>5 950</u>	<u>20 623</u>

During the year, the Group reassessed the recoverability of its deferred tax asset which arises at the South African level. The reassessment resulted primarily from the further losses incurred by Tharisa Minerals Proprietary Limited in the current financial year and the matters referred to in the going concern assessment detailed in note 2(d), particularly relating to the trend of declining commodity prices experienced during the year.

A significant component of the deferred tax asset relates to the foreign exchange losses on the preference share liability of Tharisa Minerals Proprietary Limited, which is denominated in US\$. The exchange losses can only be claimed on redemption of the preference shares. The aforementioned factors have resulted in a revised cash flow forecast which indicates that the earliest redemption date of the preference shares is unlikely to be in the near term.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

**22. DEFERRED TAX** (*continued*)

While the Group remains confident that the commodity prices will recover, based on the current commodity prices and the uncertainty of future prices, the Group is of the view that it would be prudent to take a more near term view in assessing the likelihood of utilising the deferred tax asset and has therefore derecognised a portion of the deferred tax asset that was recognised by Tharisa Minerals Proprietary Limited. As a result, the Group has derecognised US\$13 142 thousand of its deferred tax asset and did not recognise a further US\$9 324 thousand that arose during the year.

The estimates used to assess the recoverability of the recognised deferred tax asset include the following: i) an increase in commodity prices from the average prices achieved in November 2014 of 4.5% (being the mid-point of the SARB inflation target) per annum with effect from 1 April 2015; ii) the cash flow projections were based on a 3 year period (in assessing the earliest commencement of the redemption of the preference share liability) and iii) forecast of taxable income.

In assessing the recoverability of the deferred tax recognised, management is satisfied that Tharisa Minerals Proprietary Limited will generate sufficient taxable income against which the recognised deferred tax asset on the tax losses and deductible temporary differences can be utilised.

The Group did not have tax losses and temporary differences for which deferred tax was not recognised except that the Group has not recognised deferred tax assets in respect of a subsidiary's tax losses of US\$1 273 thousand and US\$980 thousand as at 30 September 2014 and 2013, as it is not probable that future taxable profits against which the losses can be utilised will be available in the relevant tax jurisdiction and entity. The tax losses at 30 September 2014 and 2013 expire in 2019 and 2018 respectively.

**23. BORROWINGS**

	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>
	US\$'000	US\$'000
<i>Non-current:</i>		
Secured bank borrowing (note 23(a))	63 333	90 833
Other borrowings - loans payable to third parties (note 23(b))	<u>890</u>	<u>1 979</u>
	<u>64 223</u>	<u>92 812</u>
<i>Current:</i>		
Secured bank borrowing (note 23(a))	17 899	19 854
Other borrowings – loans payable to third parties (note 23(b))	1 095	1 354
Other borrowings – bank credit and other facility (note 23(c))	9 775	12 610
Other borrowings - loans payable to related parties (note 30)	<u>2 217</u>	<u>2 870</u>
	<u>30 986</u>	<u>36 688</u>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

**23. BORROWINGS** (*continued*)

(a) During the year ended 30 September 2012 the Group obtained financing of ZAR1 billion from a consortium of banks in South Africa, to finance the expansion projects of its mining activities. The financing is for a period of 7 years and is repayable in 22 equal quarterly installments, with the first repayment date at 31 December 2013. The financing was obtained by Tharisa Minerals Proprietary Limited, a subsidiary of the Group.

Repayments are subject to a cash sweep which will reduce the repayment period to a minimum of five years. Tharisa Minerals Proprietary Limited is required to maintain funds in a debt service reserve account, refer to note 14, and may utilize funds in this account, with the prior written consent of the lenders for the purpose of making a repayment in the event that Tharisa Minerals Proprietary Limited does not have the necessary funds available to make the debt repayment. The financing bears interest at 3 month JIBAR + 3.4% to 3.9% per annum. The financing is secured by the assets of the subsidiary and by the shares of the Company in the subsidiary and is also guaranteed by the Company.

The loan contains the following financial covenants:

- Debt service cover ratio ("DSCR") at a level greater than 1.4 times
- Loan life cover ratio at a level greater than 1.6 times
- Debt/equity ratio at a level greater than 1.5 times
- Reserve tail ratio at a level of 30% or greater.

As at 30 September 2014 Tharisa Minerals Proprietary Limited complied with all covenant ratios, except for the historic DSCR which was calculated as -0.36. The historic DSCR is calculated as the cash flow available for repayment divided by the actual repayment for the six month period preceding the covenant measurement date. The lenders granted a waiver on the requirement as at 30 September 2014. Repayment terms were not renegotiated but the interest rate was increased by 1% to JIBAR + 4.9% prior to technical completion. The technical completion date was extended to 28 November 2015. The company hedges a portion of the facility for interest rate risk via an interest rate cap. As described in note 14, an amount of US\$14 409 thousand was restricted as a security for a bank guarantee by the Company and Tharisa Minerals Proprietary Limited.

(b) During the year ended 30 September 2012 a subsidiary of the Group obtained a credit facility of ZAR35 000 thousand from a third party. The facility is payable in 36 equal monthly instalments commencing 7 months after the first draw down. Interest on the facility utilized as at the prevailing South African prime interest rate. The financing was obtained by Arxo Metals Proprietary Limited, a subsidiary of the Group, and is secured by the assets of the subsidiary.

(c) During the year ended 30 September 2013 the Group obtained a US\$12 500 thousand bank credit facility that allows the Group to receive a percentage of trade receivables on receipt of an acceptable letter of credit which results in significant shortening of the credit period. This facility has a tenor of 60 days and is secured by cash and cash equivalents of the Group of US\$2 500 thousand and is also guaranteed by the Company. The other facility relates to the discounting of the letters of credits by the Group's banks following performance of the letter of credit conditions by the Group which results in funds being received in advance of the normal payment date. Interest on these facilities ranges from US Libor + 1.5% to 2.5%.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

### 24. CURRENT TAXATION

Current taxation in the statements of financial position represents:

	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>
	US\$'000	US\$'000
Corporate income tax recoverable (note 24(a))	<u>3</u>	<u>-</u>
Corporate income tax payable (note 24(b))	<u>421</u>	<u>294</u>

(a) The above amounts are provided in Cyprus.

(b) The above amounts are provided in Cyprus and South Africa.

### 25. TRADE AND OTHER PAYABLES

	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>
	US\$'000	US\$'000
Trade payables - third parties	13 775	14 340
Amount due to related parties (note 30)	108	150
Other payables	466	678
Accruals	15 524	13 721
Leave pay provision	1 700	1 631
Operating lease payable	9	74
Interest bearing - accrued dividends (note 20(b))	5 433	-
Value added tax payable	<u>209</u>	<u>209</u>
	<u>37 224</u>	<u>30 803</u>

The above amounts are payable within one year from the reporting period.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2014

**26. PARTICIPATION OF DIRECTORS IN THE COMPANY'S SHARE CAPITAL**

The percentage of share capital of the Company held directly or indirectly by each member of the Board of Directors, as at 30 September 2014 and 30 September 2013 were as follows:

	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>
	%	%
Loucas Pouroulis	-	-
Phoevos Pouroulis	2.62	-
Michael Jones	-	-
John David Salter	-	-
Ioannis Drapaniotis	-	-
Antonios Djakouris	-	-
Omar Kamal	<u>0.14</u>	<u>-</u>
Total	<u><u>2.76</u></u>	<u><u>-</u></u>

There has been no change in the Directors' interests in the share capital of the Company between the end of the financial year and the date of the approval of the annual consolidated financial statements.

**27. ANALYSIS OF SHAREHOLDERS**

The shareholders holding directly or indirectly more than 5% of the share capital and their respective number of shares as at 30 September 2014 is as follows:

		<u>30 September</u> <u>2014</u>
	No of shares	%
Medway Developments Limited	119 030 07	46.72
LCC Pershing	40 548 24	15.91
Fujian Wuhang Stainless Steel Products Co. Limited	28 070 21	11.02
Maaden Invest Limited	<u>14 989 35</u>	<u>5.88</u>

There has been no change in the shareholders holding more than 5% of the share capital of the Company between the end of the financial year and the date of the approval of the annual consolidated financial statements.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

### 27. ANALYSIS OF SHAREHOLDERS *(continued)*

An analysis of the public and non public shareholders of the Company as at 30 September 2014 is as follows:

	<u>Number of shareholders</u>	<u>Number of shares</u>	<u>% of issued share capital</u>
Public	110	60 159 025	23.61
Non Public:			
Directors and associates of the Company and its subsidiaries	3	126 003 169	49.46
Persons interested (other than directors), directly or indirectly , in 10% or more	<u>2</u>	<u>68 618 452</u>	<u>26.93</u>
	<u>115</u>	<u>254 780 646</u>	<u>100.00</u>

### 28. BUSINESS COMBINATIONS

#### Acquisition of a subsidiary

##### *Braeston Corporate Consulting Services Proprietary Limited :*

On 1 April 2013, Tharisa Administration Services Limited acquired 100% of the ordinary share capital of Braeston Corporate Consulting Services Proprietary Limited for US\$108. Braeston Corporate Consulting Services Proprietary Limited is a South African company that was acquired to provide and centralize management and administration services primarily to other group companies. The subsidiary contributed revenue of US\$4 thousand to the Group during the period from 1 April 2013 to 30 September 2013. The subsidiary contributed a loss of US\$339 thousand during the period from 1 April 2013 to 30 September 2013. If the acquisition had occurred on 1 October 2012, the subsidiary would have contributed revenue and loss of US\$6 thousand and US\$384 thousand respectively for the year ended 30 September 2013.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2014

**28. BUSINESS COMBINATIONS** *(continued)*

**Acquisition of a subsidiary** *(continued)*

Details of net assets acquired and goodwill are as follows:

	<u>Carrying amounts and fair values</u> US\$'000
Trade and other receivables	17
Cash and cash equivalents	154
Trade payables	(80)
Borrowings	<u>(487)</u>
	(396)
Goodwill arising from acquisition (note 13)	<u>396</u>
Consideration paid satisfied in cash	-
Cash acquired	<u>(154)</u>
Net cash inflow in respect of the acquisition of subsidiary	<u><u>(154)</u></u>

Management has assessed that the fair values of the identifiable assets acquired and liabilities assumed were approximately the same as the amounts presented in the books of the subsidiary on the acquisition date.

**29. FINANCIAL RISK MANAGEMENT**

In the ordinary course of business the Group is exposed to credit risk, liquidity risk, and market risk. This note presents information about the Group's exposure to each of the above risks and its objectives, policies and processes for measuring and managing risks. Further quantitative disclosures are included throughout this note.

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

The Board of Directors has overall responsibility for the establishment and oversight of the Group's risk management framework.

**29. FINANCIAL RISK MANAGEMENT** *(continued)*

**(a) Credit risk**

Credit risk is the risk of financial loss to the Group if a customer or a counterparty to a financial instrument fails to meet its contractual obligations and arises principally from the Group's trade and other receivables and cash and cash equivalents and deposits.

*Trade and other receivables*

The Group's exposure to credit risk is influenced mainly by the individual characteristics of each customer. However, management also considers the demographics of the Group's customer base, including the default risk of the industry and country, in which customers operate, as these factors may have an influence on credit risk. In monitoring customer credit risk, management reviews on a regular basis the ageing of trade and other receivables to obtain comfort that there are no past due amounts.

The Group establishes an allowance for credit losses that represents its estimate of incurred losses in respect of trade and other receivables. The main component of this allowance is a specific loss component that relates to individually significant exposures. As at 30 September 2014 and 2013, none of the carrying amounts of trade and other receivables is either past due or impaired, for which an allowance for credit losses is necessary. Receivables that were neither past due nor impaired relate to customers for whom there was no recent history of default and who have a good track record with the Group.

The allowance for credit losses in respect of trade and other receivables is used to record credit losses unless management is satisfied that no recovery of the amount owing is possible and at that point the amount considered irrecoverable is written off against the financial asset directly.

The most significant exposure of the Group to credit risk is represented by the carrying amount of trade receivables. The Board of Directors performs regular ageing reviews of trade receivables to identify any doubtful balances. Based on the review performed for the reporting period, the Board of Directors concluded that no additional allowance for credit losses is necessary in respect of trade receivables. 41% and 37% of the total trade receivables were due from the Group's largest customer as at 30 September 2014 and 30 September 2013, respectively.

*Cash and cash equivalents and deposits:*

The Group limits its exposures on cash and cash equivalents and deposits by dealing only with well-established financial institutions of high quality credit standing. The majority of the Group's cash resources were deposited with HSBC based in Hong Kong and South Africa.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2014

**29. FINANCIAL RISK MANAGEMENT** *(continued)*

**(b) Liquidity risk**

Liquidity risk is the risk that the Group will encounter difficulties in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation. Typically the Group ensures that it has sufficient cash on demand to meet expected operational expenses, including the servicing of financial obligations. This excludes the potential impact of extreme circumstances that cannot reasonably be predicted, such as natural disasters. In addition, financial risk management may not be possible for instances of the forecast production not being achieved and/or South African Rand commodity prices weaken, as discussed in note 2(d) which circumstances may create a material uncertainty in relation to the going concern of the Group.

The following table shows the remaining contractual maturities of the Group's financial liabilities at the end of the reporting period, which are based on contractual undiscounted cash flows (including interest payments computed using contractual rates or, if floating, based on rates current at the end of the reporting period) and the earliest date the Group can be required to pay:

**30 September 2014**

	<b>Contractual undiscounted cash outflow</b>				Total	Carrying amount At 30 September
	Within 1 year or on demand	More than 1 year but less than 2 years	More than 2 years but less than 5 years	More than 5 years		
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
Borrowings	39 851	25 437	52 647	-	117 935	95 209
Trade and other payables	37 224	-	-	-	37 224	37 224
Current taxation	421	-	-	-	421	421
	<u>77 496</u>	<u>25 437</u>	<u>52 647</u>	<u>-</u>	<u>155 580</u>	<u>132 854</u>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

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**29. FINANCIAL RISK MANAGEMENT** *(continued)*

**(b) Liquidity risk** *(continued)*

**30 September 2013**

	<b>Contractual undiscounted cash outflow</b>					Carrying amount At 30 September US\$'000
	Within 1 year or on demand US\$'000	More than 1 year but less than 2 years US\$'000	More than 2 years but less than 5 years US\$'000	More than 5 years US\$'000	Total US\$'000	
Borrowings	46 866	29 531	74 048	10 612	161 057	129 500
Trade and other payables	30 803	-	-	-	30 803	30 803
Class B preference shares	12 171	-	-	-	12 171	12 171
Current taxation	294	-	-	-	294	294
	<u>90 134</u>	<u>29 531</u>	<u>74 048</u>	<u>10 612</u>	<u>204 325</u>	<u>172 768</u>

**(c) Market risk**

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates, will affect the Group's income and the values of its financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return.

*(i) Currency risk*

Currency risk is the risk that the value of financial instruments will fluctuate due to changes in foreign exchange rates. Currency risk arises when future commercial transactions and recognised assets and liabilities are denominated in a currency that is not the Group's functional currency.

The Group is exposed to currency risk on transactions that are denominated in a currency other than the respective functional currency of the Group entities. These currency risk exposures arise primarily from exchange rate movements in ZAR, Euro (€), British Sterling (STG) and US\$.

Typically the Group monitors currency fluctuations and evaluates the potential impact on its operations when possible. Financial risk management may not be possible for instances of the forecast production not being achieved and/or South African Rand commodity prices weaken, as discussed in note 2(d) which circumstances may create a material uncertainty in relation to the going concern of the Group.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

### 29. FINANCIAL RISK MANAGEMENT (continued)

#### (c) Market risk (continued)

##### (i) Currency risk (continued)

The following table details the Group's exposure at the end of each reporting period to currency risk arising from recognised assets and liabilities denominated in a currency other than the functional currency of the entity to which they relate. Exposures in US\$ relate to recognized assets and liabilities denominated in US\$ of entities of the Group that have a functional currency other than the US\$. For presentation purposes, the amounts of the exposure are shown in US\$, translated using the spot rate at the reporting date. Differences resulting from the translation of the financial statements of foreign operations into the Group's presentation currency are excluded.

At the reporting date the Group's exposure to currency risk was as follows:

Amounts in US\$'000	<u>30 September 2014</u>				<u>30 September 2013</u>			
	US\$	ZAR	€	STG	US\$	ZAR	€	STG
Trade and other receivables	-	12	91	-	-	45	377	-
Cash and cash equivalents	4 226	2 726	67	2	6 227	123	85	1
Trade and other payables	-	(35)	(355)	(1)	-	(89)	(565)	(88)
Current taxation	-	-	(371)	-	-	-	(274)	-
	<u>4 226</u>	<u>2 703</u>	<u>(568)</u>	<u>1</u>	<u>6 227</u>	<u>79</u>	<u>(377)</u>	<u>(87)</u>

A 10% strengthening of the US\$ against the above currencies at the reporting date would have changed losses and equity by the amounts shown below. This analysis assumes that all other variables, and in particular interest rates, remain constant. The analysis has been performed on the same basis for each reporting date.

	<u>30 September</u>	<u>30 September</u>
	<u>2014</u>	<u>2013</u>
	<u>(Decrease)/increase</u>	<u>(Decrease)/increase</u>
	<u>in loss for the year</u>	<u>in loss for the year</u>
	<u>and accumulated</u>	<u>and accumulated</u>
	<u>losses</u>	<u>losses</u>
	US\$'000	US\$'000
ZAR	<u>(246)</u>	<u>(7)</u>
€	<u>52</u>	<u>34</u>
US\$	<u>(488)</u>	<u>(724)</u>
STG	<u>-</u>	<u>8</u>

A 10% weakening of the US\$ against the above currencies at each reporting date would have had an equal but opposite effect to the amounts shown above, on the basis that all other variables remain constant.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

29. FINANCIAL RISK MANAGEMENT (continued)

(c) Market risk (continued)

(ii) Interest rate risk

Interest rate risk is the Group's exposure to adverse movements in interest rates. It arises as a result of timing differences on the repricing of assets and liabilities.

As at the reporting date, the interest rate profile of the Group was as follows :

	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>
	%	%	US\$'000	US\$'000
<b>Variable rate financial assets</b>				
Investments in cash funds and income funds	3.5%	3.5%	<u>4 969</u>	<u>3 656</u>
<b>Variable rate financial liabilities</b>				
Secured bank borrowing	JIBAR + 3.9%	JIBAR +3.9%	81 232	110 687
Other borrowings – loans payable to third parties	ZAR prime	ZAR prime	1 985	3 333
Other borrowings – bank credit and other facility	US libor +1.5% -2.5%	US libor +1.5%- 2.5%	9 775	12 610
Other borrowings - loans payable to related parties	ZAR prime + 2%	ZAR prime+ 2%	2 217	2 870
Interest bearing - accrued dividends	ZAR prime + 2%	ZAR prime+ 2%	5 433	-
Class B preference shares	ZAR prime + 2%	ZAR prime+ 2%	-	<u>12 171</u>
			<u>100 642</u>	<u>141 671</u>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

**29. FINANCIAL RISK MANAGEMENT** *(continued)*

**(c) Market risk** *(continued)*

*(ii) Interest rate risk (continued)*

A change of 100 basis points in interest rates at each reporting date would have changed losses and equity by the amounts shown below. This analysis assumes that all other variables, and in particular foreign currency rates, remain constant. The analysis has been performed on the same basis for each reporting date.

	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>
	<u>Increase/(decrease)</u> <u>in loss for the year</u> <u>and accumulated</u> <u>losses</u>	<u>Increase/(decrease)</u> <u>in loss for the year</u> <u>and accumulated</u> <u>losses</u>
	US\$'000	US\$'000
Investments in cash funds and income funds	36	26
Secured bank borrowing	(585)	(797)
Other borrowings – loans payable to third parties	(14)	(24)
Other borrowings – bank credit and other facility	(86)	(90)
Other borrowings - loans payable to related parties	(16)	(20)
Interest bearing - accrued dividends	(39)	-
Class B preference shares	-	(88)
	<u>(704)</u>	<u>(993)</u>

A decrease of 100 basis points in interest rates at each reporting date would have had an equal but opposite effect to the amounts shown above, on the basis that all other variables remain constant.

**(d) Fair values**

The Board of Directors considers that the fair values of significant financial assets and financial liabilities approximate to their carrying values at each reporting date.

*Financial instruments carried at fair value:*

The following table presents the carrying values of financial instruments measured at fair value at the end of each reporting period across the three levels of the fair value hierarchy defined in IFRS 13, *Fair Value Measurement*, with the fair value of each financial instrument categorised in its entirety based on the lowest level of input that is significant to that fair value measurement.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2014

**29. FINANCIAL RISK MANAGEMENT** *(continued)*

**(d) Fair values** *(continued)*

The levels are defined as follows:

- Level 1 (highest level): fair values measured using quoted prices (unadjusted) in active markets for identical financial instruments
- Level 2: fair values measured using quoted prices in active markets for similar financial instruments, or using valuation methodologies in which all significant inputs are directly or indirectly based on observable market data
- Level 3: fair values measured using valuation methodologies in which any significant inputs are not based on observable market data.

**30 September 2014**

	Level 1 US\$'000	Level 2 US\$'000	Level 3 US\$'000
Financial assets			
– Investments in cash funds and income funds	-	4 969	-
– Interest rate caps	-	39	-
– Investments at fair value through profit or loss	86	-	-
– Discount facility	-	356	-
	<u>86</u>	<u>5 364</u>	<u>-</u>

Liabilities

- Convertible redeemable preference shares

	<u>-</u>	<u>-</u>	<u>-</u>
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**30 September 2013**

	Level 1 US\$'000	Level 2 US\$'000	Level 3 US\$'000
Financial assets			
– Investments in cash funds and income funds	-	3 656	-
– Interest rate caps	-	118	-
– Investments at fair value through profit or loss	86	-	-
– Discount facility	-	225	-
	<u>86</u>	<u>3 999</u>	<u>-</u>

Liabilities

- Convertible redeemable preference shares

	<u>-</u>	<u>-</u>	<u>260 291</u>
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## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

### 29. FINANCIAL RISK MANAGEMENT *(continued)*

#### (d) Fair values *(continued)*

The movement during the years ended 30 September 2014 and 2013 in the balance of Level 3 fair value measurements is as follows:

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
<i>Convertible redeemable preference shares</i>		
Balance at 1 October	260 291	212 791
Changes in fair value of financial liabilities at fair value through profit or loss	32 420	47 500
Conversion of redeemable convertible preference shares into ordinary shares	<u>(292 711)</u>	<u>-</u>
Balance at 30 September	<u>-</u>	<u>260 291</u>
Total gains or losses for the year included in profit or loss	<u>32 420</u>	<u>47 500</u>
<i>Class B preference shares</i>		
Balance at 1 October	-	12 548
Derecognition from fair value basis to amortised cost upon term changes (see note 20(b))	-	(13 289)
Changes in fair value of financial liabilities at fair value through profit or loss	<u>-</u>	<u>741</u>
Balance at 30 September	<u>-</u>	<u>-</u>
Total gains or losses for the year included in profit or loss	<u>-</u>	<u>741</u>
<i>Other borrowings – loan payable to Langa Trust</i>		
Balance at 1 October	-	2 935
Recognition at fair value through profit or loss upon term changes (see note 30)	-	(3 118)
Changes in fair value of financial liabilities at fair value through profit or loss	<u>-</u>	<u>183</u>
Balance at 30 September	<u>-</u>	<u>-</u>
Total gains or losses for the year included in profit or loss	<u>-</u>	<u>183</u>

#### (e) Estimation of fair values

The following summarises the major methods and assumptions used in estimating the fair values of financial instruments.

For the year ended 30 September 2014

**29. FINANCIAL RISK MANAGEMENT** *(continued)*

**(e) Estimation of fair values** *(continued)*

*(i) Investments in cash funds and income funds, investments at fair value through profit or loss, forward exchange contracts and interest rate caps:*

Fair values are based on quoted market prices at the end of the reporting period without any deduction for transaction costs.

*(ii) Discount facility*

The fair values are calculated by multiplying the actual metal quantities per discounted invoice with the difference between the hedged metal price per discounted invoice and the average spot metal price translated to ZAR using the average monthly rate.

*(iii) Convertible redeemable preference shares*

The estimate of the fair value of these financial liabilities is measured using the probability weighted expected return method, which values the financial liabilities based on the likelihood and expected settlement values of the respective expected settlement scenarios, discounted to their present value at the valuation date.

Estimation of the settlement values of the financial liabilities requires an estimation of the equity value of the Group using discounted cash flow techniques. Estimated future cash flows of the Group are based on management's best estimates and the discount rates used are market related rates reflecting the risks specific to the respective operations of the Group.

The underlying assumptions in the fair value measurements include a nominal discount rate of 11.53%, which is a pre-tax nominal rate and reflects specific risks relevant to the operations of the Company and its subsidiaries, a risk-free rate of 2.14%, which is the average yield of 10 year US treasury bond, and an inflation rate of 2.1%, which is the projected long-term US inflation rate. The Board of Directors is of the opinion that the above rates are more relevant to the operations of the Company and its subsidiaries, since revenues of the Company and its subsidiaries are generated in US\$, which also the functional currency of the Company.

No sensitivity analysis is presented as the convertible redeemable preference shares were converted into ordinary shares upon listing of the Company's shares on the JSE on 10 April 2014.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2014

**30. RELATED PARTY TRANSACTIONS**

The balances with related parties at each reporting date were as follows:

	<u>30 September</u> <u>2014</u> US\$'000	<u>30 September</u> <u>2013</u> US\$'000
<b>Trade and other receivables</b>		
Kameni Management Services Proprietary Limited	17	21
Salene Mining Proprietary Limited	9	10
Kameni Proprietary Limited	22	24
Keaton Administrative and Technical Services Proprietary Limited	<u>7</u>	<u>-</u>
	<u>55</u>	<u>55</u>
<b>Loans payable to related parties</b>		
Langa Trust	<u>2 217</u>	<u>2 870</u>

The terms of the loan with Langa Trust were amended to having no fixed repayment terms following its partial repayment by US\$700 thousand approximately. The Langa Trust loan bears interest at prime + 2%.

	<u>30 September</u> <u>2014</u> US\$'000	<u>30 September</u> <u>2013</u> US\$'000
<b>Amounts due to related parties</b>		
Evi Papacleovoulou	-	34
Keaton Administrative and Technical Services Proprietary Limited	-	1
Kameni Management Services Proprietary Limited	2	11
Director- Antonios Djakouris	32	38
Director- John David Salter	37	28
Director- Ioannis Drapaniotis	26	38
Director- Omar Kamal	<u>11</u>	<u>-</u>
	<u>108</u>	<u>150</u>

The above amounts are unsecured, interest free and with no fixed repayment dates.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

For the year ended 30 September 2014

**30. RELATED PARTY TRANSACTIONS (continued)**

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
<b>Interest bearing - accrued dividends to related parties</b>		
Arti Trust	2 849	-
Ditodi Trust	243	-
Makhaye Trust	243	-
The Phax Trust	485	-
The Rowad Trust	243	-
Moira June Jacquet-Briner	243	-
	<u>4 306</u>	<u>-</u>

Class B preference shares of a subsidiary held by related parties are as follows:

	30 September 2014		30 September 2013	
	<u>Number of shares</u>	<u>Carrying amount US\$'000</u>	<u>Number of shares</u>	<u>Carrying amount US\$'000</u>
Arti Trust	-	-	4 000	6 998
Ditodi Trust	-	-	300	485
Makhaye Trust	-	-	300	485
The Phax Trust	-	-	600	970
The Rowad Trust	-	-	300	485
Moira June Jacquet-Briner	-	-	300	485
	<u>-</u>	<u>-</u>	<u>5 800</u>	<u>9 908</u>

Convertible redeemable preference shares of the Company held by related parties.

	30 September 2014		30 September 2013	
	<u>Number of shares</u>	<u>US\$'000</u>	<u>Number of shares</u>	<u>US\$'000</u>
Fujian Wuhang Stainless Steel Products Co. Limited	-	-	112	27 738
	<u>-</u>	<u>-</u>	<u>112</u>	<u>27 738</u>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

**30. RELATED PARTY TRANSACTIONS** *(continued)*

Significant transactions carried at arms length with related parties during the year were as follows:

	Years ended 30 September	
	<u>2014</u>	<u>2013</u>
	US\$'000	US\$'000
<b>Interest expense</b>		
Langa Trust	285	311
Arti Trust	515	661
Ditodi Trust	44	56
Makhaye Trust	44	56
The Phax Trust	88	112
The Rowad Trust	44	56
Moira June Jacquet-Briner	44	56
	<u>1 064</u>	<u>1 308</u>
<b>Compensation to key management (excluding directors)</b>		
Short term employee benefits	1 038	1 217
Post employment benefits- Defined contribution plans	94	111
Share based payments	3	-
	<u>1 135</u>	<u>1 328</u>
<b>Travel expenses paid</b>		
Salene Mining Proprietary Limited	-	1

***Relationships between parties:***

***Braeston Corporate Consulting Services Proprietary Limited:***

One of the directors of the Company and one of the directors of Tharisa Minerals Proprietary Limited are shareholders of Braeston Corporate Consulting Services Proprietary Limited. Braeston Corporate Consulting Services Proprietary Limited ceased to be a related party on 1 April 2013 when it was acquired by the Group.

***Kameni Management Services Proprietary Limited ("Kameni")***

A director of the holding company of Kameni is also a director of Tharisa Minerals Proprietary Limited and of the Company. In addition, a director of the holding company of Kameni is also a director of the Company.

***Kameni Proprietary Limited***

A director of Kameni Proprietary Limited is also a director of Tharisa Minerals Proprietary Limited and of the Company. In addition a director of Kameni Proprietary Limited is also a director of the Company.

**30. RELATED PARTY TRANSACTIONS** (*continued*)

***Salene Mining Proprietary Limited***

A director of Salene Mining Proprietary Limited is also a director of Tharisa Minerals Proprietary Limited and the Company. In addition a director of Salene Mining Proprietary Limited is also a director of the Company.

***Keaton Administrative and Technical Services Proprietary Limited (“Keaton”)***

Two of the directors of the holding company of Keaton are also directors of Tharisa Minerals Proprietary Limited and the Company.

***Langa Trust***

One of the directors of the Company who is also a director of Tharisa Minerals Proprietary Limited is a beneficiary of this trust.

***Arti Trust***

One of the directors of the Company who is also a director of Tharisa Minerals Proprietary Limited is a beneficiary of this trust.

***Ditodi Trust***

The non-controlling interest of Tharisa Minerals Proprietary Limited is a beneficiary of this trust.

***Makhaye Trust***

The non-controlling interest of Tharisa Minerals Proprietary Limited is a beneficiary of this trust.

***The Phax Trust***

One of the directors of the Company who is also a director of Tharisa Minerals Proprietary Limited is a beneficiary of this trust.

***The Rowad Trust***

One of the directors of the Company who is also a director of Tharisa Minerals Proprietary Limited is a beneficiary of this trust.

***Moira June Jacquet-Briner***

Moira June Jacquet-Briner is a director of Tharisa Minerals Proprietary Limited and is a shareholder in the non-controlling interest of Tharisa Minerals Proprietary Limited.

**30. RELATED PARTY TRANSACTIONS** *(continued)*

***Fujian Wuhang Stainless Steel Products Co. Limited***

Fujian Wuhang Stainless Steel Products Co. Limited is a shareholder of the Company.

***Evi Papacleovoulou***

Evi Papacleovoulou was a director of the Company and Company Secretary until 30 January 2013 and 14 February 2014 respectively.

***Antonios Djakouris***

Antonios Djakouris is a director of the Company.

***John David Salter***

John David Salter is a director of the Company.

***Ioannis Drapaniotis***

Ioannis Drapaniotis is a director of the Company.

***Omar Kamal***

Omar Kamal is a director of the Company.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

### 31. CAPITAL COMMITMENTS

(a) Capital commitments of the Group in respect of property, plant and equipment outstanding at the reporting period not provided for in the consolidated financial statements were as follows:

	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>
	US\$'000	US\$'000
Contracted for	4 411	3 931
Authorised but not contracted for	-	<u>6 808</u>
	<u>4 411</u>	<u>10 739</u>

(b) The Company holds an indirect 100% equity interest in Tharisa Fujian Industrial Co., Ltd, the registered capital of which is US\$10 000 thousand. Up to 30 September 2014, US\$5 100 thousand has been paid up. The remaining US\$4 000 thousand needs to be paid up by 14 February 2016.

(c) A Company guarantee was issued to ABSA Bank Limited which guarantees the payment of certain liabilities of Arxo Logistics Proprietary Limited to Transnet totalling ZAR19 000 thousand.

(d) A guarantee was issued by Arxo Logistics Proprietary Limited to Lombard Insurance Company Limited which guarantees the payment of certain liabilities of Arxo Logistics Proprietary Limited to Transnet totalling ZAR12 000 thousand.

### 32. OPERATING LEASES

Non-cancellable operating lease rentals are payable as follows:

	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>
	US\$'000	US\$'000
Less than one year	228	292
Between one and five years	<u>390</u>	<u>51</u>
	<u>618</u>	<u>343</u>

The Group leases a number of office facilities under operating leases. The leases typically run for a period of two to three years. A portion of lease payments are increased every year to reflect market rentals. The amounts recognised as an expense in profit or loss in respect of operating leases are disclosed in note 9.

Since the property titles did not pass to the Group, the Group determined that the leased office facilities are operating leases. The rents paid to landlords are increased to market rents at regular intervals and the Group does not participate in the residual value of the buildings therefore it was determined that substantially all the risks and rewards of the buildings are with the landlords.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2014

**33. COMPARATIVE FIGURES**

The short term portion of the Group's senior debt facility incorrectly included future interest not yet accrued on the facility. Therefore as a result the comparative figures relating to the senior debt facility have been restated, refer to note 23. The effects are as follows:

	<u>30 September</u> <u>2014</u>	<u>30 September</u> <u>2013</u>
	US\$'000	US\$'000
<b>Statement of financial position</b>		
Non current: secured bank borrowings	-	7 957
Current: secured bank borrowings	-	(7 957)

**34. EVENTS AFTER THE REPORTING PERIOD**

Contingent liability

The Company has, subsequent to the financial year end, received a "letter before action" from a firm of solicitors representing a shareholder which asserts intended claims against, inter alia, the Company for damages purporting to arise in the context of the listing of the Company on the JSE and the compulsory conversion of the convertible redeemable preference shares held by that shareholder in the Company into ordinary shares as provided for in the terms of the convertible redeemable preference shares.

The Board of Directors has taken legal advice and in the event legal proceedings are instituted, the Company will defend itself vigorously. In accordance with paragraph 92 of IAS 37 "Provisions, contingent liabilities and contingent assets" no further information is disclosed in relation to the subject matter on the grounds that it may prejudice the position of the Company in a dispute with other parties.

The consolidated financial statements were authorized for issue by the Board of Directors on 15 December 2014.

Reports and Consolidated Financial Statements for the year ended 30 September 2013

tharisa  
plc

REPORTS AND  
CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

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## **BOARD OF DIRECTORS, PROFESSIONAL ADVISERS AND CORPORATE INFORMATION**

### **Board of Directors**

**Loucas Pouroulis** - Chairman

**Phoevos Pouroulis** – Chief Executive Officer

**Michael Jones** – Chief Finance Officer

*(appointed on 30 January 2013)*

**John David Salter** – Independent Non Executive Director

**Brian Chi Ming Cheng** – Non Executive Director

*(appointed on 21 June 2013 and resigned on 13 February 2014)*

**Che Wei Tan** – Non Executive Director

*(appointed on 21 June 2013 and resigned on 13 February 2014)*

**Ioannis Drapaniotis** – Independent Non Executive Director

**Antonios Djakouris** – Independent Non Executive Director

**Evi Papacleovoulou** – Compliance Executive Director

*(resigned on 30 January 2013)*

**Chan Wah Man Carman** – Independent Non Executive Director

*(resigned on 30 January 2013)*

### **Company Secretaries**

**Lysandros Lysandrides** *(appointed on 13 February 2014)*

**Sanet de Witt** *(appointed on 13 February 2014)*

**Evi Papacleovoulou** *(resigned on 13 February 2014)*

**Ella Wong Wei Yee** (Hong Kong Secretary)

*(resigned on 31 January 2013)*

**BOARD OF DIRECTORS, PROFESSIONAL ADVISERS AND CORPORATE INFORMATION  
(continued)**

<b>Independent auditors</b>	<b>KPMG Limited</b>
<b>Group bankers</b>	<b>The Hong Kong and Shanghai Banking Corporation Limited</b> <b>Nedbank Limited</b> <b>ABSA Bank Limited</b> <b>Bank of Cyprus Public Company Limited</b> <b>Standard Bank Limited</b> <b>China Construction Bank Limited</b> <b>Industrial and Commercial Bank of China Limited</b> <b>Barclays Bank Plc</b>
<b>Address of registered office</b>	<b>Sofoklis Pittokopitis Business Centre, Offices 108-110</b> <b>17 Neophytou Nicolaides and Kilkis Street,</b> <b>8011 Paphos</b> <b>Cyprus</b>
<b>Registration number</b>	<b>HE 223412</b>

**Tharisa plc**  
**Chairman's Statement**

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Dear Shareholder,

It is with pleasure that I present Tharisa's Annual Financial Statements for the year ended 30 September 2013 – a year which marked your company's rise to a globally significant producer of platinum group metals (PGMs) and chrome.

You may recall that last year I reported our excitement about completing the construction of the Voyager plant at Tharisa Minerals, our primary asset, in South Africa. This plant is ramping up to full rated capacity and continues to exceed our expectations in many areas. Similarly, enhancements in the mining method are yielding better quality ore for the plant and, significantly, have extended the life of the open pit. Obviously, with such a major mining and processing operation there are areas still to be optimised and new technology to be applied but, these opportunities and depressed metal prices notwithstanding, Tharisa Minerals is already a cash-generative operation and your company is now established as a mid-tier PGM and chrome producer.

Our management continues to strive to maximise the revenue from our unique Tharisa Minerals orebody. In this regard it is pleasing that the recently commissioned Challenger plant is producing added-value, high margin, niche chrome products for international markets in parallel with our bulk chrome products. Tharisa's highly talented R+D group has developed several improved technologies improvements which will be implemented in the coming year to increase the recovery of our valuable minerals above the excellent levels already being achieved.

It is pleasing that the Tharisa Minerals operation was judged the safest mine in the South African chrome and platinum sector during the year – a credit to the philosophy we all subscribe to. However, while we continue to strive for zero—harm operations with regard to safety, health and the environment, it pains me to report that during the year under review a mining contractor employee lost his life conducting an unapproved, reckless operation in one of our open pits. The mining contractor was subsequently dismissed from the site and our safety management efforts redoubled.

Outside of our profitable PGM and chrome operation, we evaluated a number of growth opportunities during the year but found none that merited our continued involvement. We will continue to evaluate technically appropriate, value-accretive opportunities in the coming year.

In the year ahead we will also look to list Tharisa. We completed all of the work necessary to list the company on AIM in London during the year under review. However, the Cyprus financial crisis proved to be a challenge to listing that our advisors thought too great to overcome. A listing on the more mining-centred Johannesburg Stock Exchange is under consideration and I will write to you separately in that regard.

Finally, I wish to thank all of Tharisa's employees for their hard work and dedication during the year. We have achieved much and we will do more as we grow our world class company into the market leader.

L C Pouroulis

Chairman

**Tharisa plc**  
**Chief Executive Officer's Review**

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I am pleased to report on the continued development and performance of the Tharisa group for the financial year ending 30 September 2013. The principal business of the Group is:

- the selective mining and blasting of the Middle Group chromitite ore reef horizons and the production of PGM and chrome concentrates at the Tharisa Minerals Mine;
- the sales, marketing and trading of these concentrates to customers, predominantly managed by Arxo Resources and Dinami;
- the transportation of these products to Tharisa Minerals' customers, managed by Arxo Logistics; and,
- the production of high margin foundry and chemical grade products and beneficiation, research and development, by Arxo Metals.

**THARISA MINERALS MINE**

The health and safety of all employees remains our number one priority and we are highly focused on this. In addition to appropriate risk management processes, we have implemented strategies, systems, and put training in place to promote a safe working environment. Management's focus on a zero harm environment requires a zero tolerance approach for any action that may result in potential injury to employees. We strive to instil a systematic culture of safety.

Despite all our efforts we suffered a fatality in May 2013, where the mining contractor Liviero undertook an unapproved hazardous operation. No safety assesment was undertaken prior to the intended mining which resulted in a fatality primarily due to gross negligence and lack of adherence to our safety protocols and standards. Liviero's services were subsequently terminated.

Our Lost Time Injury frequency rate for the year was recorded at 0.19 which is still the lowest rate within the platinum and chrome industries.

Sustainability is at the heart of what we do and our approach is to ensure a long-term future for our assets by planning and structuring our operations to the benefit of all stakeholders.

Our production of PGMs and chrome concentrate has increased markedly primarily due to the commissioning of the Voyager Plant and the planned ramp up of mining and processing however still falling short of the FY2013 budget.

*Operational Update Year End 2013 (30 September 2013)*

	Chrome concentrate production (metric kilo tonnes)	PGM concentrate production (contained kilo ounces)	ROM ore mined (metric kilo tonnes)	ROM processed (metric kilo tonnes)
Actual YE 2013	1,192	57	3,305	3,865
Budget YE 2013	1,607	98	3,550	4,545
Actual YE 2012	339	4	1,433	1,062

Our revenues have quadrupled with the increase in production with a positive gross profit, however the funding charge for the convertible redeemable preference shares, which are classified as a liability, resulting in a net loss of \$(47.4) million) for the period.

*Consolidated Income YE September 2013 (unapproved)*

	Revenue (US\$'000s)	Gross profit/(loss) (US\$'000s)	Loss for the year (US\$'000s)
Year End 2013	215,455	25,885	(47,443)*
Year End 2012	53,889	(8,225)	(29,971)**

*\* A fair value charge of US\$(48,4) million is included as a non cash flow adjustment for the pre-IPO convertible share IRR calculation, \*\*(2012:US\$5.7 million).*

An updated Competent Persons Report (CPR) dated 31 December 2013 has been finalised. The CPR reflects an increase in the open pit reserves to 109 million tonnes allowing for the open pit to be mined for 23 years. The increase has arisen due to the inclusion of the interburden layers within the MG2 and MG3 reef horizons which contain high PGM grades.

Optimisation of our minerals processing is a core objective within the group and in 2013 extensive research and development was conducted and on the back of the results from these tests two important projects have been approved for the 2014 financial year. These projects are magnetic separation within the chrome circuit potentially increasing chrome yields significantly and secondly high energy flotation within the PGM flotation circuit which improves the recoveries of the PGMs followed by ultra fine grinding which should see PGM recoveries comparable to the best in the industry.

## **TRADING, LOGISTICS AND INFRASTRUCTURE**

The Group's trading and logistical operations were established to market and transport commodities to customers of Tharisa Minerals. These operations enable the Group to have direct access to end customers in the People's Republic of China ("PRC") and elsewhere to facilitate the capture of additional margin by the Group of a greater share of the value chain.

With the increase in production the logistics chain has ramped up accordingly and in 2013 we transported and shipped the following volumes:

	Chrome concentrate shipped (metric kilo tonnes)	Chrome concentrate shipped in containers (metric kilo tonnes)	ROM processed In bulk (metric kilo tonnes)	PGM concentrate delivered to IRS (metric kilo tonnes)
Actual YE 2013	1,033	488	545	23.5
Actual YE 2012	275	211	64	4.3

We continue to increase our volumes through bulk shipments and have reduced the number of containers we utilise for delivery. Transnet has been engaged to approve the possibility of routing a railroad siding on the Tharisa mine, and the initial study that was submitted previously is being reviewed and updated.

We have increased our customer base within the Chinese markets and continue to create market and brand awareness. Tharisa represented approximately 18% of all Chinese imports of South African chrome ores or concentrates during the 2013 financial year. This number is expected to increase further as we position ourselves as one of the larger exporters of chrome into China with the increase in production.

#### **BENEFICIATION**

The commissioning of the Challenger Plant (foundry and chemical plant) occurred in June 2013 with first commercial production being sold in the same month. This plant provides diversity in chrome products and markets and affords the group higher margins within these niche markets.

On going research and development and test work on chrome smelting and PGM downstream beneficiation are being conducted and subject to any breakthrough will be presented for project scope and budget approval.

#### **THARISA FERROCHROME SMELTER**

The ferrochrome smelter remains suspended and is not likely to prove viable in the near term.

#### **CORPORATE ACTIVITIES**

During the first quarter of 2013 extensive work was undertaken to list the company on the Alternative Investment Market of the London Stock Exchange (“AIM”). Unfortunately due to the Cyprus financial crisis, advisors to the board recommended that the IPO be postponed. This resulted in a “Material Adverse Change” in terms of the pre-IPO preference shareholding agreement as market conditions and certainty around the Cyprus implications on the Tharisa plc holding company structure were uncertain.

The board is assessing the potential to list the shares of the company on the Johannesburg Stock Exchange (JSE) during April of 2014.

## **CONCLUSION**

The 2013 financial year-end results show that our Group has grown significantly and is almost at the optimal stage of steady state throughput and production. There were a number of set backs during the year which had an impact on the speed of our ramp up, however we feel confident that 2014 will yield the results that illustrate the competitive basis of our business. Despite weak commodity markets we have managed to achieve positive margins and withstand external factors afflicting the South African mining industry.

The achievements of the year are from a combined team effort and I would like to thank the tireless efforts of the Tharisa global team in propelling us one step closer to being a market leader in PGMs and chrome.

**PHOEVOS POUROULIS**

**Chief Executive Officer**

**Tharisa plc**  
**Chief Finance Officer's Review**

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The consolidated financial statements of the Group for the financial year ended 30 September 2013, have been audited and the auditors have expressed an unqualified audit opinion, although I draw your attention to the emphasis of matter relating to going concern set out in the audit report and the annual financial statements. This emphasis of matter is as a consequence of the terms of the convertible redeemable preference shares requiring the preference shares to be classified as a current liability. This liability will be discharged upon a listing of the Company.

**MACRO ECONOMICS**

Ferro-chrome is used primarily in the production of stainless steel with the primary chrome product produced by Tharisa Minerals being metallurgical grade chrome concentrate sold principally into the Chinese market. Global stainless steel consumption for the twelve months ended 30 June 2013, increased by approximately 3.2% with stainless steel consumption in China for the same period increasing by approximately 6.9%.

The US\$ : ZAR exchange rate remained volatile during the financial year with a low of ZAR8.30 and a high of ZAR10.38 with a trading average over the financial year of ZAR9.27. While the majority of the cost base is ZAR, certain inputs such as diesel are US\$ based and this has a material impact on the mining costs incurred by Tharisa Minerals. The weakening currency does off-set, in part, the lower commodity prices being realised and increases the trading profitability of the Group although has a negative impact on the funding costs with the subsidiaries typically being funded in US\$ which is not their functional currency. Subsequent to the financial year end, the currency weakened markedly and as at 27 January 2014, was trading at ZAR11.08.

In terms of cost pressures, the producer price index in South Africa year-on-year as at 31 December 2013, is currently +5.8% with the headline consumer price index in South Africa year-on-year at +5.4%. The weakening currency, recently announced increased interest rate and above inflation wage demands are considered likely to drive the inflation numbers above the targeted CPI limit of 6.0%.

Approximately 8.5% (against an increase in gross domestic product of approximately 7.7%). For the financial year, global chrome ore production totalled 26,070kt. Tharisa Minerals produced 1,192kt (2012: 339kt) or 4.6% of this production. This ramp-up in production by Tharisa Minerals followed the commissioning of the Voyager Plant in December 2012. Total chrome concentrate usage over the financial year totalled 24,801kt thereby creating an oversupply with consequent downward pressure on the chrome concentrate prices. Metallurgical grade (42%) chrome concentrate prices achieved by Arxo Resources, based on load port results, on a volume weighted basis equated to US\$164 per DMT

(2012: US\$185 per DMT). Metallurgical grade chrome concentrate prices for the first quarter of the 2014 financial year on a volume weighted basis averaged US\$148 per DMT; reflecting continued downward pricing pressure.

Tharisa Minerals co-produces PGMs which are sold, in terms of an off-take agreement, to Impala Refinery Services based on market prices. In summary, based on the Johnson Matthey Platinum 2013 Interim Review, a deficit in both the platinum and palladium markets for 2013 was forecast, with reduced production from South Africa due to one-off factors such as industrial action and safety stoppages. The main industrial use for PGMs is in the autocatalyst market where platinum is the key PGM for use in diesel vehicles and palladium the key PGM for use in petrol vehicles. The demand fundamentals for these separate vehicle markets differs with a forecast decline in demand for diesel powered vehicles in the European and Indian markets while demand for petrol powered vehicles in the Chinese market is forecast to increase. Supplies of platinum are forecast at 5.74moz and palladium at 6.43moz. Tharisa Minerals for the financial year produced 57.4koz in total of PGMs

#### **RE-FINANCING AND IPO**

The Company considered various alternatives relating to the refinancing of the pre-IPO preference shares. Following the receipt of debt term sheets from a number of financial institutions and a detailed evaluation of the funding costs and covenants, the Board resolved that the Company would not proceed with the re-financing proposals and these discussions were terminated. Subsequently, South African Reserve Bank approval was obtained, in principle, for the primary inward listing of the Company on the JSE Limited. This approval was followed with meetings with the stock exchange regulators to obtain assurances that there were no impediments to the listing of the Company from a stock exchange perspective. The Board will be asked to consider and, if acceptable, approve the listing of the Company on the JSE Limited.

#### **DOMICILIUM**

Following the financial crisis in Cyprus, the domicile of the Company, consideration was given to the re-domiciling of the Company. After taking into account a number of factors including the process for resolving the Cypriot financial crisis and the favourable terms of the double tax agreement between South Africa and Cyprus, the domicilium of the Company remains in Cyprus.

#### **GROUP FINANCING**

No new ordinary shares were issued by the Company during the financial year.

During the financial year, the Group has secured certain working capital facilities as it changes from a development asset to an operational asset with the commissioning of the Voyager Plant in December 2012. These facilities include:

- A pre-packing facility for Arxo Resources from The Hongkong & Shanghai Banking Corporation Limited (Hong Kong) in the amount of US\$12.5 million. This facility has significantly shortened the period for receipt of the cash inflows from chrome concentrate sales made on a CIF basis. As at 30 September 2013, the facility utilisation amounted to US\$7.6 million;
- A limited recourse receivables finance facility in the amount of ZAR300 million (US\$29.8 million) specifically for the sale of PGMs to Impala Refining Services Limited from a consortium of banks led by Absa Capital, the investment banking division of Absa Bank Limited. This has significantly reduced the period for the receipt of the cash inflows from the sale of the PGMs. As at 30 September 2013, the facility utilisation amounted to US\$10.8 million.

In addition, Arxo Metals secured a loan in the amount of ZAR35.0 million (US\$3.4 million) for the capital cost for the construction of the foundry and chemical grade spiral plant that has been integrated into the feed stage of the Genesis Plant. This plant was commissioned in June 2013.

The terms of the senior debt facility provided that as at 30 September 2013, an amount of approximately US\$15.4 million was required to be set aside in a debt service reserve account. This amount was provided in part by Tharisa Minerals setting aside an amount of US\$7.7 million with the balance of US\$8.5 million being set aside by the Company (together with a 10% reserve for currency fluctuations). The first debt repayment of US\$7.4 million was made on 31 December 2013.

The convertible redeemable preference shares have been classified as a current liability. On the listing of the Company this liability will be converted into equity. Similarly the B class preference shares and the loan owing to the Langa Trust will be redeemed and repaid respectively out of the proceeds of the listing. The conversion of the preference shares will remove a significant potential liability and improve the financial position in terms of gearing of the Company.

The terms of the B class preference shares and the Langa Trust loan were amended such that the coupon and interest rate respectively were amended to the South African prime bank overdraft interest rate plus 200 basis points. This reduction was effective from 1 October 2012. The previous return was calculated by reference to an internal rate of return of 25%.

Total debt (excluding the convertible redeemable preference shares) totals US\$141.7 million, a debt to equity ratio of 63.6% (assuming the convertible redeemable preference shares issued by the Company are classified as equity for calculation purposes). This gearing ratio may be considered “high” based on the cyclical nature of the commodities markets. However, Tharisa Minerals has recently completed a major capital expansion programme which was, in part, debt funded. The cash outflow for additions to property, plant and equipment for the financial year totalled US\$24.3 million with the amount in 2012 totalling US\$189.0 million. The benefits of the cash flows from the plant expansion are still to be received following the ramp up in production of the Voyager Plant. The intention is to reduce the gearing level through (i) the proceeds from the planned IPO; and (ii) internally generated cash flows, with a target debt to equity ratio of 15%.

As at 30 September 2013, the Group cash and cash equivalents excluding amounts set aside as security for certain trading facilities and for the debt service reserve account amounted to US\$10.2 million.

## **FINANCIAL RESULTS & POSITION**

For the financial year ended 30 September 2013, there was a significant increase in revenue from US\$53.9 million to US\$215.5 million following the commissioning of the Voyager Plant and the Arxo Metals foundry and chemical grade plant and consequent increased production. The chrome concentrate sales are mainly on a CIF basis. If the insurance and freight costs are excluded to enable a “like for like” comparison to be made, the contribution to revenue from chrome concentrate sales amounted to US\$140.8 million (2012: US\$43.4 million) and PGM sales amounted to US\$54.3 million (2012: US\$5.3 million). The respective contributions to gross profit from chrome concentrate sales and PGM sales amounted to US\$22.1 million (2012: US\$4.6 million) and US\$3.8 million (2012: US\$(12.8) million). Gross profit totalled US\$25.6 million (2012: US\$(8.2) million).

In terms of finance costs, the net charge to the income statement was US\$62.3 million (2012: US\$5.1 million) and relates primarily to the fair value adjustments in respect of the internal rate of return calculation on the convertible redeemable preference shares of US\$48.4 million (2012: US\$5.7 million), with US\$14.7 million (2012: US\$1.6 million) relating primarily to the interest on third party borrowings including (for the 2013 financial year) the B class preference dividend.

The net loss after providing for the finance charges amounted to US\$63.0 million (2012: US\$38.7 million).

The Company has provided funding to Tharisa Minerals by way of preference shares. The preference shares are US\$ denominated while Tharisa Minerals reports in ZAR. The foreign currency translation differences relating primarily to this inter group funding for the financial year amounted to US\$38.8 million (2012: US\$7.9 million) following the weakening of the ZAR against the US\$.

After accounting for this foreign currency translation adjustment, the total comprehensive income amounted to a negative US\$86.2 million (2012: US\$37.8 million).

The basic and diluted earnings per share increased from a loss of US\$3.40 to a loss of US\$6.31. This is the loss after tax relating to the ordinary shares (after deducting the diluted redeemable preference holders' share) divided by the total number of ordinary shares.

The Group has a negative total equity of US\$53.6 million (2012: US\$32.6 million positive) with the convertible redeemable preference shares being classified as a current liability.

Cash flows from operating activities before changes in working capital amounted to US\$13.9 million (2012: US\$(23.8) million) and after taking into account working capital changes this reduced to cash used in operating activities of US\$3.0 million (2012: US\$9.2 million).

**DIVIDENDS**

No dividends have been proposed or paid to shareholders.

**MICHAEL JONES****Chief Finance Officer**

## **Tharisa Plc – Remuneration Committee Report to Shareholders-2013**

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### **MEMBERSHIP AND ATTENDANCE**

The members of the Remuneration Committee are three: A. Djakouris, J. D. Salter and I. Drapaniotis. All three members are independent non-executive directors.

The Committee met twice during the financial year and all members attended. The Chairman of the Committee reported to the Board on the Committee's work.

### **COMMITTEE ROLE AND RESPONSIBILITY**

The primary role of the Remuneration Committee is to review the Group's remuneration policy and the terms of remuneration packages for executive directors and senior management as well as review the awards under the performance-based remuneration scheme and consider the grant of awards under the Share Award Plan.

The full terms of reference of the Committee can be found on the company's website at [www.tharisa.com](http://www.tharisa.com)

### **ACTIVITIES**

The Committee reviewed the various aspects of the Group's remuneration policy and structure, including performance-based remuneration schemes awarding bonuses on achieving corporate objectives; the Committee is satisfied with the prevailing employee policies, remuneration and structure.

The Executive "cost to company" salaries were reviewed and the Committee concurred with Executive Management's proposal that Executives who are now remunerated in US Dollars and paid the equivalent in South African Rand, have their contracts amended so that with effect from 1 October 2013 their remuneration is determined in ZAR.

## **REMUNERATION POLICY AND PRACTICES**

### **BASE PAY**

Employee base pay is determined by benchmarking prevailing market rates in the mining industry; cost-to-company pay is made up of cash component and certain benefits. Benefits include compulsory membership to the group provident fund, life cover, disability, funeral, dread disease and medical aid scheme.

### **SHORT TERM INCENTIVE**

An incentive bonus scheme is in operation which links performance of the individual to the performance of a number of important factors in the business.

All incentive bonuses are proposed to and reviewed by the Remuneration Committee and finally approved by the Board.

### **LONG TERM INCENTIVE**

The Group is in the process of establishing a Long term Incentive scheme for Executives and Senior Management with a share award scheme.

### **COMMITTEE EFFECTIVENESS**

The Committee conducted regular self-evaluations of its own activities and concluded that it was operating effectively.

## **Tharisa Plc - Nomination Committee report to Shareholders -2013**

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### **MEMBERSHIP AND ATTENDANCE**

The members of the Committee are three: A. Djakouris (Chairman), J. D. Salter and I. Drapaniotis. All three members are independent non-executive directors.

The Committee met twice during the financial year and all members attended.

The Chairman of the Committee reported to the Board on the committee's work.

### **COMMITTEE ROLES AND RESPONSIBILITIES**

The primary role of the Nomination Committee is to make recommendations to the Board on candidates for appointment and determine Board succession plans.

The Committee is also responsible for regularly reviewing the balance of skills, knowledge and experience of the Board and for reviewing Board performance, including the time devoted by non-executive directors.

The full terms of reference of the Committee can be found on the company's website at [www.tharisa.com](http://www.tharisa.com)

### **ACTIVITIES**

The work of the committee closely follows its terms of reference as well as established good practice in Corporate Governance.

In this respect the Committee conducted regular reviews of the structure, size and composition of the Board of Directors with specific emphasis on skills, knowledge, independence and diversity of the Board members. It also considered the reappointment of two directors in June 2013.

The Committee reported to the Board that it is satisfied with the composition of the Board.

## **COMMITTEE EFFECTIVENESS**

The Committee conducted regular self evaluations of its own activities and concluded that it is operating effectively.

## Tharisa Plc- Audit Committee Report to Shareholders 2013

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### **MEMBERSHIP AND ATTENDANCE**

The members of the Committee are A. Djakouris, J.D. Salter and I. Drapaniotis.

The members of the Committee are independent non-executive directors. The Board is satisfied that Antonios Djakouris as chairman has recent and relevant financial experience.

The Committee met twice during the financial year and all members attended.

Other regular attendees at Committee meetings include: the Chief Executive Officer, the Company Secretary and the External and Internal Auditors.

The Committee has a constructive and open relationship with Management and we thank them for their assistance during the year.

### **RESPONSIBILITY**

The role of the Audit Committee is to monitor the integrity of the financial information and to provide assurance to the Board that the Group's internal controls are appropriate and regularly reviewed; of equal importance is the overseeing of the work of the Internal Auditors, approving their remuneration and assessing their independence and recommending their appointment.

In addition it considers and reviews the performance of the Internal Auditor and approve their remuneration.

The full terms of reference of the Committee can be found on the company's website at [www.tharisa.com](http://www.tharisa.com)

### **ACTIVITIES**

The work of the Committee followed its terms of reference as well as established good practice in corporate governance.

The Committee's work covered four main areas: financial statements and accounting policies, internal controls, the oversight of the Internal Audit function and the oversight of Internal Audit.

In each Committee meeting a report to the Board was tabled detailing the activities and recommendations to the Board.

## **COMMITTEE EFFECTIVENESS**

The Audit Committee conducted regularly self-evaluations of its own activities and concluded that it was operating effectively.

## **Board of Director's Report**

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The Board of Directors of **Tharisa Plc** (“the Company”) presents to the members its report together with the audited consolidated financial statements of the Company and its subsidiaries (together with the Company, “the Group”) for the year ended 30 September 2013.

### **PRINCIPAL ACTIVITY**

The principal activity of the Group, which remained the same as last year, is that of platinum group metals (“PGM”) and chrome mining and processing. The Group holds the mining rights to 5,516 hectares of the Middle Group reef horizon of the Bushveld Igneous Complex located on the farms Kafferskraal and Rooikoppies near Marikana in the North West Province of South Africa.

### **FINANCIAL RESULTS**

The results of the Group are disclosed in the consolidated statement of comprehensive income on page 26. The loss of the Group for the year before income tax amounted to US\$62,968 thousand (2012: US\$38,651 thousand). The loss for the year amounted to US\$47,443 thousand (2012: US\$29,971 thousand). The Board of Directors recommends that the loss for the year is transferred to accumulated losses reserve.

### **DIVIDENDS**

The Board of Directors does not recommend the payment of dividends.

### **SHARE CAPITAL**

There have been no changes in the share capital of the Company during the year under review.

### **SUBSIDIARIES**

The consolidated financial statements of the Group include the financial statements of the Company and its subsidiaries.

On 1 April 2013, Tharisa Administration Services Limited, a subsidiary of the Company, acquired Braeston Corporate Consulting Services Proprietary Limited, a company incorporated in South Africa. The principal activity of Braeston Corporate Consulting Services Proprietary Limited is the provision of management services to the Group.

On 30 May 2013, the Company incorporated Dinami Limited, a company established in Guernsey. The principal activity of Dinami Limited is to provide consultancy services in relation to the Group's foundry and chemical sales products.

## **MAIN RISKS**

The main financial risks faced by the Group are disclosed in note 2 (c) (going concern) and note 24 of the consolidated financial statements.

## **FUTURE DEVELOPMENT**

The Board of Directors does not anticipate significant changes in the operations of the Group in the foreseeable future.

## **BRANCHES**

During the year the Group did not operate any branches.

## **BOARD OF DIRECTORS**

The members of the Board of Directors as at the date of this report are disclosed on page 1. There were no significant changes in the assignment of responsibilities of the Board of Directors.

## **EVENTS AFTER THE REPORTING PERIOD**

Events after the reporting period are disclosed in note 29 of the consolidated financial statements.

## **INDEPENDENT AUDITORS**

The independent auditors, KPMG Limited, have expressed their willingness to continue in office and a resolution fixing their remuneration will be submitted at the Annual General Meeting.

On behalf of the Board of Directors

Michael Jones  
Director

Paphos, 13 February 2014

## **Independent auditors' report**

### **To the Members of Tharisa Plc**

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#### **REPORT ON THE CONSOLIDATION FINANCIAL STATEMENT**

We have audited the consolidated financial statements of Tharisa Plc (the “Company”) and its subsidiaries (together with the Company, the “Group”) on pages 26 to 92, which comprise the consolidated statement of financial position as at 30 September 2013, and the consolidated statements of comprehensive income, changes in equity and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

#### **BOARD OF DIRECTOR'S RESPONSIBILITY**

The Board of Directors is responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards as adopted by the European Union and the requirements of the Cyprus Companies Law, Cap. 113, and for such internal control as the Board of Directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

#### **AUDITOR'S RESPONSIBILITY**

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation of consolidated financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of

accounting policies used and the reasonableness of accounting estimates made by the Board of Directors, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

## **OPINION**

In our opinion, the consolidated financial statements give a true and fair view of the financial position of the Group as at 30 September 2013, and of its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union and the requirements of the Cyprus Companies Law, Cap. 113.

## **REPORT ON OTHER LEGAL REQUIREMENTS**

Pursuant to the additional requirements of the Auditors and Statutory Audits of Annual and Consolidated Accounts Laws of 2009 and 2013, we report the following:

- We have obtained all the information and explanations we considered necessary for the purposes of our audit.
- In our opinion, proper books of account have been kept by the Company, so far as appears from our examination of those books.
- The consolidated financial statements are in agreement with the books of account.
- In our opinion and to the best of our information and according to the explanations given to us, the consolidated financial statements give the information required by the Cyprus Companies Law, Cap. 113, in the manner so required.
- In our opinion, the information given in the report of the Board of Directors on pages 20 to 22 is consistent with the consolidated financial statements.

## **EMPHASIS OF MATTER**

We draw attention to note 2(c) to the consolidated financial statements which indicates that at 30 September 2013 the Group's current liabilities exceeded current assets by US\$266,710 thousand and its total liabilities exceeded total assets by US\$53,641 thousand. These conditions, along with the matters as set forth in note 2(c), indicate that in an event of a no listing scenario and/or should there be a different interpretation to the Board of Directors' opinion as to the legal obligation of the Group to redeem the convertible redeemable preference shares, which will result in full redemption of the convertible redeemable preference shares, payable within 10 business days from a redemption notice, the Group may not have the necessary liquid funds required to redeem its convertible redeemable preference shares and continue as a going concern. Our opinion is not qualified in respect of this matter.

## **OTHER MATTER**

This report, including the opinion, has been prepared for and only for the Company's members as a body in accordance with Section 34 of the Auditors and Statutory Audits of Annual and Consolidated Accounts Laws of 2009 and 2013 and for no other purpose. We do not, in giving this opinion, accept or assume responsibility for any other purpose or to any other person to whose knowledge this report may come to.

Michael M. Antoniadis  
Certified Public Accountant and Registered Auditor  
for and on behalf of

KPMG Limited  
Certified Public Accountants and Registered Auditors

14 Esperidon street  
1087 Nicosia, Cyprus

13 February 2014

## CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

For the year ended 30 September 2013

		Years ended 30 September	
	Note	2013 US\$'000	2012 US\$'000
Revenue	3	215,455	53,889
Cost of sales	3	<u>(189,570)</u>	<u>(62,114)</u>
<b>Gross profit/(loss)</b>		25,885	(8,225)
Other income	4	48	667
Administrative expenses		<u>(26,596)</u>	<u>(25,960)</u>
<b>Results from operating activities</b>		<u>(663)</u>	<u>(33,518)</u>
Finance income		863	2,128
Finance costs		(14,744)	(1,597)
Changes in fair value of financial liabilities at fair value through profit or loss		<u>(48,424)</u>	<u>(5,664)</u>
<b>Net finance costs</b>	5	<u>(62,305)</u>	<u>(5,133)</u>
Loss before taxation	6	(62,968)	(38,651)
Income tax	7	<u>15,525</u>	<u>8,680</u>
Loss for the year		<u>(47,443)</u>	<u>(29,971)</u>
<b>Other comprehensive income</b>			
Foreign currency translation differences for foreign operations, net of nil tax		<u>(38,781)</u>	<u>(7,858)</u>
<b>Total comprehensive income for the year</b>		<u>(86,224)</u>	<u>(37,829)</u>
<b>Loss for the year attributable to:</b>			
Owners of the Company		(48,347)	(26,018)
Non-controlling interests		<u>904</u>	<u>(3,953)</u>
<b>Loss for the year</b>		<u>(47,443)</u>	<u>(29,971)</u>
<b>Total comprehensive income for the year attributable to:</b>			
Owners of the Company		(75,989)	(31,912)
Non-controlling interests		<u>(10,235)</u>	<u>(5,917)</u>
<b>Total comprehensive income for the year</b>		<u>(86,224)</u>	<u>(37,829)</u>
<b>Loss per share</b>			
Basic and diluted loss per share	8	<u>(6.31)</u>	<u>(3.40)</u>

The notes on pages 32 to 92 form part of the Consolidated Financial Statements.

## CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 30 September 2013

		30 September 2013	30 September 2012
	Note	US\$'000	US\$'000
<b>Assets</b>			
<b>Non-current assets</b>			
Property, plant and equipment	9	269,130	318,263
Goodwill	10	1,427	1,384
Deferred tax assets	19	20,623	6,403
Long term deposits	11	7,708	-
Other financial assets	12	<u>3,774</u>	<u>3,837</u>
<b>Total non-current assets</b>		<u>302,662</u>	<u>329,887</u>
<b>Current assets</b>			
Inventories	13	24,043	28,297
Trade and other receivables	14	29,123	18,129
Other financial assets	12	311	-
Current taxation	21	-	220
Cash and cash equivalents	15	<u>28,017</u>	<u>52,805</u>
<b>Total current assets</b>		<u>81,494</u>	<u>99,451</u>
<b>Total assets</b>		<u>384,156</u>	<u>429,338</u>
<b>Equity</b>			
Ordinary share capital	16	6	6
Share premium	16	113,342	113,342
Other reserve	16	47,245	47,245
Foreign currency translation reserve	16	(30,170)	(2,528)
Accumulated losses		(167,859)	(119,512)
<b>Equity attributable to owners of the Company</b>		<u>(37,436)</u>	<u>38,553</u>
<b>Non-controlling interests</b>		<u>(16,205)</u>	<u>(5,970)</u>
<b>Total equity</b>		<u>(53,641)</u>	<u>32,583</u>
<b>Liabilities</b>			
<b>Non-current liabilities</b>			
Provisions	18	4,738	11,391
Borrowings	20	<u>84,855</u>	<u>121,424</u>
<b>Total non-current liabilities</b>		<u>89,593</u>	<u>132,815</u>
<b>Current liabilities</b>			
Convertible redeemable preference shares	17	260,291	212,791
Class B preference shares	17	12,171	12,548
Borrowings	20	44,645	3,297
Current taxation	21	294	117
Trade and other payables	22	<u>30,803</u>	<u>35,187</u>
<b>Total current liabilities</b>		<u>348,204</u>	<u>263,940</u>
<b>Total liabilities</b>		<u>437,797</u>	<u>396,755</u>
<b>Total equity and liabilities</b>		<u>384,156</u>	<u>429,338</u>
<b>Net current liabilities</b>		<u>(266,710)</u>	<u>(164,489)</u>
<b>Total assets less current liabilities</b>		<u>35,952</u>	<u>165,398</u>

The consolidated financial statements were approved by the Board of Directors on 13 February 2014.

.....  
Director

.....  
Director

The notes on pages 32 to 92 form part of the Consolidated Financial Statements.

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended 30 September 2013

	Attributable to owners of the Company							
	Ordinary share capital US\$'000	Share premium US\$'000	Other reserve US\$'000	Foreign currency translation reserve US\$'000	Accumulated losses US\$'000	Total US\$'000	Non- controlling interests US\$'000	Total Equity US\$'000
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
<b>Balance at 1 October 2012</b>	<u>6</u>	<u>113,342</u>	<u>47,245</u>	<u>(2,528)</u>	<u>(119,512)</u>	<u>38,553</u>	<u>(5,970)</u>	<u>32,583</u>
Total comprehensive income for the year								
Loss for the year	-	-	-	-	(48,347)	(48,347)	904	(47,443)
Other comprehensive income	-	-	-	(27,642)	-	(27,642)	(11,139)	(38,781)
<b>Total comprehensive income for the year</b>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(27,642)</u>	<u>(48,347)</u>	<u>(75,989)</u>	<u>(10,235)</u>	<u>(86,224)</u>
Transactions with owners of the Company recorded directly in equity								
Contributions by owners of the Company:	-	-	-	-	-	-	-	-
Total contributions by owners of the Company	-	-	-	-	-	-	-	-
Total transactions with owners of the Company	-	-	-	-	-	-	-	-
<b>Balance at 30 September 2013</b>	<u>6</u>	<u>113,342</u>	<u>47,245</u>	<u>(30,170)</u>	<u>(167,859)</u>	<u>(37,436)</u>	<u>(16,205)</u>	<u>(53,641)</u>

The notes on pages 32 to 92 form part of the Consolidated Financial Statements.

**CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (continued)**

For the year ended 30 September 2013

	Attributable to owners of the Company					Non-controlling interests	Total Equity	
	Ordinary share capital	Share premium	Other reserve	Foreign currency translation reserve	Accumulated losses			
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	
<b>Balance at 1 October 2011</b>	<u>6</u>	<u>113,342</u>	<u>47,245</u>	<u>3,367</u>	<u>(92,184)</u>	<u>71,776</u>	<u>(1,364)</u>	<u>70,412</u>
Total comprehensive income for the year								
Loss for the year	-	-	-	-	(26,018)	(26,018)	(3,953)	(29,971)
Other comprehensive income	-	-	-	<u>(5,894)</u>	-	<u>(5,894)</u>	<u>(1,964)</u>	<u>(7,858)</u>
<b>Total comprehensive income for the year</b>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(5,894)</u>	<u>(26,018)</u>	<u>(31,912)</u>	<u>(5,917)</u>	<u>(37,829)</u>
Transactions with owners of the Company recorded directly in equity								
Contributions by owners of the Company	-	-	-	-	-	-	-	-
Total contributions by owners of the Company	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Acquisition of non controlling interests without a change in control	-	-	-	(1)	(1,310)	(1,311)	1,311	-
Total transactions with owners of the Company	<u>-</u>	<u>-</u>	<u>-</u>	<u>(1)</u>	<u>(1,310)</u>	<u>(1,311)</u>	<u>1,311</u>	<u>-</u>
<b>Balance at 30 September 2012</b>	<u>6</u>	<u>113,342</u>	<u>47,245</u>	<u>(2,528)</u>	<u>(119,512)</u>	<u>38,553</u>	<u>(5,970)</u>	<u>32,583</u>

The notes on pages 32 to 92 form part of the Consolidated Financial Statements.

## CONSOLIDATED STATEMENT OF CASH FLOWS

For the year ended 30 September 2013

	Note	Years ended 30 September	
		2013	2012
		US\$'000	US\$'000
<b>Cash flows from operating activities</b>			
Loss for the year		(47,443)	(29,971)
Adjustments for:			
Depreciation	6	12,438	5,160
Allowance for inventory obsolescence	6	-	4,492
Amounts written off directly in profit or loss	6	81	-
Impairment of property plant and equipment	6	2,097	-
Impairment of goodwill	6	75	-
Changes in fair value of financial liabilities at fair value through profit or loss	5	48,424	5,664
Interest income	5	(607)	(1,871)
Changes in fair value of financial assets at fair value through profit or loss	5,6	54	470
Interest expense	5	14,336	972
Income tax	7	<u>(15,525)</u>	<u>(8,680)</u>
		13,930	(23,764)
Changes in:			
Inventories		4,254	(10,371)
Trade and other receivables		(11,076)	3,455
Trade and other payables		(4,384)	17,359
Provisions		<u>(5,000)</u>	<u>4,762</u>
<b>Cash used in operations</b>		<u>(2,276)</u>	<u>(8,559)</u>
Income tax paid		<u>(680)</u>	<u>(636)</u>
<b>Net cash used in operating activities</b>		<u>(2,956)</u>	<u>(9,195)</u>
<b>Cash flows from investing activities</b>			
Interest received		399	1,643
Establishment of long term deposits		(7,708)	-
Acquisition of subsidiary net of cash acquired	23	154	-
Additions to property, plant and equipment		(24,316)	(189,015)
Additions of other financial assets		<u>(850)</u>	<u>(1,127)</u>
<b>Net cash used in investing activities</b>		<u>(32,321)</u>	<u>(188,499)</u>

The notes on pages 32 to 92 form part of the Consolidated Financial Statements.

## CONSOLIDATED STATEMENT OF CASH FLOWS (continued)

For the year ended 30 September 2013

	Note	Years ended 30 September	
		2013	2012
		US\$'000	US\$'000
<b>Cash flows from financing activities</b>			
Proceeds from borrowings, net of transaction costs		16,073	120,209
Repayment of borrowings		(368)	-
Interest paid		(248)	(56)
<b>Net cash generated from financing activities</b>		<u>15,457</u>	<u>120,153</u>
<b>Net decrease in cash and cash equivalents</b>		(19,820)	(77,541)
<b>Cash and cash equivalents at the beginning of the year</b>		52,805	134,783
Effect of exchange rate fluctuations on cash held		(4,968)	(4,437)
<b>Cash and cash equivalents at the end of the year</b>	15	<u>28,017</u>	<u>52,805</u>

The notes on pages 32 to 92 form part of the Consolidated Financial Statements.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## **1. BACKGROUND**

Tharisa Plc (“the Company”) was incorporated in Cyprus on 20 February 2008 under registration number HE 223412. The name of the Company was changed from Tharisa Limited to Tharisa Plc on 19 January 2012. The principal activity of the Company and its subsidiaries (together with the Company, “the Group”) is platinum group metals (“PGM”) and chrome mining and processing. The Group holds the mining rights to 5,516 hectares of the Middle Group reef horizon of the Bushveld Complex located on the farms Kafferskraal and Rooikoppies near Marikana in the North West Province of South Africa.

The Company’s registered office is at Alkiviade 3, 8011 Paphos, Cyprus.

On 9 February 2009, the Company acquired 74% of the share capital of Tharisa Minerals Proprietary Limited, a company established in South Africa. The principal activity of Tharisa Minerals Proprietary Limited is PGM and chrome mining and processing.

On 2 November 2010, the Company incorporated Tharisa Investments Limited, a company established in Cyprus. The principal activity of Tharisa Investments Limited is that of investment holding. On 15 February 2012, Tharisa Investments Limited incorporated Tharisa Fujian Industrial Co., Ltd, a company established in the People’s Republic of China (“PRC”). The principal activity of Tharisa Fujian Industrial Co., Ltd is that of ferrochrome smelting. Tharisa Fujian Industrial Co., Ltd has not commenced operations up to the date of this report. During April 2011, Tharisa Investments Limited issued additional shares representing 15% of its expanded share capital to Fujian Wuhang Stainless Steel Products Co., Ltd (“Fujian”). On 22 November 2011, the Company and Fujian signed an agreement, according to which Fujian transferred its 15% equity interests in Tharisa Investments Limited to the Company. The consideration for this transfer was the par value of the shares transferred of US\$22.5 and a call option written by the Company which conferred to Fujian a right to purchase 15% of the equity capital of Tharisa Fujian Industrial Co., Ltd at Chinese Yuan Renminbi (“YUAN”) 100 any time after 31 December 2012. On 24 August 2011, Tharisa Investments Limited incorporated Tharisa Investments (Hong Kong) Limited, a company established in Hong Kong. Tharisa Investments (Hong Kong) Limited has not commenced operations up to the date of this report.

On 4 February 2011, the Company incorporated Arxo Resources Limited, a company established in Cyprus. The principal activity of Arxo Resources Limited is the selling and distribution of chrome concentrate. On 7 December 2011, Arxo Resources Limited, incorporated Arxo Metals Proprietary Limited, a company established in South Africa. The principal activity of Arxo Metals Proprietary Limited is metal processing and currently produce foundry and chemical grade products.

On 1 March 2011, the Company acquired 100% of the share capital of Arxo Logistics Proprietary Limited, a company established in South Africa. The principal activity of Arxo Logistics Proprietary Limited is the provision of logistics services.

On 31 May 2011, the Company incorporated Tharisa Administration Services Limited, a company established in Cyprus. Tharisa Administration Services Limited provides management and administration services to the Group. On 1 April 2013, Tharisa Administration Services Limited, acquired Braeston Corporate Consulting Services Proprietary Limited, a company established in South Africa. The principal activity of Braeston Corporate Consulting Services Proprietary Limited is the provision of management services to the Group.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 1. BACKGROUND (continued)

On 30 May 2013, the Company incorporated Dinami Limited, a company established in Guernsey. The principal activity of Dinami Limited is the provision of consultancy services in relation to the sale of the Group's foundry and chemical chrome concentrate products.

### 2. SIGNIFICANT ACCOUNTING POLICIES

#### (a) Statement of compliance

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as adopted by the European Union ("EU") and the requirements of the Cyprus Companies Law, Cap. 113.

The accounting policies set out below have been applied consistently in the preparation of the consolidated financial statements for all years presented.

#### (b) Basis of measurement

The consolidated financial statements are presented in United States Dollars (US\$) and are rounded to the nearest thousand. The consolidated financial statements are prepared on the historical cost basis except as otherwise stated in the accounting policies set out below.

#### (c) Going concern

At 30 September 2013, the Group's current liabilities exceeded current assets by US\$266,710 thousand and its total liabilities exceeded total assets by US\$53,641 thousand. A significant portion of the Group's current and total liabilities relates to convertible redeemable preference shares, Class B preference shares and loan from Langa Trust, the carrying amounts of which at 30 September 2013 amounted to US\$260,291 thousand, US\$12,171 thousand and US\$2,870 thousand respectively. According to the terms of these instruments, which are set out in notes 17(a), 17(b) and 25 respectively, the convertible redeemable preference shares are, inter alia, convertible into ordinary shares upon listing of the Company's ordinary shares on any stock exchange acceptable to the holders of the majority of the convertible redeemable preference shares, while Class B preference shares and loan from Langa Trust are expected to be repaid from the proceeds of such listing, on the assumption that the Company will raise adequate proceeds.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (c) Going concern (continued)

During the year, the Company prepared itself to undertake an Initial Public Offering (“IPO”) on the Alternative Investment Market of The London Stock Exchange Plc (“AIM”), and the process was expected to be completed in March 2013. However, the severe sovereign debt crisis experienced in Cyprus in March 2013, created an adverse impact on the Company’s IPO, as it significantly and adversely impacted investor confidence and sentiment, demand for the Company’s ordinary shares and ultimately the overall valuation of the Group. As a result of these conditions, the Board of Directors of the Company, in consultation with its Nominated Advisor to the IPO, invoked the material adverse change clause of the Articles of Association of the Company and deferred the IPO by a maximum of a year to 14 April 2014. This position of the Board of Director was also agreed by the holders of a majority of the Company’s convertible redeemable preference shares.

The Board of Directors of the Company, following the obtaining of South African exchange control approval, has initiated the process for a primary inward listing on the Johannesburg Stock Exchange Limited (“JSE”). With a successful listing on the JSE, the Company’s convertible redeemable preference shares will be converted into fully paid ordinary shares and in addition the Group expects to raise adequate proceeds to repay its Class B preference shares and loan from Langa Trust.

In an event of a no listing scenario, according to the terms of the convertible redeemable preference shares, as set out in note 17(a), the Company within 10 business days from a redemption notice is required to redeem these shares for a consideration equal to the subscription price of each share with a return by applying an Internal Rate of Return (“IRR”) of 25%. However, the Board of Directors is of the opinion that, according to the Articles of Association of the Company and the terms governing the issuance of the convertible redeemable preference shares, the Company is required to redeem only those convertible redeemable preference shares for which it has received a redemption notice, and only to the extent that it has sufficient distributable reserves, with the remainder of the redemption amount to be paid upon the Company being able to pay the redemption amount.

Should the aforesaid listing not be achieved within the required time frame, and should the Company receives a redemption notice and there is a different interpretation of the legal obligation of the Company, then the Group may not have the necessary liquid funds required to redeem the convertible redeemable preference shares and also finance its working capital requirements. In such case the Group may not be able to continue as a going concern which is the basis of preparation of these consolidated financial statements and necessary adjustments will have to be made to bring the assets to their net realizable value and provide for any further liabilities which may arise. Furthermore, non-current assets will have to be reclassified as current assets and non-current liabilities as current liabilities accordingly. These consolidated financial statements do not include any adjustments that might be necessary should the Group not be able to continue as a going concern.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (d) Use of estimates and judgements

The preparation of the consolidated financial statements in conformity with IFRS requires management to make judgements, estimates and assumptions that affect the application of accounting policies and reported amounts of assets, liabilities, income and expenses. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Judgements made by management in the application of IFRS that have significant effect on the consolidated financial statements and major sources of estimation uncertainty are as follows:

#### *Impairment of assets:*

The recoverable amount of each non-financial asset or cash-generating-unit (“CGU”) is determined as the higher of the value-in-use and fair value less costs to sell, in accordance with the Group’s accounting policies (see note 2(s)). Determination of the value-in-use of an asset or CGU based on a discounted cash flow model requires the use of estimates and assumptions, including: the appropriate rate at which to discount the cash flows, the timing of cash flows and expected life of the asset or CGU, exchange rates, commodity prices, ore reserves, future capital requirements and future operating performance. Changes in these estimates and assumptions impact the recoverable amount of the asset or the CGU and, accordingly, could result in an adjustment to the carrying amount of that asset or CGU.

#### *Mineral reserves:*

Economically recoverable ore reserves represent the estimated quantity of product in an area of interest that can be expected to be profitably extracted, processed and sold under current and foreseeable economic conditions. The determination of ore reserves includes estimates and assumptions about a range of geological, technical and economic factors, including: quantities, grades, production techniques, recovery rates, production costs, transport costs, commodity demand, commodity prices and exchange rates. Changes in ore reserves impact the assessment of recoverability of exploration and evaluation assets, property, plant and equipment, the carrying amount of assets depreciated on a units-of-production basis, provision for site rehabilitation and the recognition of deferred tax assets, including tax losses.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (d) Use of estimates and judgements (continued)

##### *Rehabilitation provision:*

The Group's mining and exploration activities are subject to various laws and regulations governing the protection of the environment. The Group recognises management's best estimate for asset retirement obligations in the period in which they are incurred. Actual costs incurred in future periods can differ materially from these estimates. Additionally, future changes to environmental laws and regulations, life of mine estimates and discount rates can affect the carrying amount of the provision. The estimated long-term environmental provision, comprising rehabilitation and mine closure is based on the Group's environmental policy taking into account the current technological, environmental and regulatory requirements. The provision for future rehabilitation was determined using calculations which required the use of estimates.

##### *Inventories:*

Net realisable value tests are performed at least annually based on the estimated future sales price of the products based on prevailing metal prices, less estimated costs to complete production and bring the product to sale. The nature of the net realisable value test inherently limits the ability to precisely monitor recoverability levels and may result in additional write-downs of inventories in future periods.

#### (e) Adoption of new and revised IFRS and Interpretations

As from 1 October 2012, the Group adopted all of the IFRS and International Accounting Standards (IAS), which are relevant to its operations. The adoption of these Standards did not have a significant effect on the consolidated financial statements of the Group.

The following Standards, Amendments to Standards and Interpretations had been issued but are not yet effective for the year ended 30 September 2013:

##### (i) Standards and Interpretations adopted by the EU

- IFRS 7 (Amendments) "Financial Instruments" Disclosures -"Offsetting Financial Assets and Financial Liabilities" (effective for annual periods beginning on or after 1 January 2013).
- IFRS 10 "Consolidated Financial Statements" (effective for annual periods beginning on or after 1 January 2013).
- IFRS 11 "Joint Arrangements" (effective for annual periods beginning on or after 1 January 2013).
- IFRS 12 "Disclosure of Interests in Other Entities" (effective for annual periods beginning on or after 1 January 2013).
- IFRS 13 "Fair Value Measurement" (effective for annual periods beginning on or after 1 January 2013).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (e) Adoption of new and revised IFRS and Interpretations (continued)

##### (i) Standards and Interpretations adopted by the EU (continued)

- IAS 19 (Amendments) "Employee Benefits" (effective for annual periods beginning on or after 1 January 2013).
- IAS 27 (Revised) "Separate Financial Statements" (effective for annual periods beginning on or after 1 January 2013).
- IAS 28 (Revised) "Investments in Associates and Joint ventures" (effective for annual periods beginning on or after 1 January 2013).
- IAS 32 (Amendments) "Offsetting Financial Assets and Financial Liabilities" (effective for annual periods beginning on or after 1 January 2014).
- IFRIC 20 "Stripping Costs in the Production Phase of a Surface Mine" (effective for annual periods beginning on or after 1 January 2013).
- Improvement to IFRS's 2009-2011 (effective for annual periods beginning on or after 1 January 2013).
- IFRS 1 (Amendments): "Government Loans" (effective for annual periods beginning on or after 1 January 2013).
- IFRS 10 "Consolidated Financial Statements" Transition Guidance (effective for annual periods beginning on or after 1 January 2013).
- IFRS 10 (Amendments) "Consolidated Financial Statements" Investment Entities (effective for annual periods beginning on or after 1 January 2013).
- IFRS 11 "Joint Arrangements" Transition Guidance (effective for annual periods beginning on or after 1 January 2013).
- IFRS 11 (Amendments) "Joint Arrangements" Investment Entities (effective for annual periods beginning on or after 1 January 2013).
- IFRS 12 "Disclosure of Interests in Other Entities" Transition Guidance (effective for annual periods beginning on or after 1 January 2013).
- IFRS 12 (Amendments) "Disclosure of Interests in Other Entities" Investment Entities (effective for annual periods beginning on or after 1 January 2013).

##### (ii) Standards and Interpretations not adopted by the EU

- IFRS 7 (Amendments) "Financial Instruments" Disclosures – "Disclosures on transition to IFRS 9" (effective for annual periods beginning on or after 1 January 2015).
- IFRS 9 "Financial Instruments" (effective for annual periods beginning on or after 1 January 2015).
- IAS 19 (Amendments) "Defined Benefit Plans Employee Contributions" (effective for annual periods beginning on or after 21 July 2014).
- Improvement to IFRS's 2010-2012 (effective for annual periods beginning on or after 1 July 2014).
- Improvement to IFRS's 2011-2013 (effective for annual periods beginning on or after 1 July 2014).
- IFRIC Interpretation 21 Levies (effective for annual periods beginning on or after 1 January 2014).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (e) Adoption of new and revised IFRS and Interpretations (continued)

##### (ii) Standards and Interpretations not adopted by the EU (continued)

The Board of Directors expects that the adoption of the above financial reporting standards in future periods will not have a significant effect on the consolidated financial statements of the Group except for the adoption of IFRS 9 which could change the classification and measurement of financial assets. The Group does not plan to early adopt this standard and the extent of the impact is in the process of being assessed by the Group.

#### (f) Basis of consolidation

The consolidated financial statements include, on a line by line basis, the financial statements of all subsidiaries.

The following policies have been applied during the consolidation process:

##### *Business combinations:*

The Group has applied the acquisition method for the business combinations disclosed in note 23.

Goodwill represents the excess of:

- (i) The aggregate of the fair value of the consideration transferred, the amount of any non-controlling interest in the acquiree and the fair value of the Group's previously held equity interest in the acquiree; over
- (ii) The net fair value of the acquiree's identifiable assets and liabilities measured as at the acquisition date.

When (ii) is greater than (i), then this excess is recognised immediately in profit or loss as a gain on a bargain purchase.

Goodwill is stated at cost less accumulated impairment losses. Goodwill arising on a business combination is allocated to each CGU, or groups of CGUs, that is expected to benefit from the synergies of the combination and is tested annually for impairment (see note 2(s)).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (f) Basis of consolidation (continued)

On disposal of a CGU during the year, any attributable amount of purchased goodwill is included in the calculation of the profit or loss on disposal.

#### *Subsidiaries and non-controlling interests:*

Subsidiaries are entities controlled by the Group. Control exists when the Group has the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities. In assessing control, potential voting rights that currently are exercisable are taken into account. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

Non-controlling interests represent the equity in a subsidiary not attributable directly or indirectly to the Company, and in respect of which the Group has not agreed any additional terms with the holders of those interests which would result in the Group as a whole having a contractual obligation in respect of those interests that meets the definition of a financial liability. For each business combination, the Group can elect to measure any non-controlling interests either at fair value or at their proportionate share of the subsidiary's net identifiable assets.

Non-controlling interests are presented in the consolidated statement of financial position within equity, separately from equity attributable to the owners of the Company. Non-controlling interests in the results of the Group are presented on the face of the consolidated statements of comprehensive income as an allocation of the total profit or loss and total comprehensive income for the year between non-controlling interests and the owners of the Company.

Changes in the Group's interests in a subsidiary that do not result in a loss of control are accounted for as equity transactions, whereby adjustments are made to the amounts of controlling and non-controlling interests within consolidated equity to reflect the change in relative interests, but no adjustments are made to goodwill and no gain or loss is recognised.

When the Group loses control of a subsidiary, it is accounted for as a disposal of the entire interest in that subsidiary, with a resulting gain or loss being recognised in profit or loss. Any interest retained in that former subsidiary at the date when control is lost is recognised at fair value and this amount is regarded as the fair value on initial recognition of a financial asset.

#### *Transactions eliminated on consolidation:*

Intra-group balances and transactions and any unrealised income and expenses arising from intra-group transactions are eliminated in preparing the consolidated financial statements. Unrealised losses resulting from intra group transactions are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (f) Basis of consolidation (continued)

##### *Foreign operations:*

The assets and liabilities of foreign operations including goodwill and fair value adjustments arising on acquisition, are translated to the presentation currency at exchange rates at the end of each reporting period. The income and expenses of foreign operations are translated to the presentation currency using the average rate for the year. Foreign currency differences are recognised in other comprehensive income and presented in the foreign currency translation reserve in equity. When a foreign operation is disposed of, the cumulative amount of the exchange differences relating to that foreign operation are transferred to profit or loss as part of the profit or loss on disposal.

#### (g) Revenue

Revenue is measured at the fair value of the consideration received or receivable. Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Group and the revenue can be reliably measured. The following specific recognition criteria must also be met before revenue is recognised:

##### *Sale of chrome concentrate:*

The Group enters into contracts for the sale of chrome concentrate. Revenue arising from chrome sales under these contracts is recognised when the price is determinable, the product has been delivered in accordance with the terms of the contract, the significant risks and rewards of ownership have been transferred to the customer, collection of the sale price is probable and associated costs can be reliably estimated. These criteria may vary per contract. As sales from chrome contracts are subject to a customer survey adjustment with regards to quality, sales are initially recorded on a provisional basis using management's best estimate of the chrome quality. Subsequent adjustments are recorded in revenue to take into account final adjustments, if different from the initial estimates.

##### *Sale of PGM:*

The Group enters into contracts for the sale of PGM. Revenue arising from PGM is initially recorded at the estimated fair value of the consideration receivable at the date of delivery. Adjustments to the sale price occur based on the movements in the metal market price up to the date of final pricing. The revenue adjustment mechanism embedded within sale arrangements has the characteristic of a commodity derivative. Accordingly the fair value of the final sale price adjustment is reestimated continuously and changes in fair value are recognised as an adjustment to revenue in profit or loss and trade receivables in the statement of financial position.

##### *Rental income:*

Rental income is recognised in profit or loss on a straight line basis over the term of the lease. Lease incentives granted are recognised as an integral part of the total rental income, over the term of the lease.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (h) Segment reporting

Operating segments, and the amounts of each segment item reported in the consolidated financial statements, are identified from the financial information provided regularly to the Group's most senior executive management for the purposes of allocating resources to, and assessing the performance of, the Group's various lines of business and geographical locations. The Board of Directors is of the view that the Group had two operating segments during the reporting period, the PGM segment and the chrome segment.

#### (i) Lease payments

Payments under leases which do not transfer substantially all the risks and rewards of ownership to the Group are classified as operating leases. Operating lease payments are recognised in profit or loss on a straight line basis over the term of the lease. Lease incentives received are recognised as an integral part of the total lease expense, over the term of the lease.

#### (j) Foreign currency transactions

Transactions in foreign currencies are translated to the respective functional currencies of Group entities at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated to the functional currency at the foreign exchange rate at that date. The foreign currency gain or loss on monetary items is the difference between amortised cost in the functional currency at the beginning of the year, adjusted for effective interest and payments during the year, and the amortised cost in foreign currency translated at the exchange rate at the end of the year.

Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currency at the exchange rate at the date that the fair value was determined. Non-monetary items in a foreign currency that are measured in terms of historical cost are translated using the exchange rate at the date of the transaction. Foreign currency differences arising on retranslation are recognised in profit or loss.

#### (k) Finance income and finance costs

Finance income comprises interest income on funds invested, gains on initial recognition and modification of interest-free loans at fair value and net foreign currency gains. Interest income is recognised in profit or loss as it accrues using the effective interest method.

Finance costs comprise interest expense on borrowings, dividends on preference shares classified as liabilities, unwinding of the discount on provisions, impairment losses recognised on financial assets (other than trade receivables) and net foreign currency losses. Borrowing costs that are not directly attributable to the acquisition, construction or production of a qualifying asset (see note 2(o)) are recognised in profit or loss using the effective interest method.

Foreign currency gains and losses are reported on a net basis.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (l) Employee benefits

##### *Provident fund:*

The Group's salaried employees in South Africa are members of defined contribution retirement benefit plans. The contributions to the plans range from a minimum of 3% to a maximum of 15% of staff's pensionable salary. Contributions to the plans vest immediately. Contributions are accrued in the year in which the associated services are rendered by employees.

The Group's employees in Cyprus and the PRC do not participate in retirement benefit plans.

##### *Short term benefits:*

Liabilities for employee benefits for wages, salaries, annual leave and sick leave that are expected to be settled within 12 months from the reporting date are calculated at undiscounted amounts based on remuneration wage and salary rates that the Group expects to pay as at the reporting date including related on-costs, such as workers compensation insurance and payroll tax. Non-accumulating monetary benefits such as medical care and motor vehicle expenses are expensed as the benefits are taken by the employees.

##### *Termination benefits:*

Termination benefits are recognised when, and only when, the Group demonstrably commits itself to terminate employment or to provide benefits as a result of voluntary redundancy by having a detailed formal plan which is without realistic possibility of withdrawal.

#### (m) Income tax

Income tax comprises current and deferred taxes. Income tax is recognised in profit or loss except to the extent that it relates to items recognised in other comprehensive income or directly in equity, in which case it is recognised in other comprehensive income or directly in equity, respectively.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustments to tax payable in respect of previous years.

Deferred tax is recognised in respect of temporary differences between the carrying amounts of

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (m) Income tax (continued)

assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the reporting date.

Apart from certain limited exceptions, all deferred tax liabilities and all deferred tax assets, to the extent that it is probable that future taxable profits will be available against which the asset can be utilised, are recognised. Future taxable profits that may support the recognition of deferred tax assets arising from deductible temporary differences include those that will arise from the reversal of existing taxable temporary differences, provided those differences relate to the same taxation authority and the same taxable entity, and are expected to reverse either in the same period as the expected reversal of the deductible temporary difference or in periods into which a tax loss arising from the deferred tax asset can be carried back or forward. The same criteria are adopted when determining whether existing taxable temporary differences support the recognition of deferred tax assets arising from unused tax losses and credits, that is, those differences are taken into account if they relate to the same taxation authority and the same taxable entity, and are expected to reverse in a period, or periods, in which the tax loss or credit can be utilised.

The limited exceptions to recognition of deferred tax assets and liabilities are those temporary differences arising from goodwill not deductible for tax purposes, the initial recognition of assets or liabilities that affect neither accounting nor taxable profit (provided they are not part of a business combination), and temporary differences relating to investments in subsidiaries to the extent that, in the case of taxable differences, the Group controls the timing of the reversal and it is probable that the differences will not reverse in the foreseeable future, or in the case of deductible differences, unless it is probable that they will reverse in the future.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but which they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realised simultaneously.

A deferred tax asset is recognised for unused tax losses, tax credits and deductible temporary differences, to the extent that it is probable that future taxable profits will be available against which they can be utilised. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (m) Income tax (continued)

Additional income taxes that arise from the distribution of dividends are recognised at the same time as the liability to pay the related dividend is established.

In determining the amount of current and deferred tax, the Group takes into account the impact of uncertain tax positions and whether additional taxes and interest may be due. This assessment relies on estimates and assumptions and may involve a series of judgements about future events. New information may become available that causes the Group to change its judgement regarding the adequacy of existing tax liabilities; such changes to tax liabilities will impact tax expense in the period that such a determination is made.

#### (n) Earnings per share

The Group presents basic and diluted earnings per share data for its ordinary shares. Basic earnings per share is calculated by dividing the profit or loss attributable to ordinary shareholders of the Company by the weighted average number of ordinary shares outstanding during the period. Diluted earnings per share is determined by adjusting the profit or loss attributable to ordinary shareholders and the weighted average number of ordinary shares outstanding for the effects of all dilutive potential ordinary shares, which comprise instruments convertible into ordinary shares and share options granted to employees.

If the number of ordinary or potential ordinary shares outstanding increases as a result of capitalisation, a bonus issue or a share split, or decreases as a result of a reverse share split before the consolidated financial statements are authorised for issue, the calculation of basic and diluted earnings per share for all periods presented are adjusted retrospectively, as if such changes to share capital had been effective since the beginning of the earliest period presented.

#### (o) Property, plant and equipment

##### *Mining assets and infrastructure:*

Mining assets and infrastructure typically include those costs incurred for the development of the mine, including the design of the mine plan, constructing and commissioning the facilities and preparation of the mine and necessary infrastructure for production. The mine development phase generally begins after completion of a feasibility study and ends upon the commencement of commercial production. Mining assets are recorded at cost less accumulated depreciation and any accumulated impairment losses. Expenditure, including evaluation costs, incurred to establish or expand productive capacity, to support and maintain that productive capacity prior to the commencement of commercial levels of production, are capitalised as mine development assets under construction and transferred to mining assets and infrastructure when the mining venture reaches commercial production. Development costs incurred to maintain current production are expensed.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### **2. SIGNIFICANT ACCOUNTING POLICIES (continued)** **(o) Property, plant and equipment (continued)**

#### *Deferred stripping costs:*

All stripping costs incurred (costs incurred in removing overburden to expose the ore) during the production phase of a mine are treated as variable production costs and as a result are included in the cost of inventory produced during the period in which the stripping costs are incurred. However, any costs of overburden stripping in excess of the expected open-pit life average stripping ratio are deferred. Any costs deferred will be included in inventory and expensed in future periods as the related inventory is sold.

#### *General:*

Other items of property, plant and equipment are measured at cost less accumulated depreciation and accumulated impairment losses. The cost of self-constructed assets includes the cost of materials, direct labour and an appropriate portion of normal production overheads. Directly attributable expenses relating to major capital projects and site preparation are capitalised until the asset is brought to a working condition for its intended use. These costs include dismantling and site restoration costs to the extent that these are recognised as a provision. Administrative and other general overhead costs are expensed as incurred. Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

Borrowing costs directly attributable to the construction or acquisition of qualifying assets are capitalised directly to the cost of the qualifying asset. To the extent that funds are borrowed specifically for the purpose of obtaining a qualifying asset, these borrowing costs shall be determined as the actual borrowing costs incurred on that borrowing.

To the extent that funds are borrowed generally and used for the purpose of obtaining a qualifying asset, the amount of borrowing costs shall be determined by applying a capitalisation rate to the expenditure on that asset. Borrowing costs specifically to finance the establishment of qualifying mining assets are capitalised until commercial levels of production are achieved. Otherwise, capitalisation of borrowing costs ceases when the asset is substantially complete.

Where an item of property, plant and equipment comprises major components with different useful lives, the components are accounted for as separate items of property, plant and equipment.

Expenditure incurred to replace a component of an item of property, plant and equipment that is accounted for separately, including major inspection and overhaul expenditure, is capitalised when the costs can be reliably measured and if it is probable that the future economic benefits embodied within the component will flow to the Group. The carrying amount of the replaced component, if any, is derecognised and charged against profit or loss.

Maintenance and day to day servicing and repairs, which neither materially add to the value of assets nor appreciably prolong their useful lives, are charged against profit or loss.

Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of the item and are recognised net within 'other income' in the statement of comprehensive income.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (o) Property, plant and equipment (continued)

##### *Government grants:*

Government grants are recognized as a deduction in the carrying amount of the item of property, plant and equipment they relate to, when there is reasonable assurance that they will be received, and the Group will comply with the conditions associated with the grant.

##### *Depreciation:*

Depreciation of mining assets and infrastructure is capitalised against inventories using the units-of-production method based on estimated economically recoverable proved and probable mineral reserves. Proved and probable reserves reflect estimated quantities of economically recoverable resources which can be recovered in the future from known mineral deposits. Depreciation is first charged on mining assets and infrastructure from the date on which they are available for use.

For other property, plant and equipment, depreciation is recognised in profit or loss on a straight-line basis at rates that will reduce the carrying amounts to estimated residual values over the estimated useful lives of the assets as follows. Leasehold improvements on premises occupied under operating leases are written off over the shorter of the lease term and the useful lives.

Depreciation, unless otherwise stated, is calculated as follows:

- Buildings at 10% per annum
- motor vehicles at 20% per annum
- computer equipment and software at 33.3% per annum
- office equipment at 33.3% per annum
- furniture at 20% per annum

No depreciation is provided on freehold land and mine development assets under construction.

Depreciation methods, residual values and useful lives are reviewed at least annually, and adjusted if appropriate, at each reporting date.

#### (p) Intangible exploration and evaluation assets

Exploration and evaluation costs, including the costs of acquiring prospecting rights and directly attributable exploration expenditure, are capitalised as intangible exploration and evaluation assets on a project-by-project basis, pending determination of the technical feasibility and commercial viability. Costs are recognised as exploration and evaluation costs from the date of granting a prospecting right. The capitalised costs are presented as intangible exploration and evaluation assets as a result of the nature of the assets acquired.

The technical feasibility and commercial viability of extracting a mineral resource is considered to be determinable when proved reserves are determined to exist. Upon determination of proved reserves, intangible exploration and evaluation assets attributable to those reserves are first tested for impairment and then reclassified from intangible exploration and evaluation assets to other appropriate categories of non-current assets.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (p) Intangible exploration and evaluation assets (continued)

Depreciation or amortisation of these assets commences once these assets are appropriately reclassified and are in commercial production.

Intangible exploration and evaluation assets are assessed for impairment in accordance with the Group's accounting policy (note 2(s)).

Also, additional guidance is provided by IFRS 6 "*Exploration for and Evaluation of Mineral Resources*" on indicators of impairment, examples of which are as follows:

- The period to explore, as granted under the prospecting rights acquired, has expired during the period; or will expire in the near future; or is not expected to be renewed;
- Further exploration on the project is neither budgeted nor planned for in the near future;
- A decision was made not to develop a project; and
- There is an indication that the carrying amount of the intangible exploration and evaluation asset is unlikely to be recovered in full from a successful development or the sale of the project.

If a project is abandoned, the related costs are expensed in profit or loss immediately.

#### (q) Inventories

Inventories comprising PGM and chrome concentrate, ore stockpiled, in-process metal contained in ore and consumable items are measured at the lower of cost and net realisable value. Cost is determined using the weighted average method and includes direct mining expenditure and an appropriate portion of overhead expenditure. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and costs to sell. Obsolete, redundant and slow moving inventories are identified and written down to net realisable value.

#### (r) Financial instruments

*Non-derivative financial assets:*

The Group initially recognises loans and receivables and deposits on the date that they are originated. All other financial assets (including assets designated at fair value through profit or loss) are recognised initially on the trade date, which is the date that the Group becomes a party to the contractual provisions of the instrument.

The Group derecognises a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows on the financial asset in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred. Any interest in transferred financial assets that is created or retained by the Group is recognised as a separate asset or liability.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (r) Financial instruments (continued)

*Non-derivative financial assets (continued):*

On derecognition, the difference between the carrying amount of the financial asset and proceeds receivable and any prior adjustment to reflect fair value that had been reported in other comprehensive income and accumulated in equity are included in profit or loss for the period.

The Group's non-derivative financial assets include the following:

- *Financial assets at fair value through profit or loss:*

A financial asset is classified at fair value through profit or loss if it is classified as held for trading or is designated as such upon initial recognition. Financial assets are designated as at fair value through profit or loss if the Group manages such investments and makes purchase and sale decisions based on their fair value in accordance with the Group's documented risk management or investment strategy. Attributable transaction costs are recognised in profit or loss as incurred. Financial assets at fair value through profit or loss are measured at fair value and changes therein are recognised in profit or loss.

- *Held to maturity investments:*

Held to maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturities that the Group's management has the positive intention and ability to hold to maturity and are included in non-current assets, except for those with maturities within 12 months from the reporting date which are classified as current assets. Held to maturity investments are stated at amortised cost less impairment losses.

- *Loans receivable:*

Loans receivable are stated at amortised cost less impairment losses. Unless otherwise stated, these balances have no fixed terms of repayment and are therefore deemed repayable on demand and deemed to have carrying values equal to their fair values.

- *Trade and other receivables:*

Trade and other receivables originated by the Group are stated at their amortised cost less impairment losses, except where the receivables are interest-free loans made to related parties without any fixed repayment terms or the effect of discounting would be immaterial. Appropriate allowances for estimated irrecoverable amounts are recognised in profit or loss when there is objective evidence that the asset is impaired. The allowance recognised is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the effective interest rate computed at initial recognition. Due to the short-term nature of the Group's trade and other receivables, amortised cost approximates fair value.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (r) Financial instruments (continued)

##### *Non-derivative financial liabilities:*

The Group initially recognises debt securities issued on the date that they are originated. All other financial liabilities are recognised initially on the trade date, which is the date that the Group becomes a party to the contractual provisions of the instrument.

The Group derecognises a financial liability when its contractual obligations are discharged, cancelled or expire. On derecognition, the difference between the carrying amount of the financial liability, including related unamortised costs, and the amount paid for it is included in profit or loss.

Non-derivative financial liabilities are recognised initially at fair value less any directly attributable transaction costs. Subsequent to initial recognition, these financial liabilities are measured at amortised cost using the effective interest method.

The Group's non-derivative financial liabilities include the following:

- *Trade and other payables:*

Trade and other payables are stated at amortised cost. Due to the short-term nature of the Group's trade and other payables, amortised cost approximates fair value.

- *Interest-bearing borrowings:*

Interest-bearing borrowings are stated at amortised cost, using the effective interest rate method, with any difference between cost and redemption value being recognised in profit or loss over the period of the borrowings on an effective interest rate basis.

- *Redeemable preference shares:*

Redeemable preference shares are classified as a liability if they are redeemable on a specific date or at the option of the preference shareholders, or if dividend payments are not discretionary. The liability is recognised in accordance with the Group's policy for interest-bearing borrowings. Dividends on redeemable preference shares are recognised as a liability and recognised as an interest expense using the effective interest rate method.

##### *Financial liabilities at fair value through profit or loss:*

The Group's financial liabilities at fair value through profit or loss include the following:

- *Hybrid financial liabilities:*

A hybrid financial liability includes a non-derivative host contract and one or more embedded derivatives with the effect that some of the cash flows of the instrument vary in a way similar to a stand-alone derivative. The Group designates the entire hybrid liability as a financial liability at fair value through profit or loss unless:

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (r) Financial instruments (continued)

*Financial liabilities at fair value through profit or loss (continued):*

- *Hybrid financial liabilities (continued):*

- (a) the embedded derivative(s) does not significantly modify the cash flows that otherwise would be required by the contract; or
- (b) it is clear with little or no analysis when a similar hybrid instrument is first considered that separation of the embedded derivative(s) is prohibited, such as a prepayment option embedded in a loan that permits the holder to prepay the loan for approximately its amortised cost.

Hybrid financial liabilities are recognised initially at fair value. Transaction costs that relate to the issue of the liabilities are recognised immediately in profit or loss. At the end of each reporting period the fair value is remeasured. The gain or loss on remeasurement to fair value is recognised immediately in profit or loss.

- *Derivative financial instruments:*

Derivative financial instruments are recognised initially at fair value. At the end of each reporting period the fair value is remeasured. The gain or loss on remeasurement to fair value is recognised immediately in profit or loss.

Financial assets and liabilities are offset and the net amount presented in the statement of financial position when, and only when, the Group has a legal right to offset the amounts and intends either to settle on a net basis or to realise the asset and settle the liability simultaneously.

The fair value of financial instruments traded in an organised financial market is measured at the applicable quoted prices. The fair value of financial instruments not traded in an organised financial market is determined using a variety of methods and assumptions that are based on market conditions and risks existing at the reporting date, including independent appraisals and discounted cash flow methods.

*Share capital:*

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of ordinary shares are recognized as a deduction from equity net of any tax effects. Holders of ordinary shares are entitled to dividends, which are recognized as a liability in the period they are declared.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
For the year ended 30 September 2013

**2. SIGNIFICANT ACCOUNTING POLICIES (continued)**

**(s) Impairment**

*Financial assets:*

Financial assets are assessed at each reporting date to determine whether there is any objective evidence that they are impaired. A financial asset is considered to be impaired if objective evidence indicates that a loss event has occurred after the initial recognition and the loss event had a negative effect on the estimated future cash flows of that asset, that can be estimated reliably.

Objective evidence of impairment includes observable data that comes to the attention of the Group about one or more of the following loss events:

- significant financial difficulty of the debtor;
- a breach of contract, such as a default or delinquency in interest or principal payments;
- its becoming probable that the debtor will enter bankruptcy or other financial reorganisation;
- significant changes in the technological, market, economic or legal environment that have an adverse effect on the debtor; and
- a significant or prolonged decline in the fair value of an investment in an equity instrument below its cost.

If any such evidence exists, any impairment loss is determined and recognised as follows:

An impairment loss in respect of a financial asset measured at amortised cost is calculated as the difference between its carrying amount and the present value of the estimated future cash flows discounted at the original effective interest rate. Individually significant financial assets are tested for impairment on an individual basis. The remaining financial assets are assessed collectively in groups that share similar credit risk characteristics.

All impairment losses are recognised in profit or loss and reflected in an allowance account against such financial assets. An impairment loss is reversed if the reversal can be related objectively to an event occurring after the impairment loss was recognised. The reversal is recognised in profit or loss.

*Non-financial assets:*

The carrying amounts of the Group's non-financial assets, other than inventories and deferred tax assets, are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable amount is estimated. For goodwill and intangible assets that have indefinite lives or are not yet available for use, the recoverable amount is estimated annually whether or not there is any indication of impairment. An impairment loss is recognised whenever the carrying amount of an asset or its related CGU exceeds its recoverable amount. A CGU is the smallest identifiable asset group that generates cash flows that are largely independent from other assets and groups. Impairment losses are recognised in profit or loss. Impairment losses recognised in respect of CGUs are allocated first to reduce the carrying amount of any goodwill allocated to the CGUs (group of units) and then, to reduce the carrying amount of the other assets in the CGU (group of units) on a pro rata basis.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (s) Impairment (continued)

*Non-financial assets (continued):*

The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the assets. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash flows from continuing use that are largely independent of the cash inflows of the other assets of the CGU.

For the purposes of goodwill impairment testing, goodwill acquired in a business combination is allocated to groups of CGUs that are expected to benefit from the synergies of the combination.

An impairment loss in respect of goodwill is not reversed. In respect of other assets, impairment losses recognised in prior periods are assessed at each reporting date for any indication that the loss has decreased or no longer exists. An impairment loss is reversed through profit or loss if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

#### (t) Provisions

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events where it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate of the amount of the obligation can be made. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability.

Long-term environmental obligations are based on the Group's environmental management plans, in compliance with the current environmental and regulatory requirements.

Where it is not possible that an outflow of economic benefits will be required, or the amount cannot be estimated reliably, the obligation is disclosed as a contingent liability, unless the probability of outflow of economic benefits is remote. Possible obligations, whose existence will only be confirmed by the occurrence or non-occurrence of one or more future events are disclosed as contingent liabilities unless the probability of outflow of economic benefits is remote.

*Rehabilitation costs:*

The net present value of estimated future costs for mine closure and rehabilitation is recognised and provided for in the consolidated financial statements and capitalised within mining assets on initial recognition. Rehabilitation will generally occur on closure or after closure of a mine. Initial recognition of the provision is at the time that the disturbance occurs and thereafter as and when additional disturbances take place.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (t) Provisions (continued)

*Rehabilitation costs (continued):*

The estimates are reviewed annually to take into account the effects of inflation and changes in estimates and are discounted using rates that reflect the time value of money. Annual increases in the provision due to the passage of time are recognised in profit or loss as an unwinding of the value of the provision expense. The present value of additional disturbances and changes in the estimate of the rehabilitation liability is capitalised to mining assets against an increase in the rehabilitation provision. The rehabilitation asset is depreciated as per the Group's accounting policy on depreciation (see note 2(o)). Cost of rehabilitation projects undertaken, included in the estimates, are charged to the provision as incurred.

Costs for restoration and rehabilitation which are created on an ongoing basis during production of inventories are provided for at their net present values and included as part of inventory costs. Environmental liabilities, other than rehabilitation costs, which relate to liabilities arising from specific events, are recognised in profit or loss when they are known, probable and may be reasonably estimated.

Gains or losses from the expected disposal of assets are not taken into account when determining the provision.

#### (u) Cash and cash equivalents

Cash and cash equivalents comprise cash at bank and on hand, demand deposits with banks and other financial institutions, and short-term, highly liquid investments that are readily convertible into known amounts of cash and which are subject to an insignificant risk of changes in value, having been within three months of maturity at acquisition.

#### (v) Related party transactions

For the purpose of these consolidated financial statements, a party is considered to be related to the Group if:

- (i) The party has the ability, directly or indirectly through one or more intermediaries, to control the Group or exercise significant influence over the Group in making financial and operating policy decisions, or has joint control over the Group;
- (ii) The Group and the party are subject to common control;
- (iii) The party is an associate of the Group or a joint venture in which the Group is a venturer;
- (iv) The party is a member of key management personnel of the Group or the Group's parent, or a close family member of such individual, or is an entity under the control, joint control or significant influence of such individuals;

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 2. SIGNIFICANT ACCOUNTING POLICIES (continued)

#### (v) Related party transactions (continued)

(v) The party is a close family member of a party referred to in (i) or is an entity under the control, joint control or significant influence of such individuals; or

(vi) The party is a post-employment benefit plan which is for the benefit of employees of the Group or of any entity that is a related party of the Group.

Close family members of an individual are those family members who may be expected to influence, or be influenced by, that individual in their dealings with the Group.

### 3. OPERATING SEGMENTS

The Group has two reportable segments, the chrome segment and the PGM segment. Information regarding the results of each reportable segment is included below. Performance is measured based on segment revenue, cost of sales and gross profit or loss, as included in the internal management reports that are reviewed by the Group's most senior executive management. Segment revenue, cost of sales and gross profit or loss are used to measure performance as management believes that such information is the most relevant in evaluating the results of each segment.

#### Year ended 30 September 2013

	Chrome US\$'000	PGM US\$'000	Total US\$'000
Revenue	161,184	54,271	215,455
Cost of sales	<u>(139,074)</u>	<u>(50,496)</u>	<u>(189,570)</u>
Gross profit	<u>22,110</u>	<u>3,775</u>	<u>25,885</u>

#### Year ended 30 September 2012

	Chrome US\$'000	PGM US\$'000	Total US\$'000
Revenue	48,556	5,333	53,889
Cost of sales	<u>(43,987)</u>	<u>(18,127)</u>	<u>(62,114)</u>
Gross profit/(loss)	<u>4,569</u>	<u>(12,794)</u>	<u>(8,225)</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 3. OPERATING SEGMENT (continued) Geographical Information

The following table sets out information about the geographical location of (i) the Group's revenue from external customers and (ii) the Group's property, plant and equipment and intangible assets ("specified non-current assets"). The geographical location analysis of revenue from external customers is based on the country of establishment of each customer. The geographical location of the specified non-current assets is based on the physical location of the asset in the case of property, plant and equipment, and the location of the operation to which they are allocated in the case of intangible assets.

	<u>Years ended 30 September</u>	
	<u>2013</u>	<u>2012</u>
	US\$'000	US\$'000
<b>(i) Revenues from external customers</b>		
The PRC	93,509	38,331
South Africa	55,011	7,168
Singapore	36,820	5,764
Hong Kong	28,174	738
Other countries	<u>1,941</u>	<u>1,888</u>
	<u>215,455</u>	<u>53,889</u>

Revenue represents the sales value of goods supplied to customers, net of value-added tax. The Group had two customers with whom transactions have individually exceeded 10% of the Group's revenues. Revenue from the largest customer of the Group represented approximately US\$54,104 thousand and US\$14,961 thousand for each of the years ended 30 September 2013 and 2012 and corresponds to revenues of the PGM segment and of the Chrome segment respectively. Revenue from the second largest customer of the Group represented approximately US\$33,414 thousand and US\$5,333 thousand for each of the years ended 30 September 2013 and 2012 and corresponds to revenues of the Chrome segment and of the PGM segment respectively.

	<u>30 September</u>	<u>30 September</u>
	<u>2013</u>	<u>2012</u>
	US\$'000	US\$'000
<b>(ii) Specified non-current assets</b>		
South Africa	270,441	319,442
Cyprus	61	129
The PRC	<u>55</u>	<u>76</u>
	<u>270,557</u>	<u>319,647</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 4. OTHER INCOME

	<u>Years ended 30 September</u>	
	<u>2013</u>	<u>2012</u>
	US\$'000	US\$'000
Rental income	-	94
Other income	<u>48</u>	<u>573</u>
	<u>48</u>	<u>667</u>

Rental income relates to portion of rent recovered by sub-tenants and income from houses rented in the area covered by the mining rights.

### 5. NET FINANCE COSTS

	<u>Years ended 30 September</u>	
	<u>2013</u>	<u>2012</u>
	US\$'000	US\$'000
<b>Finance income</b>		
Interest income	607	1,871
Changes in fair value of financial assets at fair value through profit or loss	256	-
Net foreign currency gains	<u>-</u>	<u>257</u>
	<u>863</u>	<u>2,128</u>
<b>Finance costs</b>		
Changes in fair value of financial assets at fair value through profit or loss	-	(470)
Interest expense	(14,336)	(972)
Bank charges	(158)	(155)
Net foreign currency losses	<u>(250)</u>	<u>-</u>
	<u>(14,744)</u>	<u>(1,597)</u>
<b>Changes in fair value of financial liabilities at fair value through profit or loss</b>	<u>(48,424)</u>	<u>(5,664)</u>
Net finance costs	<u>(62,305)</u>	<u>(5,133)</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 6. LOSS BEFORE TAXATION

Loss before taxation is arrived at after charging:

	<u>Years ended 30 September</u>	
	<u>2013</u>	<u>2012</u>
	US\$'000	US\$'000
<b>(a) Staff costs</b>		
Directors' fees	738	860
Directors' salaries and other benefits	1,742	980
Salaries, wages and other benefits	19,999	15,826
Contributions to defined contribution retirement plans	<u>1,540</u>	<u>1,625</u>
	<u>24,019</u>	<u>19,291</u>
<b>(a) Other items</b>		
Allowance for inventory obsolescence (note 13)	-	4,492
Fair value charge of financial assets	310	-
Impairment of goodwill (note 10)	75	-
Amounts written off directly in profit or loss	81	-
Impairment loss of property plant and equipment (note 9)	2,097	-
Depreciation (note 9)	12,438	5,160
Fees for professional services for the listing	3,126	3,368
Independent auditors' remuneration		
– current year	608	522
– over provision for prior years	-	(18)
Operating lease payments	<u>342</u>	<u>596</u>

### 7. INCOME TAX

	<u>Years ended 30 September</u>	
	<u>2013</u>	<u>2012</u>
	US\$'000	US\$'000
Corporate income tax for the year		
- Cyprus	991	203
- South Africa	94	90
Special contribution for defence in Cyprus for the year	3	154
Deferred tax – origination and reversal of temporary differences (note 19)	<u>(16,613)</u>	<u>(9,127)</u>
Income tax credit	<u>(15,525)</u>	<u>(8,680)</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 7. INCOME TAX (continued)

The entities within the Group are taxed in the countries in which they are incorporated and operate at the relevant tax rates as follows:

	Country	<u>Years ended 30 September</u>	
		<u>2013</u>	<u>2012</u>
Tharisa Plc	Cyprus	12.5%	10%
Tharisa Minerals Proprietary Limited	South Africa	28%	28%
Tharisa Investments Limited	Cyprus	12.5%	10%
Arxo Resources Limited	Cyprus	12.5%	10%
Tharisa Fujian Industrial Co., Ltd	The PRC	25%	25%
Arxo Logistics Proprietary Limited	South Africa	28%	28%
Tharisa Administration Services Limited	Cyprus	12.5%	10%
Tharisa Investments (Hong Kong) Limited	Hong Kong	16.5%	16.5%
Arxo Metals Proprietary Limited	South Africa	28%	28%
Braeston Corporate Consulting Services Proprietary Limited	South Africa	28%	N/A
Dinami Limited	Guernsey	0%	N/A

Tax rates are not disclosed for the years when subsidiaries were not yet acquired or established by the Group.

### Reconciliation between tax credit and accounting loss at applicable tax rates:

	<u>Years ended 30 September</u>	
	<u>2013</u>	<u>2012</u>
	<u>US\$'000</u>	<u>US\$'000</u>
Loss before taxation	<u>(62,968)</u>	<u>(38,651)</u>
Notional tax on loss before taxation, calculated at the rates applicable in the jurisdictions concerned	(25,582)	(10,854)
Non taxable income	(580)	(667)
Non deductible expenses	10,155	2,070
Recognition of deemed interest income for tax purposes	171	147
Tax losses not recognized for deferred tax purposes	308	470
Special contribution for defence (note (i))	<u>3</u>	<u>154</u>
	<u>(15,525)</u>	<u>(8,680)</u>

Notes:

- (i) Special contribution for defence is provided in Cyprus on certain interest income at the rate of 30% (15% until 29 April 2013). 100% of such interest income is treated as non taxable in the computation of chargeable income for corporation tax purposes.
- (ii) No provision for PRC Income Tax was made as the PRC subsidiary has sustained losses for taxation purposes.
- (iii) No provision for Hong Kong Profits Tax was made as the Hong Kong subsidiary did not earn any assessable profits.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 8. LOSS PER SHARE

The calculation of basic loss per share was based on the loss attributable to the owners of the Company, reduced by the loss attributable to the holders of the Company's convertible redeemable preference shares (note 17(a)), and the weighted average number of ordinary shares outstanding during each year.

	<u>Years ended 30 September</u>	
	<u>2013</u>	<u>2012</u>
	US\$'000	US\$'000
Loss for the year attributable to the owners of the Company	(48,347)	(26,018)
Less: loss attributable to holders of convertible redeemable preference shares	<u>9,417</u>	<u>5,068</u>
Net loss for the year attributable to Ordinary Shareholders	<u>(38,930)</u>	<u>(20,950)</u>
Weighted average number of ordinary shares outstanding during the year	<u>6,169,900</u>	<u>6,169,900</u>
Loss per share (US\$)	<u>(6.31)</u>	<u>(3.40)</u>

The weighted average number of ordinary shares outstanding during the year is the number of ordinary shares outstanding at the beginning of the year, adjusted by the number of ordinary shares issued during the year multiplied by a time-weighting factor, as detailed below:

	<u>Years ended 30 September</u>	
	<u>2013</u>	<u>2012</u>
	Number of shares	Number of shares
Issued ordinary shares at beginning of year	6,169,900	4,345
Effect of share subdivision on 11 November 2011 (note 16(b))	<u>-</u>	<u>6,165,555</u>
Issued ordinary shares at end of year	<u>6,169,900</u>	<u>6,169,900</u>
Weighted average number of ordinary shares for determination of loss per share	<u>6,169,900</u>	<u>6,169,900</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 8. LOSS PER SHARE (continued)

The Company's convertible redeemable preference shares (see note 17(a)) are potential dilutive shares, but were anti-dilutive during the reporting period. Accordingly, diluted loss per share is the same as basic loss per share for the reporting period.

As further described in note 16 of these consolidated financial statements, each of the Company's ordinary shares was sub-divided into 1,420 ordinary shares on 11 November 2011. For the purpose of calculating basic and diluted earnings per share, the weighted average number of ordinary shares used in the calculation reflects the effect of the share subdivision as if it had occurred at the beginning of the earliest period presented.

### 9. PROPERTY, PLANT AND EQUIPMENT

	Balance at 1 October <u>2012</u> US\$'000	<u>Additions</u> US\$'000	<u>Transfers</u> US\$'000	<u>Impairments</u> US\$'000	<u>Exchange differences</u> US\$'000	Balance at 30 September <u>2013</u> US\$'000
<b>Cost</b>						
Freehold land and buildings	16,251	1,363	-	-	(2,969)	14,645
Mine development assets under construction	136,718	-	(126,450)	-	(10,268)	-
Mining assets and infrastructure	169,606	21,874	124,681	(2,097)	(45,220)	268,844
Leasehold improvements	77	2	56	-	(24)	111
Computer equipment and software	1,341	932	-	-	(290)	1,983
Motor vehicles	254	60	-	-	(34)	280
Office equipment and furniture, social community and site office improvements	<u>514</u>	<u>85</u>	<u>(56)</u>	<u>-</u>	<u>(78)</u>	<u>465</u>
	<u>324,761</u>	<u>24,316</u>	<u>(1,769)</u>	<u>(2,097)</u>	<u>(58,883)</u>	<u>286,328</u>

	Balance at 1 October <u>2012</u> US\$'000	<u>Charge for the year</u> US\$'000	<u>Written back on disposals</u> US\$'000	<u>Exchange differences</u> US\$'000	Balance at 30 September <u>2013</u> US\$'000
<b>Accumulated depreciation</b>					
Freehold land and buildings	-	12	-	(1)	11
Mining assets and infrastructure	5,965	11,786	-	(1,619)	16,132
Leasehold improvements	40	55	-	(12)	83
Computer equipment and software	281	447	-	(67)	661
Motor vehicles	64	43	-	(9)	98
Office equipment and furniture, social community and site office improvements	<u>148</u>	<u>95</u>	<u>-</u>	<u>(30)</u>	<u>213</u>
	<u>6,498</u>	<u>12,438</u>	<u>-</u>	<u>(1,738)</u>	<u>17,198</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 9. PROPERTY, PLANT AND EQUIPMENT (continued)

	Balance at 1 October <u>2011</u> US\$'000	<u>Additions</u> US\$'000	<u>Transfers</u> US\$'000	<u>Exchange differences</u> US\$'000	Balance at 30 September <u>2012</u> US\$'000
Cost					
Freehold land and buildings	23,101	3,250	(9,186)	(914)	16,251
Mine development assets under construction	30,478	160,733	(47,566)	(6,927)	136,718
Mining assets and infrastructure	84,289	33,421	56,734	(4,838)	169,606
Leasehold improvements	75	7	-	(5)	77
Computer equipment and software	407	982	(5)	(43)	1,341
Motor vehicles	227	38	(3)	(8)	254
Office equipment and furniture, social community and site office improvements	<u>484</u>	<u>60</u>	<u>(10)</u>	<u>(20)</u>	<u>514</u>
	<u>139,061</u>	<u>198,491</u>	<u>(36)</u>	<u>(12,755)</u>	<u>324,761</u>

	Balance at 1 October <u>2011</u> US\$'000	<u>Charge for the year</u> US\$'000	<u>Written back on disposals</u> US\$'000	<u>Exchange differences</u> US\$'000	Balance at 30 September <u>2012</u> US\$'000
<b>Accumulated depreciation</b>					
Mining assets and infrastructure	1,334	4,780	-	(149)	5,965
Leasehold improvements	14	28	-	(2)	40
Computer equipment and software	80	208	-	(7)	281
Motor vehicles	20	45	-	(1)	64
Office equipment and furniture, social community and site office improvements	<u>65</u>	<u>99</u>	<u>-</u>	<u>(16)</u>	<u>148</u>
	<u>1,513</u>	<u>5,160</u>	<u>-</u>	<u>(175)</u>	<u>6,498</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 9. PROPERTY, PLANT AND EQUIPMENT (continued)

	30 September <u>2013</u> US\$'000	30 September <u>2012</u> US\$'000	1 October <u>2011</u> US\$'000
<b>Net book value</b>			
Freehold land and buildings	14,634	16,251	23,101
Mine development assets under construction	-	136,718	30,478
Mining assets and infrastructure	252,712	163,641	82,955
Leasehold improvements	28	37	61
Computer equipment and software	1,322	1,060	327
Motor vehicles	182	190	207
Office equipment and furniture, social community and site office improvements	<u>252</u>	<u>366</u>	<u>419</u>
	<u>269,130</u>	<u>318,263</u>	<u>137,548</u>

All of the Group's land is freehold and located on the farms Kafferskraal 342 and Elandsdrift 467. All farms are situated in the North West Province, Registration Division JQ, South Africa.

At 30 September 2013 and 2012, all of the property, plant and equipment of subsidiary company Tharisa Minerals Proprietary Limited, the carrying amount of which amounted to US\$264,357 thousand and US\$317,066 thousand respectively, is pledged as security against the secured bank borrowing (note 20(a)).

### 10. GOODWILL

#### (a) Reconciliation of carrying amount

<b>Cost</b>	Years ended 30 September	
	<u>2013</u> US\$'000	<u>2012</u> US\$'000
Balance at 1 October	1,384	1,453
Acquisition through business combination (note 23)	396	-
Effect of movements in exchange rate	<u>(278)</u>	<u>(69)</u>
Balance 30 September	<u>1,502</u>	<u>1,384</u>
<b>Accumulated impairment losses</b>	Years ended 30 September	
	<u>2013</u> US\$'000	<u>2012</u> US\$'000
Balance at 1 October	-	-
Impairment of goodwill	<u>75</u>	<u>-</u>
Balance 30 September	<u>75</u>	<u>-</u>
<b>Carrying amounts 30 September</b>	<u>1,427</u>	<u>1,384</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 10. GOODWILL (continued)

#### (b) Impairment test for goodwill

Impairment losses were recognised in relation to goodwill which arose from the acquisition of Arxo Logistics Proprietary Limited and Braeston Corporate Consulting Services Proprietary Limited, as follows:

	Years ended 30 September	
	<u>2013</u>	<u>2012</u>
	US\$'000	US\$'000
Arxo Logistics Proprietary Limited (note 10(b)(i))	57	-
Braeston Corporate Consulting Services Proprietary Limited (note 10(b)(ii))	<u>18</u>	<u>-</u>
<b>Impairment loss</b>	<u><u>75</u></u>	<u><u>-</u></u>

#### (i) Impairment loss on Arxo Logistics Proprietary Limited

At 30 September 2013, the carrying amount of Arxo Logistics Proprietary Limited CGU exceeded its recoverable amount and thus impairment was recognised to reduce the carrying amount of goodwill. The recoverable amount is determined based on value-in-use calculation. This calculation uses cash flow projections approved by management covering a thirty one-year period. The growth rates used do not exceed the long-term average growth rates for the business in which the CGU operates. The cash flows are discounted using a nominal discount rate of 11.53%. The discount rate used is a pre-tax nominal rate and reflects specific risks relating to the relevant segment.

#### (ii) Impairment loss on Braeston Corporate Consulting Services Proprietary Limited

At 30 September 2013, the carrying amount of Braeston Corporate Consulting Services Proprietary Limited CGU exceeded its recoverable amount and thus impairment was recognised to reduce the carrying amount of goodwill. The recoverable amount is determined based on value-in-use calculation. This calculation uses cash flow projections approved by management covering a thirty one-year period. The growth rates used do not exceed the long-term average growth rates for the business in which the CGU operates. The cash flows are discounted using a nominal discount rate of 11.53%. The discount rate used is a pre-tax nominal rate and reflects specific risks relating to the relevant segment.

### 11. LONG TERM DEPOSITS

	30 September	30 September
	<u>2013</u>	<u>2012</u>
	US\$'000	US\$'000
Long term deposits	<u>7,708</u>	<u>-</u>

The amount of US\$7,708 thousand is restricted and designated as a “debt service reserve account” as required by the terms of the senior debt facility of Tharisa Minerals Proprietary Limited. As at 30 September 2013, the long term deposits did not earn any interest and had no maturity date.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 12. OTHER FINANCIAL ASSETS

	30 September 2013 US\$'000	30 September 2012 US\$'000
<i>Non-current :</i>		
Investments in cash funds and income funds (note 12(a))	3,656	3,705
Interest rate caps (note 12(b))	<u>118</u>	<u>132</u>
	<u>3,774</u>	<u>3,837</u>
<i>Current :</i>		
Investments at fair value through profit or loss	86	-
Discount facility (note 12(c))	<u>225</u>	<u>-</u>
	<u>311</u>	<u>-</u>

- (a) The investment in cash funds and income funds is provided to Lombard Insurance Group as collateral against the guarantee issued by Lombard Insurance Group to the Department of Minerals and Energy of South Africa in the amount of South African Rand (“ZAR”) 84 million (see note 18). The balance is unsecured and is considered as level 1 in the fair value hierarchy and held at fair value through profit or loss (designated), (note 24(d)).
- (b) Interest rate caps were obtained from a consortium of financial institutions, against the floating 3 month Johannesburg Interbank Agreed Rate (“JIBAR”) on 25% of the secured bank borrowing (note 20(a)). The interest rate caps have a strike rate of 7.5% and terminate on 31 March 2017. The balance is held at fair value through profit or loss (held for trading), (note 24(d)).
- (c) Discount facility relates to fair value adjustments on the limited recourse disclosed receivables discounting facility (“Discount facility”) with ABSA, Nedbank and HSBC in terms of which 98% of the sales of platinum, palladium and gold (included in PGM) sold at an effective finance cost of JIBAR (3 month) + 2%. The facility is for an amount of ZAR300 million. The balance is held at fair value through profit or loss (designated), (note 24(d)).

### 13. INVENTORIES

	30 September 2013 US\$'000	30 September 2012 US\$'000
Finished products	13,037	4,169
In progress metal	1,247	12,988
Ore stockpile	6,841	10,389
Consumables	<u>2,918</u>	<u>751</u>
	<u>24,043</u>	<u>28,297</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 13. INVENTORIES (continued)

Inventories are stated at the lower of cost and net realisable value.

The analysis of the amount of inventories recognised as an expense and included in profit or loss is as follows:

	Years ended 30 September	
	2013	2012
	US\$'000	US\$'000
Carrying amount of inventories sold	119,627	39,323
Write-down of inventories	-	4,492
	<u>119,627</u>	<u>43,815</u>

All amounts of inventories are expected to be recovered within one year from each reporting date.

### 14. TRADE AND OTHER RECEIVABLES

	30 September 2013	30 September 2012
	US\$'000	US\$'000
Trade receivables		
- Third parties	21,135	6,330
- Related parties (note 25)	60	65
Deposits, prepayments and other receivables	1,637	3,540
Value added tax recoverable	6,291	8,091
Foreign exchange forward contracts (note 24(d))	-	103
	<u>29,123</u>	<u>18,129</u>

Trade and other receivables of the Group, are expected to be recoverable within one year from each reporting date.

The ageing of trade receivables after allowance for credit losses was as follows:

	30 September 2013	30 September 2012
	US\$'000	US\$'000
Current	21,108	6,395
Past due but not impaired	87	-
	<u>21,195</u>	<u>6,395</u>

The movement in allowance for credit losses in respect of trade and other receivables of the Group during the year was as follows:

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 14. TRADE AND OTHER RECEIVABLES (continued)

	Years ended 30 September	
	2013 US\$'000	2012 US\$'000
Balance at the beginning of the year	163	171
Amounts written off during the year directly against the financial asset	(147)	-
Exchange differences	(16)	(8)
Balance at the end of the year	-	163

At 30 September 2013 and 2012 an amount of US\$Nil thousand and US\$163 thousand respectively, of the Group's trade receivables was determined to be impaired. The impaired trade receivables related to customers that were in financial difficulties and management assessed that the receivable balances are fully impaired. Consequently, specific allowance for credit losses was recognised against the respective balances. Based on past experience, management believes that no further impairment allowance is necessary in respect of the remaining trade and other receivables as there has not been a significant change in credit quality and the balances are still considered fully recoverable. The Group does not hold any collateral over these balances.

### 15. CASH AND CASH EQUIVALENTS

	30 September 2013 US\$'000	30 September 2012 US\$'000
	Bank balances	27,472
Call deposits	545	1,332
	28,017	52,805

As at 30 September 2013, an amount of US\$2,231 thousand was provided as security for a bank guarantee issued in favour of a trade creditor of the Group, an amount of US\$2,500 thousand was placed as security against a credit facility of a subsidiary of the Company (note 20 (c)) and US\$327 thousand was provided as security against certain credit facilities of the Group.

### 16. SHARE CAPITAL AND RESERVES

#### (a) Movements in components of equity

The reconciliation between the opening and closing balances of each component of the Group's consolidated equity is set out in the consolidated statement of changes in equity.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 16. SHARE CAPITAL AND RESERVES (continued)

#### (b) Ordinary share capital

At 30 September 2013, the authorised ordinary share capital of the Company consisted of 10,000,000,000 ordinary shares of US\$0.001 each (2012: 10,000,000,000 ordinary shares). The issued and fully paid share capital of the Company consisted of 6,169,900 ordinary shares of US\$0.001 each (2012: 6,169,900 ordinary shares).

During the year ended 30 September 2012 each issued and unissued ordinary share of the Company of nominal value of US\$1.42 was subdivided, into 1,420 ordinary shares, such that following the subdivision the authorised share capital of the Company is US\$14,200 divided into 14,200,000 ordinary shares of US\$0.001 and the issued and fully paid share capital of the Company is US\$6,170 divided into 6,169,900 ordinary shares of US\$0.001 each, effective on 11 November 2011. In addition, the authorised share capital of the Company was increased to US\$10,000,000 divided into 10,000,000,000 ordinary shares of US\$0.001 each also effective on 11 November 2011.

All shares rank equally with regard to the Company's residual assets. The holders of ordinary shares are entitled to receive dividends as declared from time to time and are entitled to one vote per share at meetings of the Company.

The Company did not issue any ordinary shares during the years ended 30 September 2013 and 30 September 2012.

#### (c) Nature and purpose of reserves

##### (i) *Share premium:*

The share premium reserve represents the excess of the issuance price of shares over their nominal value to the extent that it is registered at the Company registrar in Cyprus.

##### (ii) *Other reserve:*

Other reserve represents the excess of the issuance price of the Company's ordinary shares over the sum of their nominal value and share premium arising from such issuance as registered with the Registrar of Companies in Cyprus.

##### (iii) *Foreign currency translation reserve:*

The foreign currency translation reserve comprises all foreign currency differences arising from the translation of the financial statements of foreign operations.

#### (d) Capital management

The Company manages its capital to ensure that it will be able to continue as a going concern, while maximising the return to the owners through the optimisation of the debt and equity balance. The policy of the Board of Directors is to maintain a strong capital base to sustain future development of the business. The Company is not exposed to externally imposed capital requirements.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 17. REDEEMABLE PREFERENCE SHARES

	<u>30 September</u> <u>2013</u> US\$'000	<u>30 September</u> <u>2012</u> US\$'000
Convertible redeemable preference shares of the Company (note 17(a))	<u>260,291</u>	<u>212,791</u>
Class B preference shares of a subsidiary (note 17(b))	<u>12,171</u>	<u>12,548</u>

#### (a) Terms of convertible redeemable preference shares of the Company

Convertible redeemable preference shares relate to convertible redeemable preference shares of the Company. The authorised convertible redeemable preference share capital of the Company was US\$1,156 at 30 September 2013 and 2012, divided into 1,156 shares of US\$1.00 each. The issued convertible redeemable preference share capital of the Company consisted of 1,051 shares at 30 September 2013 and 2012. All shares were issued on 14 April 2011, at a price of US\$142,857 each and are fully paid. Convertible redeemable preference shares rank before ordinary shares with respect to the return of the nominal value of capital but rank equally with ordinary shares with respect to the Company's residual assets after return of the nominal amount of capital. The holders of convertible redeemable preference shares are entitled to receive dividends as declared from time to time and are entitled to one vote per share at meetings of the Company.

The convertible redeemable preference shares shall be converted into ordinary shares upon:

- (i) Listing of the Company's ordinary shares on any stock exchange acceptable to the holders of the majority of the convertible redeemable preference shares;
- (ii) The sale of any of the shares in the capital of the Company which will result in the purchaser of those shares acquiring control of the Company; or
- (iii) The sale of all or substantially all of the assets of the Group.

Convertible redeemable preference shares shall be converted into the number of fully paid ordinary shares at the higher of the following:

- (i) 1,420 ordinary shares for every one convertible redeemable preference share; or
- (ii) The number of ordinary shares calculated by dividing the notional return amount by the offer price per ordinary share in an IPO, or on the sale of any of the shares in the capital of the Company which will result in the purchaser of those shares acquiring control of the Company that sale price per share, or in the sale of all or substantially all assets of the Group the imputed price per share.

The notional return amount is the amount calculated by applying to the subscription price for each convertible redeemable preference share an IRR of 25%, taking into account any cash dividends which have been paid by the Company to the holders of the convertible redeemable preference shares between the subscription date and the conversion date.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 17. REDEEMABLE PREFERENCE SHARES (continued)

#### (a) Terms of convertible redeemable preference shares of the Company (continued)

According to the original terms, if none of the above events occurs within 24 months from the date of issuance of the convertible redeemable preference shares, then within ten business days from the receipt of a redemption notice, the Company must redeem the shares for a consideration equal to the subscription price of each share with a return by applying an IRR of 25% taking into account any cash dividends which have been paid by the Company to the holders of the convertible redeemable preference shares between the subscription date and the redemption date.

However, during the year ended 30 September 2013, and following the developments set out in note 2(c), and the invoking by the Board of Directors of the material adverse change clause, the due date for the conversion or redemption of the convertible redeemable preference shares of the Company was deferred by a maximum of a year to 14 April 2014 and as at 30 September 2013 were classified as current liabilities.

Convertible redeemable preference shares are stated at fair value. The fair value is measured using a probability weighted expected return method as set out in note 24 (e) (ii).

#### (b) Terms of Class B preference shares of a subsidiary

Class B preference shares relate to cumulative redeemable preference shares of Tharisa Minerals Proprietary Limited. On 8 April 2010, Tharisa Minerals Proprietary Limited issued 7,200 cumulative redeemable class B preference shares of nominal value of ZAR0.01 each at the price of ZAR10,000 each. The authorised number of cumulative redeemable class B preference shares is 100,000. Class B preference shares held by related parties are set out in note 25.

Main terms of Class B preference shares are as follows:

None of the Class B Preference shares shall be redeemed until the earlier of the date on which the convertible redeemable preference shares of the Company (note 17 (a)) are fully redeemed or the date on which any of the following events occurs:

- (i) Listing of the Company's ordinary shares on or any stock exchange acceptable to the holders of the majority of the convertible redeemable preference shares;
- (ii) The sale of any of the shares in the capital of the Company which will result in the purchaser of those shares acquiring control of the Company; or
- (iii) The sale of all or substantially all assets of the Group.

For the year ended 30 September 2012, the redemption amount was calculated by applying to the aggregate subscription price of Class B preference shares outstanding and accrued cumulative dividends thereon an IRR of 25% or in case of the above events giving an IRR to the Company's convertible redeemable preference shareholders of more than 25%, such higher IRR, less any amount

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 17. REDEEMABLE PREFERENCE SHARES (continued)

#### (b) Terms of Class B preference shares of a subsidiary (continued)

paid to Class B preference shareholders by way of any dividend or other distribution. Upon the changes aforementioned, Class B preference shares have been measured at fair value through profit or loss. The fair value is measured using a probability weighted expected return method as set out in note 24(e)(ii).

Following further amendments to the terms on 1 October 2012, the Class B preference shares were derecognized as financial liabilities at fair value through profit and loss and recognized as financial liabilities at amortised cost. The day one fair value following conversion as financial liabilities at amortised cost was calculated such that the IRR on the preference shares between 14 April 2011 and 30 September 2012 would be 25%. From 1 October 2012, the preference shares bear a coupon at prime plus 2%, compounded monthly.

### 18. PROVISIONS

	Years ended 30 September	
	2013	2012
	US\$'000	US\$'000
<b>Provision for future rehabilitation</b>		
Balance at the beginning of the year	11,391	6,629
Capitalised to inventories	(3,774)	409
Capitalised to mining assets and infrastructure	(1,653)	4,040
Recognised in profit or loss	354	794
Exchange differences	<u>(1,580)</u>	<u>(481)</u>
Balance at the end of the year	<u>4,738</u>	<u>11,391</u>

As detailed in note 2(t), the Group has a legal obligation to rehabilitate the site where the Group's mine is located, once the mining operations cease which would be when the current mine life of the project expires.

An insurance company has provided a guarantee to the Department of Minerals and Energy of South Africa to satisfy the requirements of the Mineral and Petroleum Resources Development Act with respect to environmental rehabilitation and the Group has pledged as collateral its investments in interest-bearing debt instruments to the insurance company to support this guarantee (see note 12(a)).

The interest rate used for estimating future costs is the long-term risk free rate as indicated by the R186 government bond of South Africa, which was 7.92% and 7.45% as at 30 September 2013 and 2012, respectively. The net present value of the current rehabilitation estimate is based on the average of the long-term inflation target range of the South African Reserve Bank of between 3% and 6%.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 19. DEFERRED TAX (LIABILITIES)/ASSETS

	Years ended 30 September	
	2013	2012
	US\$'000	US\$'000
<b>Recognised deferred tax assets/ (liabilities)</b>		
At the beginning of the year	<u>6,403</u>	<u>(2,578)</u>
Temporary differences recognised in profit or loss in relation to:		
- Capital allowances on property, plant and equipment	(731)	(52,521)
- Provisions	(1,420)	1,468
- Tax losses	15,401	58,429
- Others	<u>3,363</u>	<u>1,751</u>
	<u>16,613</u>	<u>9,127</u>
Exchange differences	<u>(2,393)</u>	<u>(146)</u>
At the end of the year	<u>20,623</u>	<u>6,403</u>

The Group did not have tax losses and temporary differences for which deferred tax was not recognised except that the Group has not recognised deferred tax assets in respect of a subsidiary's tax losses of US\$980 thousand and US\$664 thousand as at 30 September 2013 and 2012, as it is not probable that future taxable profits against which the losses can be utilised will be available in the relevant tax jurisdiction and entity. The tax losses at 30 September 2013 and 2012 expire in 2018 and 2017 respectively.

### 20. BORROWINGS

	30 September 2013	30 September 2012
	US\$'000	US\$'000
<i>Non-current:</i>		
Secured bank borrowing (note 20(a))	82,876	121,424
Other borrowings - loans payable to third parties (note 20(b))	<u>1,979</u>	<u>-</u>
	<u>84,855</u>	<u>121,424</u>
<i>Current:</i>		
Secured bank borrowing (note 20(a))	27,811	-
Other borrowings – loans payable to third parties (note 20(b))	1,354	362
Other borrowings – bank credit and other facility (note 20(c))	12,610	-
Other borrowings - loans payable to related parties (note 25)	<u>2,870</u>	<u>2,935</u>
	<u>44,645</u>	<u>3,297</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 20. BORROWINGS (continued)

(a) During the year ended 30 September 2012 the Group obtained financing of ZAR 1 billion from a consortium of banks in South Africa, to finance the expansion projects of its mining activities. The financing is for a period of 7 years and is repayable in 22 equal quarterly installments, with the first repayment date at 31 December 2013. The financing bears interest at 3 month JIBAR plus 3.4% to 3.9% per annum. The financing was obtained by Tharisa Minerals Proprietary Limited, a subsidiary of the Group, and is secured by the assets of the subsidiary and by the shares of the Company in the subsidiary and is also guaranteed by the Company.

The loan contains financial covenants, which the borrower needs to maintain at levels in excess of:

- Debt service cover ratio at a level greater than 1.4 times.
- Loan life cover ratio at a level greater than 1.6 times.
- Reserve tail ratio at a level of 30% or greater.

(b) During the year ended 30 September 2012 the Group obtained a credit facility of ZAR35,000 thousand from a third party. The facility is payable in 36 equal monthly instalments commencing 7 months after the first draw down. Interest on the facility utilized as at the prevailing South African prime interest rate.

(c) During the year ended 30 September 2013 the Group obtained a US\$12,500 thousand bank credit facility that allows the Group to receive a percentage of trade receivables on receipt of an acceptable letter of credit which results in significant shortening of the credit period. This facility has a tenor of 60 days and is secured by cash and cash equivalents of the Group of US\$2,500 thousand and is also guaranteed by the Company. The other facility relates to the discounting with recourse of the letters of credits by the Group's banks following performance of the letter of credit conditions by the Group which results in funds being received in advance of the normal payment date. Interest on these facilities ranges from US Libor plus 1.6% to 2.5%.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 21. CURRENT TAXATION

Current taxation in the statements of financial position represents:

	<u>30 September</u> <u>2013</u>	<u>30 September</u> <u>2012</u>
	US\$'000	US\$'000
Corporate income tax recoverable (note 21(a))	<u>      -</u>	<u>      220</u>
Corporate income tax payable (note 21(a))	294	110
Special contribution for defence (note 21(b))	<u>      -</u>	<u>      7</u>
	<u>      294</u>	<u>      117</u>

(a) The above amounts are provided in Cyprus and South Africa.

(b) The above amounts are provided in Cyprus.

### 22. TRADE AND OTHER PAYABLES

	<u>30 September</u> <u>2013</u>	<u>30 September</u> <u>2012</u>
	US\$'000	US\$'000
Trade payables - third parties	14,339	10,006
Other payables	887	369
Accruals	13,722	23,407
Leave pay provision	1,631	1,308
Operating lease payable	74	-
Amount due to related parties (note 25)	<u>      150</u>	<u>      97</u>
	<u>30,803</u>	<u>35,187</u>

All of the trade payables were current as at 30 September 2013 and 30 September 2012.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 23. BUSINESS COMBINATIONS

#### (a) Acquisition of a subsidiary

*Braeston Corporate Consulting Services Proprietary Limited :*

On 1 April 2013, Tharisa Administration Services Limited acquired 100% of the ordinary share capital of Braeston Corporate Consulting Services Proprietary Limited for US\$108. Braeston Corporate Consulting Services Proprietary Limited is a South African company that was acquired to provide and centralize management and administration services primarily to other group companies. The subsidiary contributed revenue of US\$4 thousand to the Group during the period from 1 April 2013 to 30 September 2013. The subsidiary contributed a loss of US\$339 thousand during the period from 1 April 2013 to 30 September 2013. If the acquisition had occurred on 1 October 2012, the subsidiary would have contributed revenue and loss of US\$6 thousand and US\$384 thousand respectively for the year ended 30 September 2013.

Details of net assets acquired and goodwill are as follows:

	Carrying amounts and fair values <u>US\$'000</u>
Trade and other receivables	17
Cash and cash equivalents	154
Trade and other payables	(80)
Borrowings	<u>(487)</u>
	(396)
Goodwill arising from acquisition (note 10)	<u>396</u>
Consideration paid satisfied in cash	-
Cash acquired	<u>(154)</u>
Net cash inflow in respect of the acquisition of subsidiary	<u><u>(154)</u></u>

Management has assessed that the fair values of the identifiable assets acquired and liabilities assumed were approximately the same as the amounts presented in the books of the subsidiary on the acquisition date.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 23. BUSINESS COMBINATIONS (continued)

#### (b) Acquisition of non controlling interests

*Tharisa Investments Limited:*

On 22 November 2011, the Company and Fujian signed an agreement, according to which Fujian transferred its 15% equity interests in Tharisa Investments Limited to the Company. The consideration for this transfer was the par value of the shares transferred of US\$22.5 and a call option written by the Company which conferred to Fujian a right to purchase 15% of the equity capital of Tharisa Fujian Industrial Co., Ltd at YUAN 100 any time after 31 December 2012.

The Group recognized an increase in non controlling interests of US\$1,311 thousand, an increase in accumulated losses of US\$1,310 thousand and a decrease in foreign currency translation reserve of US\$1 thousand.

The following summarizes the effect of changes in the Company's ownership interest in Tharisa Investments Limited and its wholly owned subsidiary Tharisa Fujian Industrial Co., Ltd.

	US\$'000
Company's ownership interest at 1 October 2011	4,365
Effect of increase in Company's ownership interest	1,311
Share of comprehensive income	<u>3,030</u>
<b>Company's ownership interest at 30 September 2012</b>	<b><u>8,706</u></b>

### 24. FINANCIAL RISK MANAGEMENT

In the ordinary course of business the Group is exposed to credit risk, liquidity risk, and market risk. This note presents information about the Group's exposure to each of the above risks and its objectives, policies and processes for measuring and managing risks. Further quantitative disclosures are included throughout this note.

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

The Board of Directors has overall responsibility for the establishment and oversight of the Group's risk management framework.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 24. FINANCIAL RISK MANAGEMENT (continued)

#### (a) Credit risk

Credit risk is the risk of financial loss to the Group if a customer or a counterparty to a financial instrument fails to meet its contractual obligations and arises principally from the Group's trade and other receivables and cash and cash equivalents and deposits.

##### *Trade and other receivables:*

The Group's exposure to credit risk is influenced mainly by the individual characteristics of each customer. However, management also considers the demographics of the Group's customer base, including the default risk of the industry and country, in which customers operate, as these factors may have an influence on credit risk. In monitoring customer credit risk, management reviews on a regular basis the ageing of trade and other receivables to obtain comfort that there are no past due amounts.

The Group establishes an allowance for credit losses that represents its estimate of incurred losses in respect of trade and other receivables. The main component of this allowance is a specific loss component that relates to individually significant exposures. At the reporting date, none of the carrying amounts of trade and other receivables is either past due or impaired, except for US\$Nil thousand at 30 September 2013 and US\$163 thousand at 30 September 2012, for which a full allowance for credit losses has been recorded. Receivables that were neither past due nor impaired relate to customers for whom there was no recent history of default and whom have a good track record with the Group.

The allowance for credit losses in respect of trade and other receivables is used to record credit losses unless management is satisfied that no recovery of the amount owing is possible and at that point the amount considered irrecoverable is written off against the financial asset directly.

The most significant exposure of the Company to credit risk is represented by the carrying amount of trade receivables. The Board of Directors performs regular ageing reviews of trade receivables to identify any doubtful balances. Based on the review performed for the reporting period, the Board of Directors concluded that no additional allowance for credit losses is necessary in respect of trade receivables. 37% and 46% of the total trade receivables were due from the Group's largest customer as at 30 September 2013 and 30 September 2012, respectively.

##### *Cash and cash equivalents and deposits:*

The Group limits its exposures on cash and cash equivalents and deposits by dealing only with well-established financial institutions of high quality credit standing. The majority of the Group's cash resources were deposited with The Hongkong and Shanghai Banking Corporation Limited based in Hong Kong and South Africa.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 24. FINANCIAL RISK MANAGEMENT (continued)

#### (b) Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulties in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation. Typically the Group ensures that it has sufficient cash on demand to meet expected operational expenses, including the servicing of financial obligations. This excludes the potential impact of extreme circumstances that cannot reasonably be predicted, such as natural disasters.

The following table shows the remaining contractual maturities of the Group's financial liabilities at the end of the reporting period, which are based on contractual undiscounted cash flows (including interest payments computed using contractual rates or, if floating, based on rates current at the end of the reporting period) and the earliest date the Group can be required to pay:

#### 30 September 2013

	<u>Contractual undiscounted cash</u>					Carrying Amount At 30 <u>September</u> US\$'000
	Within 1 year or <u>on demand</u>	<u>outflow</u>			<u>Total</u>	
		More than 1 year but less than <u>2 years</u>	More than 2 years but less than <u>5 years</u>	More than <u>5 years</u>		
US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	
Borrowings	46,866	29,531	74,048	10,612	161,057	129,500
Trade and other payables	30,803	-	-	-	30,803	30,803
Class B preference shares	12,171	-	-	-	12,171	12,171
Current taxation	<u>294</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>294</u>	<u>294</u>
	<u>90,134</u>	<u>29,531</u>	<u>74,048</u>	<u>10,612</u>	<u>204,325</u>	<u>172,768</u>

#### 30 September 2012

	<u>Contractual undiscounted cash outflow</u>					Carrying amount at 30 <u>September</u> US\$'000
	Within 1 year or <u>on demand</u>	<u>outflow</u>			<u>Total</u>	
		More than 1 year but less than <u>2 years</u>	More than 2 years but less than <u>5 years</u>	More than <u>5 years</u>		
US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	
Borrowings	3,596	55,314	66,412	-	125,322	124,721
Trade and other payables	35,187	-	-	-	35,187	35,187
Class B preference shares	14,983	-	-	-	14,983	12,548

Current taxation	117	-	-	-	117	117
	53,883	55,314	66,412	-	175,609	172,573

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 24. FINANCIAL RISK MANAGEMENT (continued)

#### (b) Liquidity risk (continued)

The Board of Directors expects all of the convertible redeemable preference shares to be converted into the Company's ordinary shares upon listing of the Company's ordinary shares (see note 2(c) and 17(a)) and that there will be no cash redemption relating to the convertible redeemable preference shares. Should full redemption of the convertible redeemable preference shares be required, the contractual undiscounted cash out flow requirements of the Group with respect to these shares are estimated to amount to US\$293,427 thousand and US\$234,213 thousand at 30 September 2013 and 2012 respectively.

#### (c) Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates, will affect the Group's income and the values of its financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return.

##### (i) Currency risk:

The Group is exposed to currency risk on transactions that are denominated in a currency other than the respective functional currency of the Group entities. These currency risk exposures arise primarily from exchange rate movements in ZAR, Euro (€), British Sterling (STG) and US\$.

The following table details the Group's exposure at the end of each reporting period to currency risk arising from recognised assets and liabilities denominated in a currency other than the functional currency of the entity to which they relate. Exposures in US\$ relate to recognized assets and liabilities denominated in US\$ of entities of the Group that have a functional currency other than the US\$. For presentation purposes, the amounts of the exposure are shown in US\$, translated using the spot rate at the reporting date. Differences resulting from the translation of the financial statements of foreign operations into the Group's presentation currency are excluded.

At the reporting date the Group's exposure to currency risk was as follows:

<i>Amounts in US\$'000</i>	<u>US\$</u>	<u>30 September 2013</u>			<u>30 September 2012</u>			
		<u>ZAR</u>	<u>€</u>	<u>STG</u>	<u>US\$</u>	<u>ZAR</u>	<u>€</u>	<u>STG</u>
Other financial assets	-	-	-	-	132	-	-	-
Trade and other receivables	-	45	377	-	103	60	170	-
Cash and cash equivalents	6,227	123	85	1	4,601	440	76	-
Trade and other payables	-	(89)	(565)	(88)	-	(152)	(278)	-
Current taxation	-	-	(274)	-	-	-	190	-
	<u>6,227</u>	<u>79</u>	<u>(377)</u>	<u>(87)</u>	<u>4,836</u>	<u>348</u>	<u>158</u>	<u>-</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 24. FINANCIAL RISK MANAGEMENT (continued)

#### (c) Market risk (continued)

##### (i) Currency risk (continued):

A 10% strengthening of the US\$ against the above currencies at the reporting date would have changed losses and equity by the amounts shown below. This analysis assumes that all other variables, and in particular interest rates, remain constant. The analysis has been performed on the same basis for each reporting date.

	<u>30 September 2013</u>	<u>30 September 2012</u>
	Decrease/(increase) in loss for the year and accumulated losses	Decrease in loss for the year and accumulated losses
	<u>US\$'000</u>	<u>US\$'000</u>
ZAR	<u>(7)</u>	<u>(32)</u>
€	<u>34</u>	<u>(14)</u>
US\$	<u>(724)</u>	<u>(562)</u>
STG	<u>8</u>	<u>-</u>

A 10% weakening of the US\$ against the above currencies at each reporting date would have had an equal but opposite effect to the amounts shown above, on the basis that all other variables remain constant.

##### (ii) Interest rate risk:

Interest rate risk is the Group's exposure to adverse movements in interest rates. It arises as a result of timing differences on the repricing of assets and liabilities.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 24. FINANCIAL RISK MANAGEMENT (continued)

#### (c) Market risk (continued)

(ii) *Interest rate risk (continued):*

As at the reporting date, the interest rate profile of the Group was as follows:

	30 September <u>2013</u> %	30 September <u>2012</u> %	30 September <u>2013</u> US\$'000	30 September <u>2012</u> US\$'000
<b>Variable rate financial assets</b>				
Investments in cash funds and income funds	3.5%	6%	3,656	3,705
Cash and cash equivalents	4.6	5.5 – 7.5	<u>8,677</u>	<u>20,536</u>
			<u>12,333</u>	<u>24,241</u>
<b>Variable rate financial liabilities</b>				
Secured bank borrowing	JIBAR +3.4%	JIBAR +3.4%	110,687	121,424
Other borrowings- Loan from third party	ZAR prime	ZAR prime	3,333	362
Other borrowings-Bank credit and other facility	US libor +1.6%- 2.5%	-	12,610	-
Other borrowings-Loan payable to related party	ZAR prime+ 2%	-	2,870	-
Class B preference shares	ZAR prime+ 2%	-	<u>12,171</u>	<u>-</u>
			<u>141,671</u>	<u>121,786</u>

A change of 100 basis points in interest rates at each reporting date would have changed losses and equity by the amounts shown below. This analysis assumes that all other variables, and in particular foreign currency rates, remain constant. The analysis has been performed on the same basis for each reporting date.

	30 September <u>2013</u> Decrease/(increase) in loss for the year and <u>accumulated losses</u> US\$'000	30 September <u>2012</u> Decrease/(increase) in loss for the year and <u>accumulated losses</u> US\$'000
Investments in cash funds and income funds	26	27
Cash and cash equivalents	62	148
Secured bank borrowing	(797)	(874)
Other borrowings- Loan from third party	(24)	(3)
Other borrowings-Bank credit and other facility	(90)	-
Other borrowings-Loan payable to related party	(20)	-
Class B preference shares	<u>(88)</u>	<u>-</u>
	<u>(931)</u>	<u>(702)</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 24. FINANCIAL RISK MANAGEMENT (continued)

#### (c) Market risk (continued)

##### (ii) Interest rate risk (continued):

A decrease of 100 basis points in interest rates at each reporting date would have had an equal but opposite effect to the amounts shown above, on the basis that all other variables remain constant.

#### (d) Fair values

The Board of Directors considers that the fair values of significant financial assets and financial liabilities approximate to their carrying values at each reporting date.

##### *Financial instruments carried at fair value:*

The following table presents the carrying values of financial instruments measured at fair value at the end of each reporting period across the three levels of the fair value hierarchy defined in *IFRS7, Financial Instruments: Disclosures*, with the fair value of each financial instrument categorised in its entirety based on the lowest level of input that is significant to that fair value measurement.

The levels are defined as follows:

- Level 1 (highest level): fair values measured using quoted prices (unadjusted) in active markets for identical financial instruments.
- Level 2: fair values measured using quoted prices in active markets for similar financial instruments, or using valuation methodologies in which all significant inputs are directly or indirectly based on observable market data.
- Level 3: fair values measured using valuation methodologies in which any significant inputs are not based on observable market data.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 24. FINANCIAL RISK MANAGEMENT (continued)

#### (d) Fair values (continued)

	<u>Level 1</u> US\$'000	<u>Level 2</u> US\$'000	<u>Level 3</u> US\$'000
<b>30 September 2013</b>			
Financial assets			
-Investments in cash funds and income funds	3,656	-	-
-Interest rate caps	118	-	-
-Discount facility	-	225	-
-Investments at fair value through profit or loss	<u>86</u>	<u>-</u>	<u>-</u>
	<u>3,860</u>	<u>225</u>	<u>-</u>
Liabilities			
-Convertible redeemable preference shares	<u>-</u>	<u>-</u>	<u>260,291</u>
<b>30 September 2012</b>			
Assets			
-Investments in cash funds and income funds	3,705	-	-
-Interest rate caps	132	-	-
-Foreign exchange forward contracts	<u>103</u>	<u>-</u>	<u>-</u>
	<u>3,940</u>	<u>-</u>	<u>-</u>
Liabilities			
-Convertible redeemable preference shares	-	-	212,791
-Class B preference shares	-	-	12,548
-Loan from Langa Trust	<u>-</u>	<u>-</u>	<u>2,935</u>
	<u>-</u>	<u>-</u>	<u>228,274</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 24. FINANCIAL RISK MANAGEMENT (continued)

#### (d) Fair values (continued)

The movement during the years ended 30 September 2013 and 2012 in the balance of Level 3 fair value measurements is as follows:

	Years ended 30 September	
	2013	2012
	US\$'000	US\$'000
<i>Convertible redeemable preference shares</i>		
At 1 October	212,791	207,184
Changes in fair value of financial liabilities at fair value through profit or loss	<u>47,500</u>	<u>5,607</u>
At 30 September	<u>260,291</u>	<u>212,791</u>
Total gains or losses for the year included in profit or loss	<u>47,500</u>	<u>5,607</u>
<i>Class B preference shares</i>		
At 1 October	12,548	13,130
Derecognition from fair value basis to amortised cost upon term changes (see note 17(b))	(13,289)	-
Changes in fair value of financial liabilities at fair value through profit or loss	741	45
Exchange differences	<u>-</u>	<u>(627)</u>
At 30 September	<u>-</u>	<u>12,548</u>
Total gains or losses for the year included in profit or loss	<u>741</u>	<u>45</u>
<i>Other borrowings – loan payable to Langa Trust</i>		
At 1 October	2,935	3,070
Recognition at fair value through profit or loss upon term changes (see note 25)	(3,118)	-
Changes in fair value of financial liabilities at fair value through profit or loss	183	12
Exchange differences	<u>-</u>	<u>(147)</u>
At 30 September	<u>-</u>	<u>2,935</u>
Total gains or losses for the year included in profit or loss	<u>183</u>	<u>12</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 24. FINANCIAL RISK MANAGEMENT (continued)

#### (e) Estimation of fair values

The following summarises the major methods and assumptions used in estimating the fair values of financial instruments.

(i) *Investments in cash funds and income funds, investments at fair value through profit or loss, forward exchange contracts and interest rate caps:*

Fair values are based on quoted market prices at the end of the reporting period without any deduction for transaction costs.

(ii) *Discount facility*

The fair values are calculated by multiplying the actual metal quantities per discounted invoice with the difference between the hedged metal price per discounted invoice and the average spot metal price translated to ZAR using the average monthly rate.

(iii) *Convertible redeemable preference shares, Class B preference shares and loan from Langa Trust:*

The estimate of the fair value of these financial liabilities is measured using the probability weighted expected return method, which values the financial liabilities based on the likelihood and expected settlement values of the respective expected settlement scenarios, discounted to their present value at the valuation date.

Estimation of the settlement values of the financial liabilities requires an estimation of the equity value of the Group using discounted cash flow techniques. Estimated future cash flows of the Group are based on management's best estimates and the discount rates used are market related rates reflecting the risks specific to the respective operations of the Group.

The underlying assumptions in the fair value measurements include a nominal discount rate of 11.53% and 10.13% for each of the years ended 30 September 2013 and 2012, which is a pre-tax nominal rate and reflects specific risks relevant to the operations of the Group, a risk free rate of 2.14% and 1.80% for each of the years ended 30 September 2013 and 2012, which is the average yield of the 10 year US treasury bond, and an inflation rate of 2.1% and 2% for each of the years ended 30 September 2013 and 2012 which is the projected long-term US inflation rate. The Board of Directors is of the opinion that the above rates are more relevant to the operations of the Group, since the Group's revenues are generated in US\$.

No sensitivity analysis is presented as at 30 September 2013, as changes in the assumptions would have no effect on the fair value of the convertible redeemable preference shares, as the fair value of the instruments is limited as per their terms to a minimum return by applying an IRR of 25% (note 17(a)). As at 30 September 2012 an increase of 100 basis points in interest rates would have decreased the Group's loss and increased equity by US\$1,783 thousand whereas a decrease of 100 basis points would have increased the Group's loss and decreased equity by US\$1,817 thousand.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 25. RELATED PARTY TRANSACTIONS

The balances with related parties at each reporting date were as follows:

	<u>30 September</u> <u>2013</u> US\$'000	<u>30 September</u> <u>2012</u> US\$'000
<b>Trade and other receivables</b>		
Kameni Management Services Proprietary Limited	21	23
Salene Mining Proprietary Limited	10	-
Kameni Limited	24	23
Braeston Corporate Consulting Services Proprietary Limited	-	6
Rocasize Proprietary Limited	4	-
Community Trust Limited	1	-
Keaton Administrative and Technical Services Proprietary Limited	<u>-</u>	<u>13</u>
	<u><u>60</u></u>	<u><u>65</u></u>
<b>Loans payable to related parties</b>		
Langa Trust	<u><u>2,870</u></u>	<u><u>2,935</u></u>

The loan from Langa Trust was interest free and initially repayable on 28 February 2010, which was subsequently extended to 28 February 2011. The loan was recognised at fair value, being its face value discounted at the prevailing market interest rate, upon initial recognition and subsequent extension. In August 2011, the terms of the loan from Langa Trust were revised as follows:

No payment of the loan shall be made until the earlier of the date on which the convertible redeemable preference shares of the Company (note 17(a)) are fully redeemed or the date on which any of the following events occurs:

- (i) Listing of the Company's ordinary shares on any stock exchange acceptable to the holders of the majority of the convertible redeemable preference shares;
- (ii) The sale of any of the shares in the capital of the Company which will result in the purchaser of those shares acquiring control of the Company; or
- (iii) The sale of all or substantially all of the assets of the Group.

Prior to 1 October 2012, the redemption amount was calculated by applying to the aggregate amount of the loan outstanding as at the date of the issue of the Company's convertible redeemable preference shares, an IRR of 25% or in case of the above events giving an IRR to the convertible redeemable preference shareholders of more than 25%, such higher IRR.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 25. RELATED PARTY TRANSACTIONS (continued)

#### Loans payable to related parties (continued)

The loan has been subordinated in favour of the Group's secured bank borrowings.

Upon the changes aforementioned, the loan has been measured at fair value through profit or loss for the year ended 30 September 2012. The fair value was measured using a probability weighted expected return method as set out in note 24(e)(ii).

Following further amendments to the terms on 1 October 2012, the loan from Langa Trust was derecognized as a financial liability at fair value through profit and loss and recognized as a financial liability at amortised cost. The day one fair value following conversion as financial liabilities at amortised cost was calculated such that the IRR on the Langa Trust loan between 14 April 2011 and 30 September 2012 would be 25%. From 1 October 2012, the Langa Trust loan bears interest at prime plus 2%, compounded monthly.

	<u>30 September</u> <u>2013</u> US\$'000	<u>30 September</u> <u>2012</u> US\$'000
<b>Trade and other payables</b>		
Evi Papacleovoulou	34	96
Keaton Administrative and Technical Services Proprietary Limited	1	-
Kameni Management Services Proprietary Limited	11	-
Director- Antonios Djakouris	38	-
Director- John David Salter	28	-
Director- Ioannis Drapaniotis	38	-
Helen Pouroulis	<u>-</u>	<u>1</u>
	<u><u>150</u></u>	<u><u>97</u></u>

The above amounts are unsecured, interest free and with no fixed repayment dates.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 25. RELATED PARTY TRANSACTIONS (continued)

Class B preference shares of a subsidiary held by related parties are as follows:

	30 September 2013		30 September 2012	
	Number of shares	Carrying amount US\$'000	Number of shares	Carrying amount US\$'000
Arti Trust	4,000	6,998	4,000	7,258
Ditodi Trust	300	485	300	496
Makhaye Trust	300	485	300	496
The Phax Trust	600	970	600	992
The Rowad Trust	300	485	300	496
Jonathan Alan Clark	-	-	300	496
Moira June Jacquet-Briner	300	485	300	496
	<u>5,800</u>	<u>9,908</u>	<u>6,100</u>	<u>10,730</u>

Convertible redeemable preference shares of the Company held by related parties.

	30 September 2013		30 September 2012	
	Number of shares	US\$'000	Number of shares	US\$'000
Fujian Wuhang Stainless Steel Products Co. Limited	<u>112</u>	<u>27,738</u>	<u>112</u>	<u>22,676</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 25. RELATED PARTY TRANSACTIONS (continued)

Significant transactions carried at arms length with related parties during the year were as follows:

	<b>Years ended 30 September</b>	
	<u>2013</u> US\$'000	<u>2012</u> US\$'000
<b>Revenue</b>		
Hong Kong Heyi Mining Resource Co Limited	9,662	4
Rocasize Proprietary Limited	4	-
The Community Trust	<u>1</u>	<u>-</u>
	<u>9,667</u>	<u>4</u>
<b>Interest expense</b>		
Langa Trust	311	-
Arti Trust	661	-
Ditodi Trust	56	-
Makhaye Trust	56	-
The Phax Trust	112	-
The Rowad Trust	56	-
Jonathan Alan Clark	56	-
Moira June Jacquet-Briner	<u>56</u>	<u>-</u>
	<u>1,364</u>	<u>-</u>
<b>Rental expense</b>		
Helen Pouroulis	<u>-</u>	<u>25</u>
<b>Consulting and other management fees</b>		
Kameni Management Services Proprietary Limited	-	145
Kameni Limited	<u>-</u>	<u>23</u>
	<u>-</u>	<u>168</u>
<b>Travel expenses paid</b>		
Salene Mining Proprietary Limited	<u>1</u>	<u>86</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 25. RELATED PARTY TRANSACTIONS (continued)

#### *Relationships between parties:*

##### ***Braeston Corporate Consulting Services Proprietary Limited:***

One of the directors of the Company and one of the directors of Tharisa Minerals Proprietary Limited are shareholders of Braeston Corporate Consulting Services Proprietary Limited. Braeston Corporate Consulting Services Proprietary Limited ceased to be a related party on 1 April 2013 when it was 100% acquired by the Group.

##### ***Kameni Management Services Proprietary Limited (“Kameni”):***

A director of the holding company of Kameni is also a director of Tharisa Minerals Proprietary Limited and of the Company.

##### ***Kameni Limited:***

A director of Kameni Limited is also a director of Tharisa Minerals Proprietary Limited.

##### ***Salene Mining Proprietary Limited:***

A director of Salene Mining Proprietary Limited is also a director of Tharisa Minerals Proprietary Limited.

##### ***Keaton Administrative and Technical Services Proprietary Limited (“Keaton”):***

Two of the directors of the holding company of Keaton are also directors of the Company.

##### ***Medway Developments Limited:***

Medway Developments Limited is the holding company of the Company.

##### ***Langa Trust:***

One of the directors of the Company who is also a director of Tharisa Minerals Proprietary Limited is a beneficiary of this trust.

##### ***Arti Trust:***

One of the directors of Tharisa Minerals Proprietary Limited is a beneficiary of this trust.

##### ***Ditodi Trust:***

The non-controlling interest of Tharisa Minerals Proprietary Limited is a beneficiary of this trust.

##### ***Makhaye Trust:***

The non-controlling interest of Tharisa Minerals Proprietary Limited is a beneficiary of this trust.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 25. RELATED PARTY TRANSACTIONS (continued)

#### *Relationship between parties (continued):*

##### *The Phax Trust:*

One of the directors of the Company is a beneficiary of this trust.

##### *The Rowad Trust:*

One of the directors of the Company is a beneficiary of this trust.

##### *Jonathan Alan Clark:*

Jonathan Alan Clark was a director of Tharisa Minerals Proprietary Limited until 25 September 2013. Jonathan Alan Clark ceased to be a related party on 25 September 2013 following his resignation as a director of Tharisa Minerals Proprietary Limited.

##### *Moira June Jacquet-Briner:*

Moira June Jacquet-Briner is a director Tharisa Minerals Proprietary Limited and in the non-controlling interest of Tharisa Minerals Proprietary Limited.

##### *Fujian Wuhang Stainless Steel Products Co. Limited:*

Fujian Wuhang Stainless Steel Products Co. Limited is a shareholder of the Company.

##### *Evi Papacleovoulou:*

Evi Papacleovoulou was a director of the Company, until 30 January 2013 and is the Company Secretary.

##### *Helen Pouroulis:*

Helen Pouroulis is a close family member of the chief executive officer of the Company.

##### *Antonios Djakouris:*

Antonios Djakouris is a director of the Company.

##### *John David Salter:*

John David Salter is a director of the Company.

##### *Ioannis Drapaniotis:*

Ioannis Drapaniotis is a director of the Company.

##### *Hong Kong Heyi Mining Resource Co. Limited:*

Hong Kong Heyi Mining Resource Co. Limited is a shareholder of the Company.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### 25. RELATED PARTY TRANSACTIONS (continued)

#### *Relationship between parties (continued):*

##### *The Community Trust:*

The Community Trust is a shareholder of Tharisa Minerals Proprietary Limited.

##### *Rocasize Proprietary Limited:*

Rocasize Proprietary Limited is a subsidiary of The Community Trust.

### 26. CAPITAL COMMITMENTS

- (a) Capital commitments of the Group in respect of property, plant and equipment outstanding at the reporting period not provided for in the consolidated financial statements were as follows:

	<u>30 September</u> <u>2013</u> US\$'000	<u>30 September</u> <u>2012</u> US\$'000
Contracted for	3,931	9,005
Authorised but not contracted for	<u>6,808</u>	<u>24,340</u>
	<u>10,739</u>	<u>33,345</u>

- (b) The Company holds an indirect 100% equity interest in Tharisa Fujian Industrial Co., Ltd, the registered capital of which is US\$10,000 thousand. Up to 30 September 2013, US\$4,200 thousand has been paid up. The remaining US\$5,800 thousand needs to be paid up by 14 February 2014.
- (c) A Company guarantee was issued to ABSA Bank Limited which guarantees the payment of certain liabilities of Arxo Logistics Proprietary Limited to ABSA Bank Limited totalling ZAR19,000 thousand.

### 27. OPERATING LEASES

Non-cancellable operating lease rentals are payable as follows:

	<u>30 September</u> <u>2013</u> US\$'000	<u>30 September</u> <u>2012</u> US\$'000
Less than one year	292	287
Between one and five years	<u>51</u>	<u>161</u>
	<u>343</u>	<u>448</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 30 September 2013

### **27. OPERATING LEASES (continued)**

The Group leases a number of office facilities under operating leases. The leases typically run for a period of two to three years. A portion of lease payments are increased every year to reflect market rentals. The amounts recognised as an expense in profit or loss in respect of operating leases are disclosed in note 6. Certain leased office facilities are sublet by the Group (see note 4).

Since the property titles did not pass to the Group, the Group determined that the leased office facilities are operating leases. The rents paid to landlords are increased to market rents at regular intervals and the Group does not participate in the residual value of the buildings, therefore, it was determined that substantially all the risks and rewards of the buildings are with the landlords.

### **28. IMMEDIATE AND ULTIMATE CONTROLLING PARTY**

At 30 September 2013, the Board of Directors considers the immediate parent and ultimate controlling party of the Group to be Medway Developments Limited and Mr. Adonis Pouroulis, respectively. Medway Developments Limited is incorporated in Cyprus under the requirements of the Cyprus Companies Law, Cap. 113 and produces financial statements available for public use in accordance with the requirements of the aforementioned law.

### **29. EVENTS AFTER THE REPORTING PERIOD**

Following the year end, the Company provided a cash amount of US\$8,476 thousand as security for a bank guarantee for the debt service reserve account as required within the Common Terms Agreement for the project financing of Tharisa Minerals Proprietary Limited as disclosed in note 20 (a). This amount will be reduced by the additional amount, if any, transferred by Tharisa Minerals Proprietary Limited to its debt service reserve account. The amount of security includes a 10% margin for exchange rate fluctuations.

The consolidated financial statements were authorized for issue by the Board of Directors on 13 February 2014.

## RESPONSIBILITY STATEMENT

### STATEMENT PURSUANT TO COMMISSION REGULATION (EC) NO 809/2004

The Company, the Company's directors that are signing this Prospectus and the Underwriter responsible for the drawing up of the Prospectus accept the responsibility for the information contained in this Prospectus. To their best knowledge and belief, the Company, the Company's directors that are signing this Prospectus and the Underwriter responsible for the drawing up of the Prospectus, declare that having taken all reasonable care to ensure that such is the case, the information contained in this Prospectus is in accordance with the facts and contains no omission likely to affect its import.

#### **On behalf of the Issuer, Tharisa plc:**

In accordance with the provisions of the Public Offer and Prospectus Law of 2005 (114(I)/2005), as amended, the Prospectus is signed by the following persons, who are responsible as to the accuracy, completeness, clarity and update of the Prospectus:

**Name**

**Signature**

Loucas Christos Pouroulis

---

Phoevos Pouroulis

---

Michael Gifford Jones

---

#### **On behalf of the Underwriter (in the sense of an underwriter responsible for the drawing up of the Prospectus), Sharelink Securities and Financial Services Limited:**

In accordance with article 23(1) of the Public Offer and Prospectus Law of 2005 (114(I)/2005), as amended, at the drawing up of the Prospectus in every public offer and first admittance to trading on a regulated market, an underwriter responsible for the drawing up of the Prospectus participates, and signs the Prospectus.

**Name**

**Signature**

---

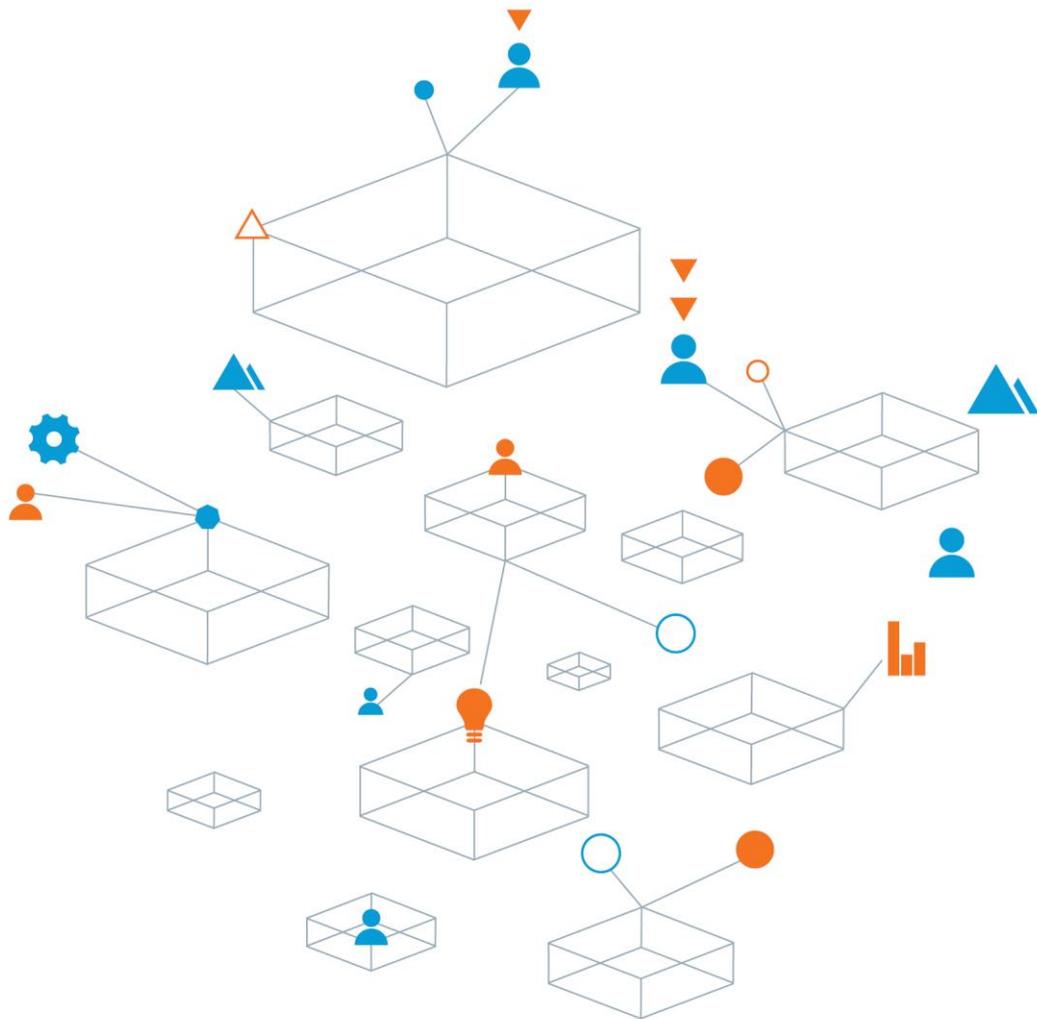
## COMPETENT PERSON'S REPORT

Tharisa plc  
Tharisa Chrome and PGM Mine, South Africa

Mineral Expert Report

(Effective Date 31 December 2015)

Lead Competent Person: Ken Lomberg (Pr.Sci.Nat.)



Trust is the  
cornerstone  
of all our  
projects

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**Date:** 31 December 2015

**Project Number:** JTHA011

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DOCUMENT INFORMATION

**The Reader is advised to read the Disclaimer (Section 2) of this document**

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## EXECUTIVE SUMMARY

Coffey Mining (South Africa) (Proprietary) Limited (Coffey) was requested by Tharisa plc, formerly Tharisa Limited (Tharisa or the Company), to complete a Mineral Expert Report (MER) on the Tharisa Mine located in the North West Province of South Africa.

This report complies with the Listing Requirements of the London Stock Exchange (LSE). The Mineral Resources and Reserves are reported in accordance with the guidelines of “The South African Code for Reporting of Exploration Results, Mineral Resources and Reserves (prepared by the South African Mineral Resource Committee (SAMREC) Working Group) (2007 and as amended in 2009)” (SAMREC Code) and “The South African Code for the Reporting of Mineral Asset Valuation (2008)(as amended in July 2009)” Prepared by The South African Mineral Asset Valuation Committee (SAMVAL) Working Group (SAMVAL Code).

This report is dated 31 December 2015 and Tharisa has advised Coffey that no material change has occurred to the Tharisa Mine since this date.

### Participants

The participants consist of a number of technical experts brought together by Coffey to complete the MER and are all Competent Person’s as defined in (SAMREC Code). The compilation of the MER in accordance with the reporting requirements of the LSE was supervised by Mr Lomberg. The participants in the compilation of the MER and their individual areas of responsibility are listed as follows:-

**Ken Lomberg, Senior Principal Consultant, Coffey**

Project management, mineral resources, geological interpretations, site visits, report preparation.

**Alan Goldschmidt, Senior Consultant, Coffey**

Mineral resources, geological interpretations, report preparation.

**Jaco Lotheringen, Associate Consultant – Ukwazi Mining Solutions**

Mining engineering, mineral reserve estimation, infrastructure, economic valuation, site visits, report preparation.

**Jacques van Wyngaard, Associate Consultant – MDM Engineering**

Process engineering, infrastructure, site visits, report preparation.

**Alistar James, Associate Consultant – SLR Consulting (previously Metago)**

Environmental and Social, site visits, report preparation.

**Alex Pheiffer, Associate Consultant – SLR Consulting (previously Metago)**

Environmental and Social, site visits, report preparation.

**John James, Associate Consultant – Celtis Geotechnical**

Geotechnical Engineering, site visits, report preparation.

**Hannes Bornman, Manager Mining, Coffey**

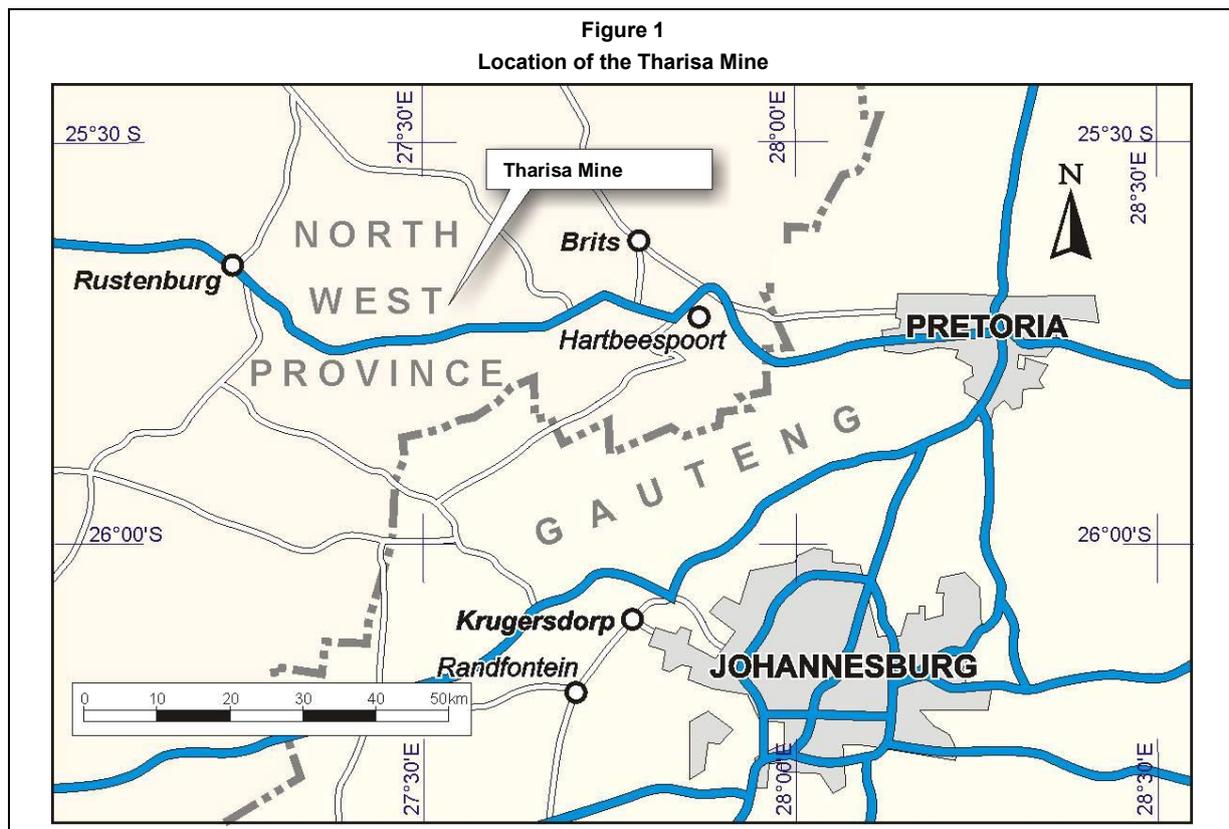
Economic valuation, site visit, report preparation.

## Independence

Coffey is an independent technical consulting group, with no direct or indirect interests in Tharisa. Neither Coffey, nor the key personnel responsible for the work, has any material interest in Tharisa, the companies associated with this project, their subsidiaries or their mineral properties. All work done by Coffey for Tharisa, is strictly in return for professional fees. Payment for the work is not in any way dependent on the outcome of the work or on the success or otherwise of Tharisa's own business dealings. There is no conflict of interest in Coffey undertaking this work as contained in this document.

## Ownership and Property Description

The Tharisa Mine a PGM and Chrome Mining Operation exploiting the Middle Group (MG) Chromitite Layers on two properties, being portions of the property Farm 342JQ and the whole of the property Rooikoppies 297JQ, located in the North West Province some 35km east of the city of Rustenburg and 95km from Johannesburg (Figure 1). The Tharisa Mine was developed by Tharisa Minerals (Pty) Ltd (Tharisa Minerals) which holds a mining right, granted by the Department of Mineral Resources (DMR) on 19 September 2008 and registered on 13 August 2009, to various portions of Farm 342JQ (in respect of PGMs (Platinum Group Metals), gold, silver, nickel, copper and chrome ore) and Rooikoppies 297JQ (PGMs, gold, silver, nickel, copper and chrome ore contained within the MG Chromitite Layers only).



A main road bisects the property in a north-south direction. The road provides access to the town of Marikana. The nearest major road, the N4 National Road links Pretoria with Rustenburg and crosses the south-eastern corner of the Farm 342JQ property immediately south of the outcrop of the Middle Group (MG) Chromitite Layers. The east west Rustenburg-Brits railway line bisects the Rooikoppies property with a station located in the town of Marikana on the Rooikoppies property.

### **History of the Tharisa Mine Ownership**

Thari Resources (Pty) Ltd (Thari) which was incorporated in January 2005, acquired prospecting rights for chrome and PGMs over various portions of the property Farm 342JQ and to the property Rooikoppies 297JQ in March 2006. Thari is a Historically Disadvantaged South African (HDSA) and woman controlled company focused on the minerals and energy sectors.

In March 2006 Thari established Tharisa Minerals as a wholly owned subsidiary. During September 2008, February 2009 and March 2009 the prospecting rights held by Thari were transferred to Tharisa Minerals after obtaining the necessary Ministerial approval in terms of Section 11 of the Mineral and Petroleum Resources Development Act, 2002 (MPRDA).

In March 2008, the mining rights for chrome ore, over portions 96 and 183 of Farm 342JQ were purchased from South African Producers and Beneficiators of Chrome Ore (Pty) Ltd. On 19 September 2008, the prospecting rights, including those for PGM and chrome ore, over various portions of Farm 342JQ and the whole of Rooikoppies held by Tharisa Minerals, were converted into mining rights in terms of Section 16 of the MPRDA.

Tharisa plc was incorporated in February 2008 and after obtaining the necessary Ministerial approval acquired 74% of Tharisa Minerals on 9 February 2009. The remaining 26% is currently held by Thari (20%) and the Tharisa Community Trust (6%). In July 2011 the Tharisa Minerals mining right 49/2009 (MR) was amended in terms of Section 102 of the MPRDA to include portions 96 and 183 of Farm 342JQ in respect of PGM, and to include PGM and chrome ore in respect of portion 286 of Farm 342JQ.

The Tharisa Mine started trial mining in October 2008 and commenced production of ore on a small scale from March 2009, achieving an average throughput rate of 38,000 tpm Run of Mine (RoM) with a small chrome concentrator. From 2010 to 2012 the mine undertook a number of process facility expansions to increase processing capacity to 400,000 tpm RoM).

Tharisa plc was listed on the Johannesburg Stock Exchange and commenced trading on 10 April 2014.

### **Current Mining Operations**

The mining operation is divided into the east pit and west pit, located on either side of the Sterkstroom River that runs north-south through the Tharisa Mine (Tharisa) property. The pits are designed to protect the water course and the local infrastructure running parallel to the river (Figure 5). The east pit extends to the eastern boundary of the mining right while the west pit extends to where the Mineral

Resource is defined on the far western portion of the mine. MCC Contracts (Pty) Ltd is the appointed mining contractor and has extensive open pit contract mining experience in Africa.

Tharisa produces largely fresh material from four groups of the MG Chromitite Layers, namely, MG4 (MG4A and MG4), MG3, MG2 and MG1. Some mining occurred on the UG1 Chromitite Layer in the past. The shallow MG1 was mined underground, by the previous mining right holder, to a limited extent on the eastern boundary of the property. Currently, no mining is conducted on MG0.

The mining schedule is co-ordinated to match the capacity of the processing facility. At steady state Tharisa will mine and process 5.0Mtpa of run of mine (RoM) ore.

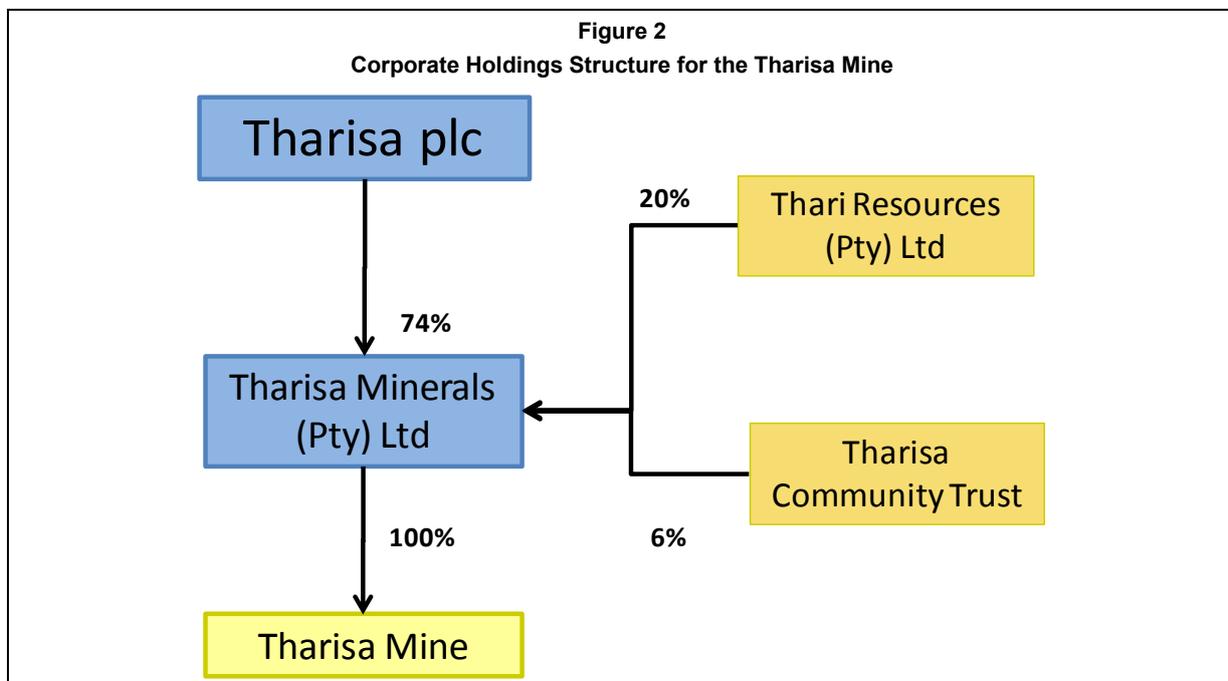
The open pit operations maintain planned production levels until 2030, then transitions to underground bord and pillar mining. The last open pit tonnage is mined in 2036.

The open pit design and schedule including the mine design and scheduling of the future underground operation, was undertaken by Ukwazi Mining Solutions (Pty) Ltd (Ukwazi). The two schedules were combined into a joint production schedule.

### Legal Aspects and Legal Tenure

The Tharisa Mine was developed by Tharisa Minerals which holds a mining right, granted by the DMR on 19 September 2008, to various portions of the property Farm 342JQ and to the property Rooikoppies 297JQ.

The corporate holding structure of the Tharisa Mine is represented in Figure 2.



## Geology and Mineralisation

The Tharisa Mine is situated on the south-western limb of the Bushveld Complex and is underlain by the Middle Group (MG) Chromitite Layers.

The MG Chromitite Layers outcrop on Farm 342JQ striking roughly east - west and dipping at 12 -15° to the north. Towards the western extent of the outcrop, the dip is steeper, with a gentle change in strike to NW-SE. The stratigraphy typically narrows to the west and the dip steepens. The dip typically shallows out at depth across the extent of the mine area.

The MG Chromitite Layer package consists of five groups of chromitite layers being the MG0 Chromitite Layer, MG1 Chromitite Layer, the MG2 Chromitite Layer (subdivided into C, B and A chromitite layers), the MG3 Chromitite Layer and the MG4 Chromitite Layer (subdivided into MG4(0), MG4 and MG4A Chromitite Layers) (Figure 3). The layers between the chromitite layers frequently include stringers or disseminations of chromite. The MG0 Chromitite Layer may be defined but the formation of these chromitites is erratic and thin, and is generally considered uneconomical in the mine area. Where exposed in the open pit, the MG0 Chromitite Layer is expected to be mined. The structural interpretation of the Tharisa Mine is based on the aeromagnetic data and the drilling data. The MG Chromitite Layers at the Tharisa Mine are a typical stack of tabular deposits (Figure 3 and Figure 4).

The Upper Group (UG) 1 Chromitite Layer ranges between 165m to 18m stratigraphically above the MG4A Chromitite Layer on the Farm 342JQ property and 163m (downdip) to 18m (near surface) on the Rooikoppies property. The UG1 Chromitite Layer outcrops on the Farm 342JQ property. Both the UG2 Chromitite Layer (which ranges between 300m to 150m above the MG4A Chromitite Layer) and Merensky Reef (which ranges between 400m (east) to 290m (west) above the MG4A Chromitite Layer) outcrop on the Rooikoppies property. Poorly developed chromitite layers below the MG Chromitite Layer were intersected in boreholes and are interpreted as the Lower Group (LG) Chromitite Layers.

The structural interpretation of the Tharisa Mine was previously based on the aeromagnetic data and the drilling data. The only significant fault is a steeply dipping NW-SE trending normal fault with a downthrow of less than 30m to the east. This fault occurs only on the far north-eastern corner of the property and will have little effect on mining of the MG Chromitite Layers on Farm 342JQ. This fault was confirmed in both Lonmin plc (Lonmin) underground operations and Samancor stopes located immediately east of the mine. A NE-SW sub-vertical dyke of some 10m thickness was interpreted on the aeromagnetic survey. This dyke was not fully intersected in any of the boreholes but has been intersected in the East Mine box-cut and is 11m wide. The dyke is not expected to have a major impact on mining. The only other major feature of interest is the Spruitfontein upfold or pothole which is located on the properties immediately west of the mine. It affects the UG2 Chromitite Layer as well as the rest of the Critical Zone below. The area around the pothole is on the adjacent property and was not accessible for further investigation.

Figure 3

Summary of Stratigraphic Units modelled

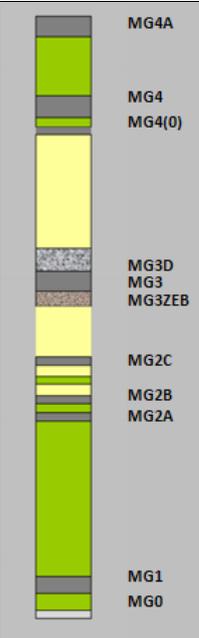
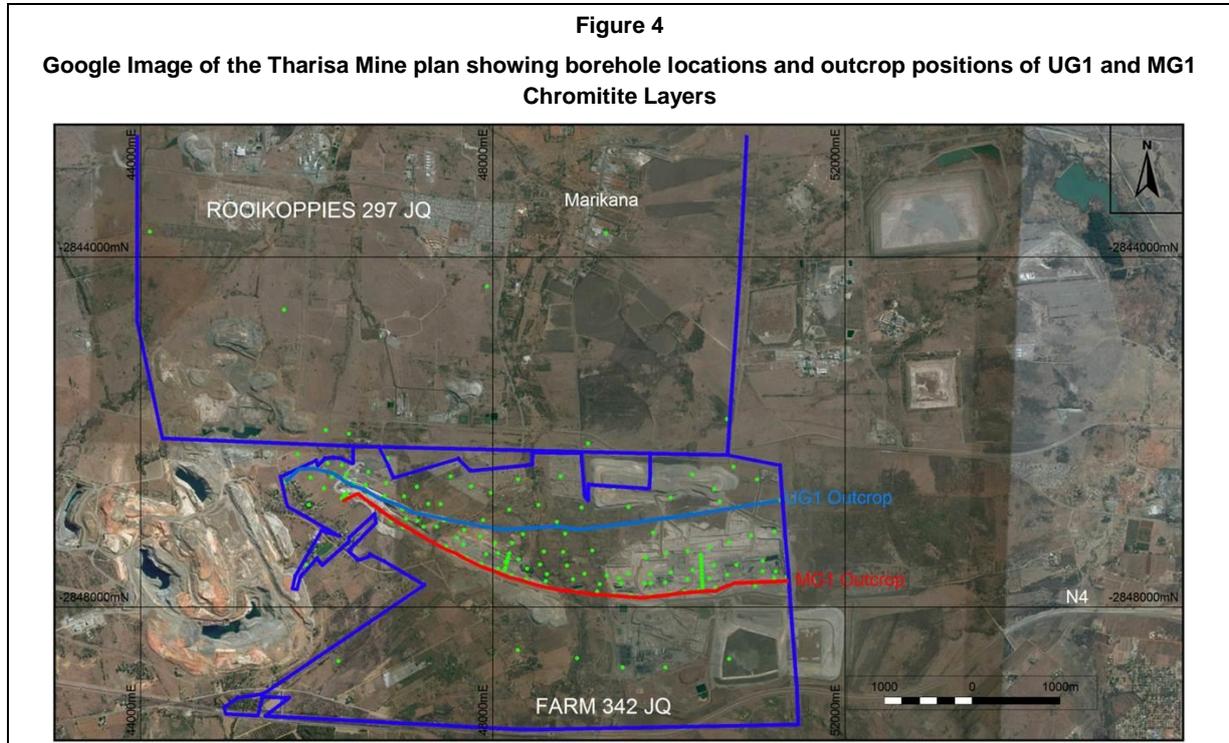
Stratigraphic Column	Unit	
	MG4A Chromitite Layer	
	MG4 Chromitite Layer	MG4 Chromitite
		MG4 – MG4 (0) Parting
		MG4(0) Chromitite
	MG3 Chromitite Layer	MG3 Disseminated
		MG3 Chromitite
		MG3 Zebra
	MG2 Chromitite Layer	MG2C Chromitite
		PEGM+ Parting
		PEGM
		PEGM- Parting
		MG2B Chromitite
MG2A – MG2B Parting		
MG2A Chromitite		
MG1 Chromitite Layer		
MG0 Chromitite Layer		

Figure 4

Google Image of the Tharisa Mine plan showing borehole locations and outcrop positions of UG1 and MG1 Chromitite Layers



The UG1 Chromitite Layer is stratigraphically situated in the Upper Critical Zone and is well developed in the Bushveld Complex. It comprises of massive chromitite, chromitiferous pyroxenite, bands of anorthosite, chromitite, norites and stringers of chromitites. The UG1 Chromitite Layer has an east-west strike and dips to the north. The dip angle varies from 10° in the east to 25° in the west. The thickness of the UG1 Chromitite Layer ranges from a few centimetres up to 3m in places. The lenses of anorthosite and pyroxenite are seen impregnated with numerous chromite grains in places. The hanging wall changes from pyroxenite to anorthositic norites. The footwall is formed by bifurcated bands of anorthosite and chromite lenses.

## Exploration and Geology

The Tharisa Mine has been explored for its mineral potential since the early 1900s. Initially this was in the form of erratic exploration activities which included trenching and small open pits.

Various trenches were excavated on both the UG1 and the MG Chromitite Layers. The MG Chromitite Layers were previously exploited from three known pits, excavated by previous tenement holders and which remain unrehabilitated.

Six diamond boreholes were drilled during January 1997 by an entrepreneur, Mr Hennie Botha in the northwest part of Farm 342JQ property and on the adjacent property, Spruitfontein 341JQ. Five NQ size, vertical diamond boreholes were drilled along strike on Farm 342JQ during 2006 by Thari Resources under the supervision of Coffey. A total of 121 vertical boreholes and 23 deflections, representing some 22,500m were drilled from March 2007 to October 2007. The drilling programme was designed so that boreholes would intersect the base of the MG1 Chromitite Layer at approximately 30m, 60m, 120m, 180m, 300m, 500m and 1000m below surface. A line of boreholes that intersected at 220m below surface was later added for greater coverage of the deposit. The drilling programme was designed to drill the deposit closest to the outcrop at higher density than further downdip so that the subsequent mineral resource estimate close to the outcrop could confidently be declared as an indicated and/or measured mineral resource in preparation for a feasibility study and the consideration of open pit mining. The programme for the deeper boreholes on the Rooikoppies property, where Lonmin is mining the Merensky Reef and UG2 Chromitite Layer, was revised due to various difficulties relating to the siting of boreholes to prevent holing into existing underground infrastructure. Fewer, more widely spaced boreholes were therefore drilled.

Two fence lines (down dip) were drilled with TNW core size for metallurgical test purposes, intersecting the chromitite layers at 10m depth increments down to 60m below surface on the MG4 Chromitite Layer. Two NQ boreholes were drilled for geotechnical logging, sampling and to conduct rock strength tests. Six boreholes were drilled around the proposed civil engineering sites which coincide with the LG6 Chromitite Layer outcrop to ensure that a possible economical deposit was not being sterilised. A total of 10 boreholes were drilled on the Rooikoppies property to test the extension of the MG Chromitite Layer package down dip.

The collars of all the boreholes were surveyed. Downhole surveys were completed for all the boreholes drilled to a depth greater than 120m. All geological and sampling protocols used are to international standards. The precious metal analyses (Pt, Pd, Rh, Au, Ru, Ir, Os) were undertaken using NiS/MS

analytical method and base metals analysis using the ICP Fusion D/OES analytical method, at Genalysis (Johannesburg).

A comprehensive quality assurance and quality control (QA/QC) programme was carried out concurrent with drilling. This included three certified reference standards, blanks and field duplicates. Each quality control aspect used was introduced in a ratio of 1:20. All assay issues were resolved and the assay data confirmed to be reliable and acceptable for a mineral resource estimate.

The geological modelling confirmed the tabular nature of the deposit and identified the major structural features (dykes and faults). The models were validated to ensure that the stratigraphic integrity was maintained. The result is five planar surfaces stacked on top of each other demonstrating the tabular nature of the deposit. The geological modelling utilised the other structural information gained from the aeromagnetic survey, trenching etc. It was noted that the dip flattens with depth.

## **Mineral Resource**

The mineral resource estimate was completed over the mining right of Tharisa Minerals to a depth of 750m for the MG Chromitite Layers and UG1 Chromitite Layer:-

- MG4A Chromitite Layer
- MG4 Chromitite Layer consisting of the MG4(0) and MG4 Chromitite Layer with the parting between them
- MG3 Chromitite Layer with the disseminated material above and the disseminated chromitite below (“zebra”)
- MG2 Chromitite Layer including the MG2A, MG2B, MG2C Chromitite Layers, the parting between the MG2A and MG2B Chromitite Layers as well as the PGM layer between the MG2B and MG2C Chromitite Layers and the associated partings
- MG1 Chromitite Layer
- MG0 Chromitite Layer
- UG1 Chromitite Layer

### MG Chromitite Layer

The data was coded for the different units within the MG and UG1 Chromitite Layer packages. Statistical analysis was then completed on both the raw and composite data grouped by unit type after examination of the data indicated that the units defined different geological populations and are statistically distinct.

Each intersection was composited after coding for all stratigraphic layers. The Pt, Pd, Rh, Au, Ru, Ir, Os, Cu, Ni, Al, Ca, Cr, Cr<sub>2</sub>O<sub>3</sub>, Fe, Mg and Si concentrations were composited utilising the weighting by densities. An analysis of the unit thickness showed that there is little correlation between the concentration and thickness confirming that the use of concentration was appropriate in the mineral resource estimate.

An assessment of the high-grade composites was completed to determine whether high-grade cutting was required. Based on the above assessment, no high grade cutting or capping was undertaken.

Omni-directional/isotropic grade variograms were developed for all the components and all variables after it had been established that the anisotropy was weak. A block size of 100m x 100m was selected. The search criteria included an isotropic search volume of 500m that expanded to 1000m then 8000m if the criteria of a minimum of four and a maximum of 12 composite data for each block estimate were not met.

A series of two-dimensional grade estimates were generated based on geologically and geochemically defined units within the MG Chromitite Layer cycle. The mineral resource estimation was completed using either an inverse distance (power 2) or Ordinary Kriging methodology, depending if a suitable variogram for each variable within each unit could be modelled. The concentration of Pt (g/t), Pd (g/t), Rh (g/t), Au (g/t), Ru (g/t), Ir (g/t), Os (g/t), Cu (ppm), Ni (ppm), Al (%), Ca (%), Cr (%), Cr<sub>2</sub>O<sub>3</sub> (%), Fe(%), Mg (%) and Si (%) for each of the units identified within the MG Chromitite Layers utilising the composite grade over the thickness of that unit (seam model approach). In addition the bulk density was estimated for each unit.

A geological loss of 15% over most of the mine was applied for areas where the MG Chromitite Layers are not developed viz. dykes, faults, potholes, mafic pegmatites. A geological loss of 7.5% has been applied for areas around the current open pit mining as only a few geological features have been intersected in the current pits.

The classification of the mineral resources was undertaken in accordance with the guidelines of the SAMREC Code. The Competent Persons responsible for the mineral resource estimation and classification is Mr Ken Lomborg Pr.Sci.Nat. and Mr Alan Goldschmidt Pr.Sci.Nat..

#### UG1Chromitite Layer

The UG1 Chromitite Layer comprises a top chromitite layer, a middling (pyroxenite/anorthosite) and a bottom chromitite layer. It was necessary to model these individual layers separately due to their different geochemical characteristics.

The East and West Mine areas were modelled independently as it was noted that they are of different populations. The boundary between east and west mines was put at the Sterkstroom River bisecting the property. The East Mine was further divided into two domains due to geology and grade considerations in the far eastern side. In total seven datasets were distinguished and modeled independently i.e. West (top, middling, and bottom), East (top, middling and bottom) and Far East (one model).

As a result of the confidence in the geological model, each of the stratigraphic units was estimated independently as a layer and a hard boundary was used. Each of the Al<sub>2</sub>O<sub>3</sub> (%), CaO (%), MgO (%), Fe<sub>2</sub>O<sub>3</sub>(%), K<sub>2</sub>O(%), MnO (%), Na<sub>2</sub>O(%), P<sub>2</sub>O<sub>5</sub>(%), Cr<sub>2</sub>O<sub>3</sub>(%), Pt (g/t), Pd (g/t), Rh (g/t), Ru (g/t), Ir (g/t), Au (g/t), width(m) and density values were estimated independently using inverse power of distance (power of 2) .

The classification of the mineral resources was undertaken in accordance with the guidelines of the SAMREC Code. The Competent Person responsible for the mineral resource estimation and classification is Mr Ken Lomborg Pr.Sci.Nat.

The classification was based on the robustness of the various data sources available, confidence of the geological interpretation, variography and various estimation service variables (e.g. distance to data, number of data, maximum search radii etc.).

In classification of the mineral resource estimate for the UG1 Chromitite Layer, consideration was given to the reasonable and realistic prospects for eventual economic extraction. As a result the declaration was made only for the areas where MG Chromitite Layer mining is anticipated to occur in open pit. The expansion of the declaration will require a financial assessment incorporating the potential movement of dumps and other surface infrastructure.

The mineral resource estimates for the MG and UG1 Chromitite Layers were estimated with an effective date 31 December 2015.

For the 2014 Annual Report the Mineral Resource estimate was derived by depleting the 2013 estimate. The depletion was completed using production data. All relevant MG Chromitite Layers were depleted to account for the period to the end of September 2014.

Both the mineral resource tonnages and grade within each resource category were depleted.

The depletion of the Mineral Resource tonnage for each layer is the sum of the monthly production information. These were reduced by 8% to account for material previously reported as part of the mineral resource, but not extracted.

Table 1 is the estimated mineral resource estimate dated 31 December 2015.

**Table 1**  
**Mineral Resource Statement for the Tharisa Mine (31 December 2015)**

MG4A CHROMITITE LAYER																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+ Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	6.234	1.43	3.69	24.82	0.40	0.15	0.12	0.003	0.26	0.04	0.05	0.67	59:22:18:0	1.02	39:15:12:0:25:4:5	1.12	204	760
<b>Indicated</b>	15.885	1.59	3.70	24.29	0.40	0.15	0.13	0.003	0.25	0.04	0.05	0.68	59:23:18:1	1.03	39:15:12:0:25:4:5	1.10	525	762
<b>Inferred</b>	68.476	1.43	3.70	25.18	0.39	0.14	0.13	0.004	0.26	0.05	0.05	0.67	59:21:19:1	1.03	38:14:12:0:26:4:5	1.11	2,263	763
MG4 and MG4(0) CHROMITITE LAYER Package																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+ Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	17.920	4.09	3.74	26.39	0.69	0.19	0.17	0.003	0.32	0.06	0.08	1.06	66:18:16:0	1.51	46:13:11:0:21:4:5	1.17	872	781
<b>Indicated</b>	29.790	2.99	3.65	24.75	1.08	0.22	0.21	0.003	0.36	0.08	0.11	1.51	71:15:14:0	2.06	52:11:10:0:18:4:6	1.20	1,972	730
<b>Inferred</b>	170.678	3.70	3.62	22.60	0.99	0.19	0.19	0.003	0.34	0.07	0.10	1.36	72:14:14:0	1.88	53:10:10:0:18:4:6	1.15	10,313	697
MG3 CHROMITITE LAYER																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+ Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	10.417	3.73	3.26	13.22	0.60	0.35	0.15	0.005	0.22	0.04	0.06	1.11	54:32:14:0	1.43	42:25:11:0:15:3:4	0.99	479	482
<b>Indicated</b>	23.412	4.28	3.22	17.99	0.75	0.44	0.19	0.005	0.27	0.05	0.08	1.39	54:32:14:0	1.79	42:25:11:0:15:3:4	1.08	1,347	603
<b>Inferred</b>	67.415	3.21	3.20	25.65	1.01	0.58	0.26	0.005	0.38	0.08	0.10	1.86	54:31:14:0	2.42	42:24:11:0:16:3:4	1.13	5,245	785
MG2 CHROMITITE LAYER																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+ Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	13.092	3.96	3.62	19.33	1.07	0.28	0.15	0.004	0.26	0.05	0.08	1.50	71:18:10:0	1.89	56:15:8:0:14:3:4	0.97	796	730
<b>Indicated</b>	42.716	4.37	3.67	17.80	0.98	0.28	0.15	0.004	0.24	0.05	0.07	1.42	69:20:10:0	1.78	55:16:8:0:14:3:4	0.92	2,388	733
<b>Inferred</b>	286.164	6.68	3.62	13.26	0.70	0.21	0.11	0.004	0.19	0.04	0.05	1.02	69:20:11:0	1.30	54:16:8:0:15:3:4	0.75	11,975	674

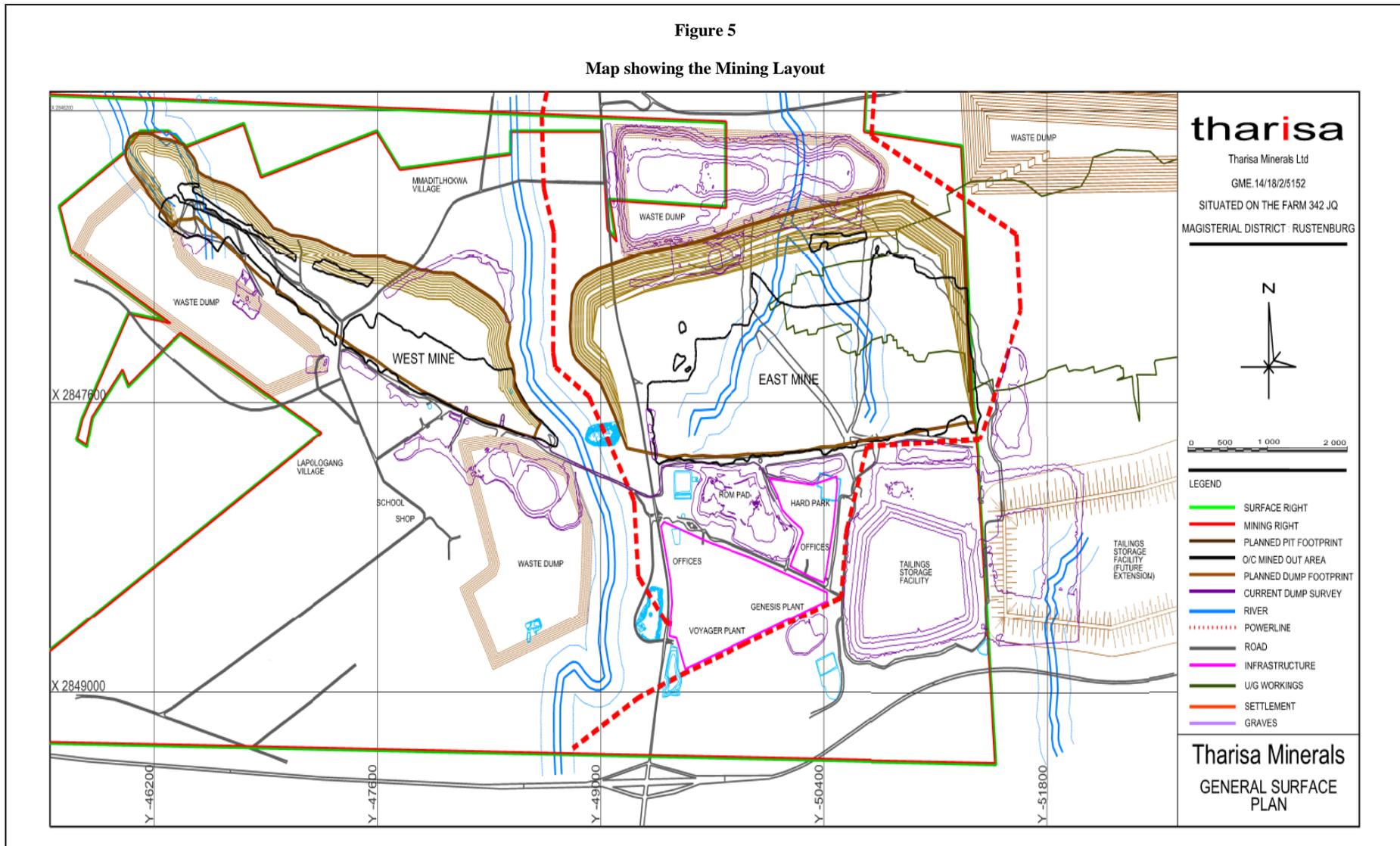
MG1 CHROMITITE LAYER																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>																	-	
<b>Indicated</b>	14.041	1.24	3.91	33.44	0.34	0.22	0.11	0.004	0.48	0.08	0.08	0.67	50:32:17:1	1.30	26:17:9:0:37:6:6	1.34	589	811
<b>Inferred</b>	57.245	1.23	3.89	32.26	0.33	0.20	0.11	0.003	0.45	0.08	0.07	0.64	51:31:17:1	1.24	26:16:9:0:36:6:6	1.29	2,276	803
MG0 CHROMITITE LAYER																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	1.801	0.50	3.74	26.07	0.57	0.18	0.16	0.004	0.30	0.05	0.07	0.92	62:19:18:0	1.33	43:13:12:0:22:4:5	1.19	77	747
<b>Indicated</b>	3.188	0.71	3.75	27.08	0.61	0.19	0.17	0.004	0.32	0.06	0.07	0.98	62:20:17:0	1.44	43:14:12:0:22:4:5	1.22	147	752
<b>Inferred</b>	0.011	0.17	3.73	23.76	0.45	0.17	0.15	0.006	0.24	0.04	0.05	0.77	58:22:19:1	1.11	41:15:13:1:22:4:5	1.11	0.40	711
UG1 CHROMITITE LAYER																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>																		
<b>Indicated</b>	1.500	2.17	3.75	23.68	0.36	0.28	0.14	0.030	0.21			0.82	44:35:17:4			1.12	39	
<b>Inferred</b>																		
TOTAL MINERAL RESOURCE																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	49.464	2.68	3.73	21.51	0.73	0.24	0.16	0.004	0.28	0.05	0.07	1.13	64:21:14:0	1.53	48:16:10:0:18:3:5	1.09	2,428	699
<b>Indicated</b>	128.033	2.45	3.67	22.22	0.80	0.27	0.16	0.004	0.31	0.06	0.08	1.24	65:22:13:0	1.69	48:16:10:0:18:3:5	1.10	7,007	713
<b>Inferred</b>	651.488	3.11	3.74	19.88	0.74	0.23	0.15	0.004	0.28	0.05	0.07	1.13	66:21:13:0	1.53	49:15:10:0:18:4:5	1.00	32,072	712
<b>Total</b>	<b>828.984</b>	<b>2.95</b>	<b>3.73</b>	<b>20.38</b>	<b>0.75</b>	<b>0.24</b>	<b>0.15</b>	<b>0.004</b>	<b>0.28</b>	<b>0.05</b>	<b>0.07</b>	<b>1.15</b>	<b>66:21:13:0</b>	<b>1.56</b>	<b>48:15:10:0:18:4:5</b>	<b>1.02</b>	<b>41,507</b>	<b>712</b>
<p>Note: The mineral resource is declared to a depth of 750m below surface.  The consideration of realistic eventual extraction necessitates that the mineral resource considers the MG Chromitite Layer to be a geological unit and that all platinumiferous and chromiferous horizons will be mined and all PGM, Cu, Ni and Cr<sub>2</sub>O<sub>3</sub> recovered.  The UG1 Chromitite Layer is declared for the part that falls within the current proposed open pit  The mineral resource is reported inclusive of the mineral reserve</p>																		

## **Mining Engineering**

A feasibility study was concluded in October 2008. Various revisions to the mine plan were undertaken to match the requirements of the processing facilities, including both open pit and underground mine design and scheduling.

The open pit operation targets MG1, MG2, MG3, MG4 and MG4A in an operation split into a west pit and an east pit. The mine is planned for two phases, an initial open pit mine followed by an underground mining operation. The open pit plan is based on fixed contract rates and volumes as determined through a detailed planning process. Based on a maximum of a 200m high wall, the life of pit and a 420ktpm production profile, the open pit operation maintains planned production levels until 2030 before mining underground. The last open pit tonnage is mined in 2036. The underground mining of targeted layers starts towards the end of the open pit operations.

**Figure 5**  
**Map showing the Mining Layout**

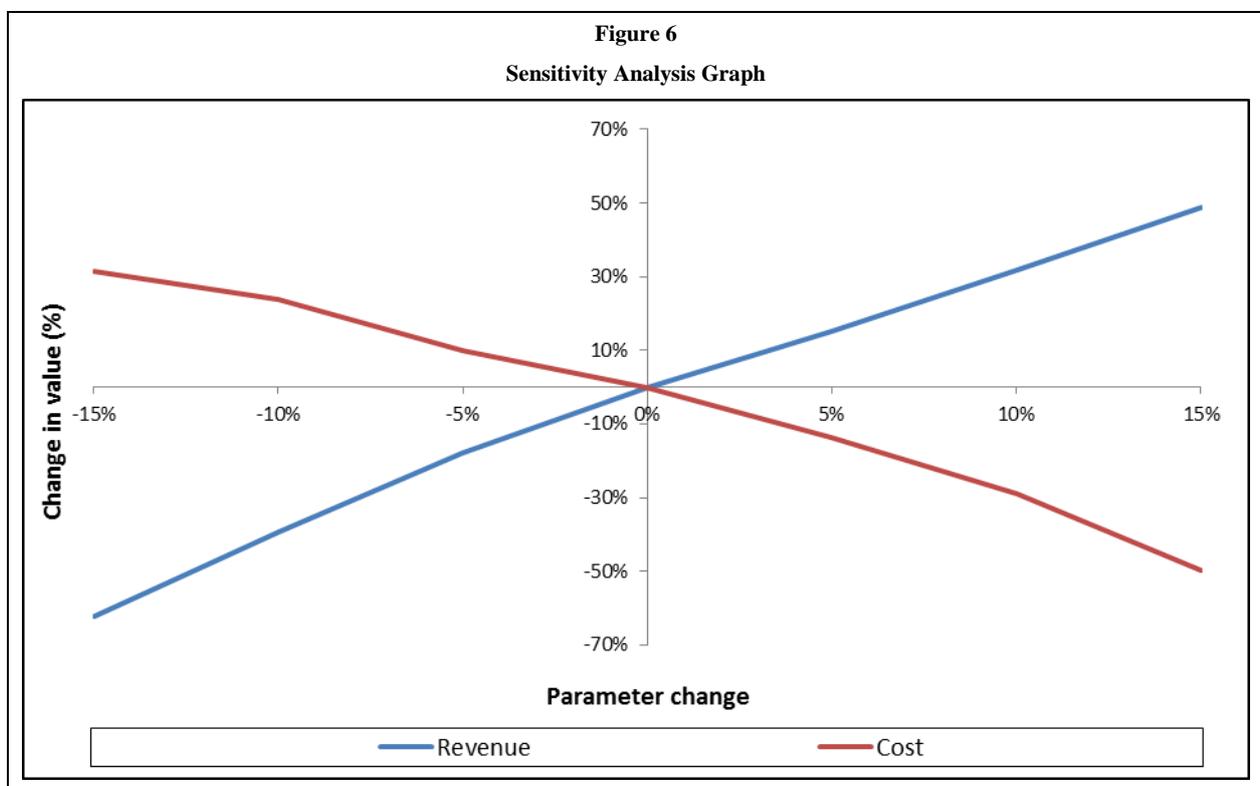


## Open Pit

The pit optimisation was undertaken in 2013 using GEMCOM Whittle® pit optimisation software. No further optimisation work was completed as stated in the 2013 CPR. A comprehensive sensitivity analysis was completed taking into consideration the previously completed pit optimisation with updated mining, cost, revenue and financial parameters.

A sensitivity analysis was conducted on a revenue and cost basis to determine the impact on the current selected pit shell. This entailed adjustment of the revenue (basket and chrome prices) by  $\pm 15\%$  in 5% increments. The value stated in the optimisation/ sensitivity analysis process is a relative value based on the Whittle® schedule including fixed and variable operational cost. A 15% reduction in revenue impacts on the relative value of the project with a value reduction, excluding capital, of 62% while a 15% increase in revenue with a relative value gain of 49%. It is evident that the mine value is most sensitive to revenue. Although a lower basket revenue has a material impact on the value of the project, it does not have a material impact on the pit selection strategy up to  $\pm 15\%$  in basket and chrome prices.

It is evident that a relative value from the selected pit is sensitive to both reduction and increase in cost. A 15% reduction on cost has a 32% increase in relative value while a 15% increase shows a 50% reduction in relative value on the selected pit. Figure 6 shows a graphical representation of the sensitivity analysis conducted for the selected pit. The sensitivity analysis indicates that the pit is sensitive to both revenue and cost.



Mining is undertaken by an established mining contractor with a track record on similar operations. Mine planning is conducted in conjunction with the mining contractor to ensure that operational plans are achieved.

The mining related modifying factors applied were based on study work, testwork, observation and measurement. A geotechnical slope angle of 45°, with a 10m safety berm at an overall slope angle of 35° was used for the top 20m of topsoil and soft overburden while an average overall 53° slope angle was applied at depth. Geological losses were applied at 7.5% in the less steeply dipping eastern section where more information existed whilst a 15% geological loss was applied towards the west. The geological loss accounted for unknown and known geological features that resulted in a loss of available Mineral Resources. The total of 6% mining losses was based on the available Mineral Resource mined, with losses allowed for drilling, blasting and loading activities. External dilution was applied based on the mining methodology employed per ore layer. MG4A, MG4 and MG2 were not mined selectively and thus attracted a higher dilution percentage. The selectively mined ore layers included MG3 and MG1 as these layers attracted lower dilution levels. The average dilution applied amounted to 9.1% measured on a tonnage basis. Excessive losses and dilution pose a material risk and have a material negative effect on the profitability of the operation.

Excavators (65t to 90t class) are used to load 40t to 80t class articulated dump trucks in the chromitite layer and waste parting zones. The RoM ore is hauled directly from the pit to the RoM pad or placed on a designated stockpile or fed directly through the mobile primary crusher and sized to 200mm. Mining operations in the west pit is restricted to day-light hours compared to 24 hour operation in the east pit. The east pit is equipped with appropriate lighting plants on each production face with quality control enforced by grade control technicians.

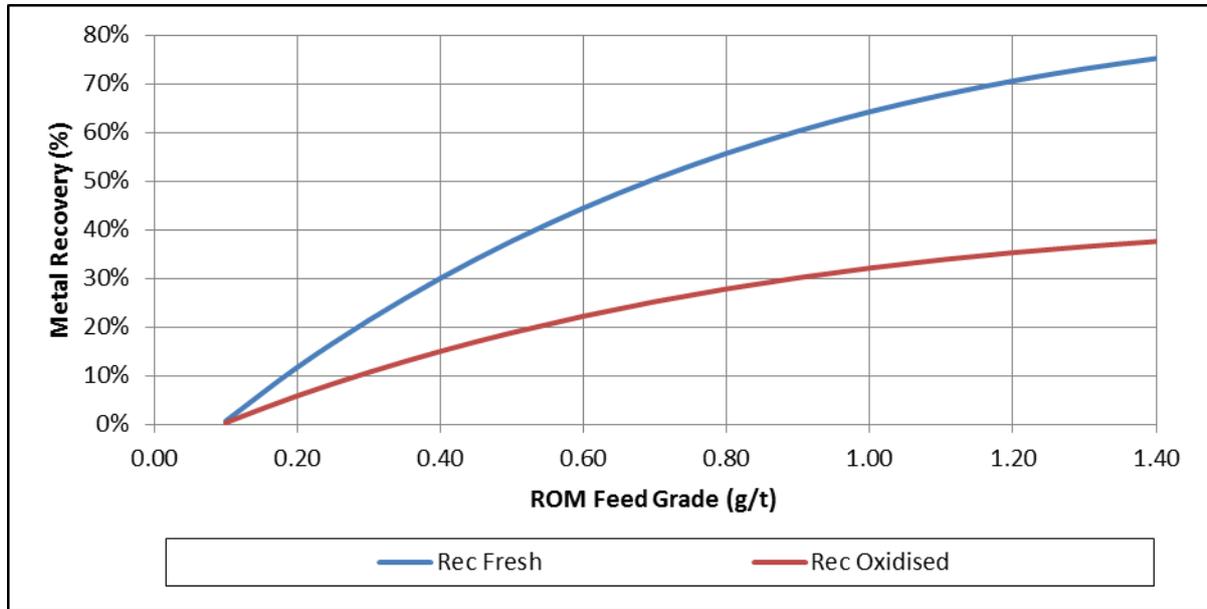
Bulk waste above the MG4A is excavated using 360t excavators and hauled with 150t dump trucks. Haul roads were designed at a maximum inclination of 10% and with a width of 30m, taking into consideration the 150t truck dimensions for safe two-way traffic.

Mining costs used in the optimisation process and subsequent sensitivity analysis were based on the plant and infrastructure operational budget, overheads and contractual mining rates. PGM metal prices were adjusted to incorporate the offtake terms and the government royalty.

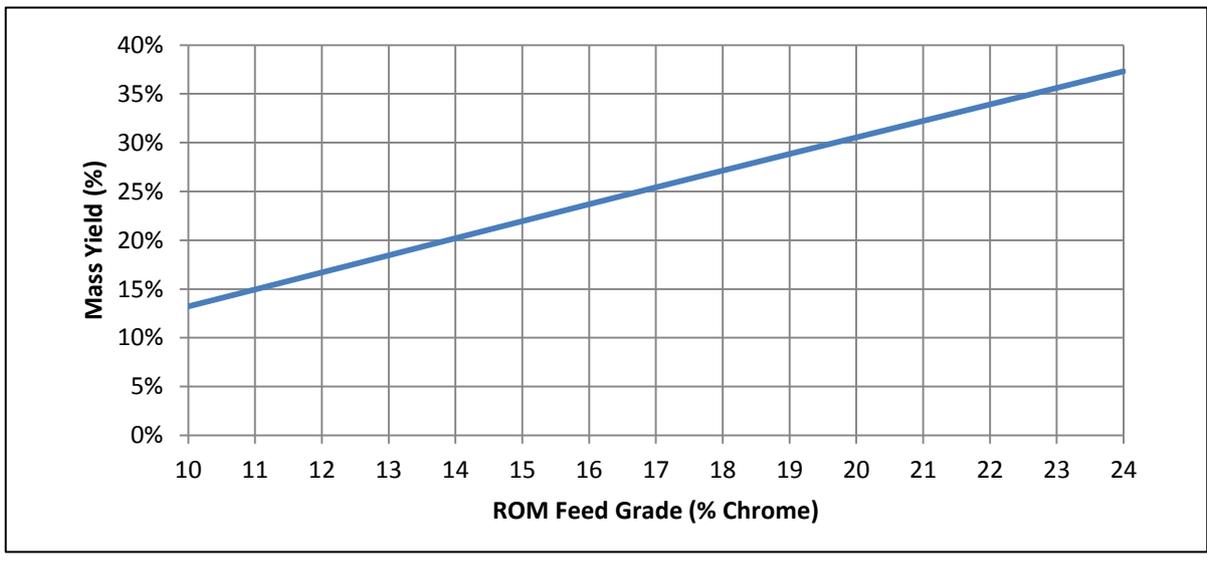
Plant recoveries were based on actual performance while capacities were based on design capacity. The PGM recoveries on oxidised and fresh ore are shown in Figure 7. The mass yield applied was based on the supplied yield curves as indicated in Figure 8.

Bulk waste is blasted in 20m benches. Depending on the dump location, waste is hauled to either the dump located on the outcrop side or hauled through temporary ramps on the interim high wall to a dump located on the high wall side of the pit. Backfilling will commence once the pit reaches a depth of approximately 100m. Close to 35% of the waste is backfilled over the life of the operation. It must be noted that, due to the low wall ramps and a minimum 100m down dip lag between the backfill and the working faces, the 35% backfill is reasonable and in line with similar operations.

**Figure 7**  
**PGM Recovery**



**Figure 8**  
**Mass Yield – Chrome Concentrate**



Steady state waste stripping requirements are set at approximately 1.3 million BCM per month from the two pits. A total of 420ktpm of RoM ore is produced from the two pits. Steady state production levels are maintained from the open pits up to 2030 when there is a gradual ramp up of production from underground sources. The last open pit tonnage is mined in 2036.

A total of 41.4Mt of Proved Mineral Reserve and 46.4Mt of Probable Mineral Reserve is declared for the open pits (Table 2).

Table 2 Open Pit: Mineral Reserve Estimation Summary (31 December 2015)								
Reserve category	Tonnes (Mt)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	3PGE+Au (g/t)	5PGE+Au (g/t)	Cr <sub>2</sub> O <sub>3</sub> (%)
<b>Proved</b>	41.4	0.74	0.25	0.15	0.004	1.14	1.45	17.8
<b>Probable</b>	46.4	0.67	0.27	0.14	0.004	1.08	1.42	19.1
<b>Total</b>	<b>87.8</b>	<b>0.70</b>	<b>0.26</b>	<b>0.14</b>	<b>0.004</b>	<b>1.11</b>	<b>1.43</b>	<b>18.5</b>
<i>Note: The Mineral Reserve is declared in terms of the guidelines of the SAMREC Code The reserve does not report Os as it typically not included in the revenue generated from the sale of PGEs.</i>								

### Underground Mine Design

An underground mining study was conducted as part of the 2013 CPR. No subsequent study work was completed. The sections contained in this document describing the underground mining and design methodologies are an extract of the 2013 report.

Small portions exist within the mine design for which Tharisa does not currently hold the mining right and/ or where the surface rights have yet to be acquired. These areas were not excluded from the mine design based on the reasonable expectation that exists that the necessary permitting and ownership could be in place by the time mining is undertaken in these areas.

The minimum strategic design requirements for the underground section was a RoM production of 400ktpm as a continuation of the open pit production profile with sustained production levels during the transition period. The health and safety aspects considered must provide for a low safety risk and profitable underground mining.

To successfully define a single go-forward case for the mining exploitation strategy, the mining method, access selection, mine design, scheduling, mining equipment selection, and the preparation of an operational and capital cost schedule up to steady state production was considered. The footprint area for underground mining was constrained by the open pit perimeter and crown pillar to the south, the 750m depth cut-off to the north and the mining right boundaries to the east and west. The overall exploitation strategy applied was to maximise the economic open pit limits followed by underground mining from the pit high walls.

A mining method selection study was undertaken to evaluate the productivity, equipment suitability, capital costs, operating costs, environmental aspects, and health and safety risks associated with various methods. A trackless bord and pillar was selected as the preferred mining method. Bord and pillar mining is widely employed for the extraction of similar flat dipping deposits with the advantages that:

- Development rates are faster compared to conventional systems
- The mining method offers good flexibility in terms of dealing with geological and quality anomalies
- Safety is enhanced as fewer people are involved and most of the work is conducted from the protection of machinery
- Personnel, equipment and consumables are moved efficiently and almost directly to the working faces
- Shift change-over times are reduced
- Supervision is improved and working places can be visited with less effort compared to conventional methods.

An analysis was undertaken to select the appropriate mining horizons. From this analysis, MG2 and MG4 were selected. After further scrutiny, it was concluded that MG2C must be excluded from the mining cut to reduce internal dilution and only MG2A, MG2B and the waste parting will be mined. The combined thickness of MG2A, waste parting and MG2B in the greater part of the underground design area is well over 1.8m and meets the minimum requirements of the equipment selected. A further constraint was applied that the maximum mining width must not exceed 4m. The mining cut was re-stated for MG2A only, taking the minimum width into consideration.

MG4 at an average in situ thickness of 3.0m, was selected as the second mining horizon as it was wide enough for trackless bord and pillar mining. The parting between MG2 and MG4 vary between 15m to 20m thick. The selected mining cut includes MG4, the pyroxenite parting and MG4(0) below. The same maximum and minimum width criteria were used. Where the MG4 package thickness exceeded 4m, only MG4 was selected for the mining cut.

Mining extraction in the bord and pillar mining method was achieved by developing a series of roadways (rooms or bords) on the chromitite layer and connecting them by holings or cut-throughs to form pillars that provide support for the overlying strata. Mining extraction in this method is a function of the pillar sizes which is a function of the depth below surface.

To accommodate the equipment sizes, production requirements and geotechnical considerations, minimum and maximum mining cuts were set at 1.8m and 4.5m respectively. Layers thinner than 1.8m were diluted up to a minimum height of 1.8m in the production sections and 4.5m in the declines.

Access to the underground mine is gained through three sets of on reef declines. The advantages of this system are that all development is undertaken on the reef horizon, more information on the geology is obtained during development and waste development is required to access the chromitite layers. The main disadvantage of this option is the lack of surge capacity. Two decline systems with a capacity of 150ktpm each were planned from the high wall of the east pit for MG2 and MG4 respectively.

Another set of declines must be developed on MG2 from the west pit high wall which services both MG2 and MG4 at a capacity of 50ktpm from each chromitite layer.

The geotechnical parameters considered for this study were based on the work conducted as part of the feasibility study concluded in 2008 and additional work completed in 2012. Initial pillar designs were modified in line with best practices employed at similar mines in the area. Consequently, pillar sizes of 6m x 6m on 8m bord spans and 6m holings were used in the stoping designs. The pillars were designed to increase with depth from 6m x 6m in the upper levels to 8m x 8m in the bottom stopes. Additional geotechnical modelling is required to refine these parameters in due course. This modelling must include a study of the waste partings between the layers to form the basis of possible future inclusion of portions of MG1 and MG3.

The mining dilution factors were estimated from first principles assuming an over break of 10cm waste from both the hanging and footwall horizons of the mined Layer. Depending on dip of the chromitite layer, some waste will be mined to maintain safe and horizontal underfoot conditions. The dilution factors decrease with depth from 16% to 13% for MG2 and from 15% to 12% for MG4. This is in direct proportion to the pillar sizes which increase with depth. Mining recovery for both horizons was set at the historical mining average for similar operations at 98%. The extraction is a function of the pillar sizes and was estimated from first principles. A decreasing trend with depth is shown from 79% in the upper levels to 71% in the lower levels for both chromitite layers.

Ten production sections are required to meet the planned 200ktpm RoM production for MG2 based on the LHD requirement estimate. A total of 12 production sections are required to meet the planned 200ktpm RoM production from MG4. Based on a production profile of 400ktpm, the scheduled underground production commences with the production ramp up during FY 2030 and continues up to FY 2075, with an underground mine life of 24 years at steady state production.

The scheduling strategy, which is a key driver to the overall project costs and economic value, was set to establish the eastern decline system initially before moving to the western decline system. This strategy was chosen to minimise project risk by starting off with areas of higher geological confidence and chromitite layer thicknesses. The sinking of the MG2 east triple declines is set to start five years before the depletion of open pit operations. At the planned advance rates, the mining of the triple MG2 declines to Level 4, including the ledging and ventilation provisions, will be completed within 24 months with the ramp up to steady state within 48 months. Sinking and production ramp up for the MG4 declines will be executed over the next three years and steady state production of 400ktpm is expected in year five from project inception. This ramp up is timed to maintain production rates with the depletion of the open pit Mineral Reserves.

The underground operations will make use of some of the existing infrastructure established for open pit operations such as electricity, water, the plant, houses, offices and transport and communications networks as this would be operational when the underground operations are conducted. Additional infrastructure provided in the capital cost estimate includes:

- The ventilation network
- Underground workshops and fuelling facilities
- Pumping arrangements
- Washrooms and lamp room facilities
- Emergency facilities.

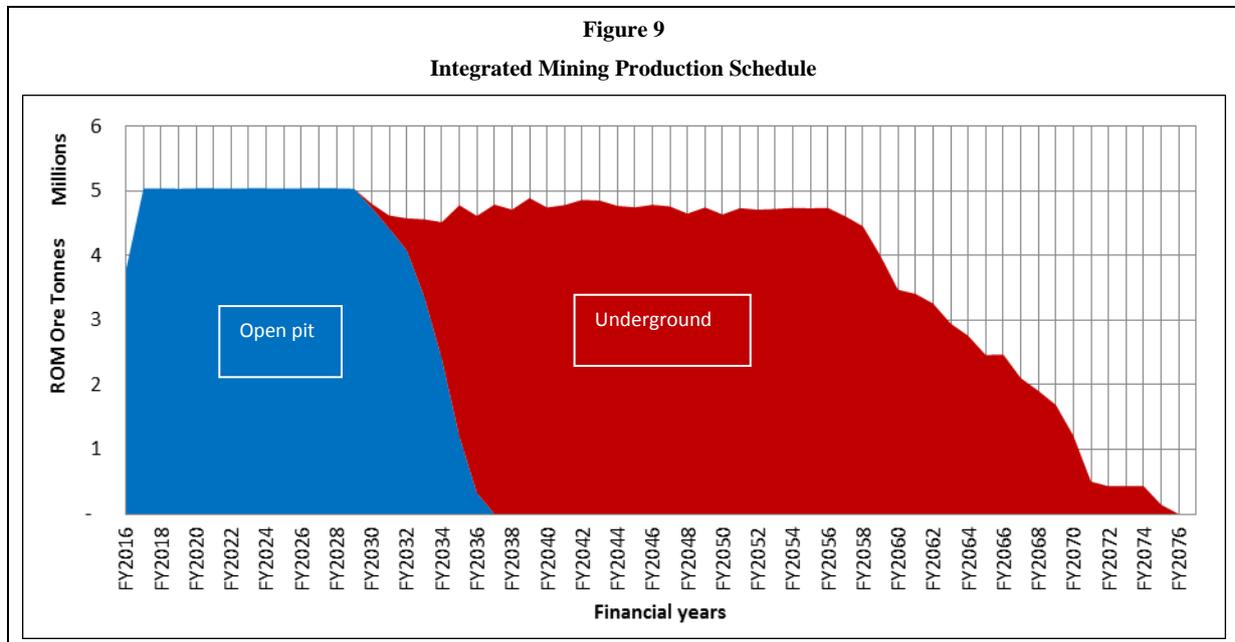
The mining operating costs were sourced mainly from an internal cost database and from relevant service providers.

A total of 18.6Mt of underground RoM was declared as a Probable Mineral Reserve (Table 3).

<b>Table 3</b>								
<b>Underground Mine: Mineral Reserve Statement</b>								
<b>(31 December 2015)</b>								
<b>Reserve category</b>	<b>Tonnes (Mt)</b>	<b>Pt (g/t)</b>	<b>Pd (g/t)</b>	<b>Rh (g/t)</b>	<b>Au (g/t)</b>	<b>3PGE+Au (g/t)</b>	<b>5PGE+Au (g/t)</b>	<b>Cr<sub>2</sub>O<sub>3</sub> (%)</b>
<b>Proved</b>	-	-	-	-	-	-	-	-
<b>Probable</b>	18.6	0.82	0.19	0.15	0.002	1.17	1.52	19.3
<b>Total Reserve</b>	<b>18.6</b>	<b>0.82</b>	<b>0.19</b>	<b>0.15</b>	<b>0.002</b>	<b>1.17</b>	<b>1.52</b>	<b>19.3</b>
<i>Note: The Mineral Reserve is declared in terms of the guidelines of the SAMREC Code.</i>								
<i>The reserve does not report Os as it typically not included in the revenue generated from the sale of PGEs.</i>								

## Production Schedule

The combined LoM schedule for the current open pit and planned underground operations is presented in Figure 9.



## Mineral Reserves

Modifying factors were applied to the Mineral Resource to convert it to a Mineral Reserve. The modifying factors applied were geological losses (7.5% in the less steeply dipping eastern section and 15% in the steeper dipping western section of the west pit), mining recovery (mining loss of 6%) and mining dilution (9.1% tonnage basis on average). Metallurgical recoveries were applied according to metal recovery curves for oxidised and fresh ore respectively and Cr<sub>2</sub>O<sub>3</sub> recovery was based on the process recovery curve.

The combined open pit and underground Mineral Reserve estimate is presented in Table 4.

Reserve Category	Tonnes (Mt)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	3PGE+Au (g/t)	5PGE+Au (g/t)	Cr <sub>2</sub> O <sub>3</sub> (%)
<b>Proved</b>	41.4	0.74	0.25	0.15	0.004	1.14	1.45	17.8
<b>Probable</b>	65.0	0.71	0.25	0.14	0.003	1.11	1.45	19.2
<b>Total Reserve</b>	<b>106.4</b>	<b>0.72</b>	<b>0.25</b>	<b>0.15</b>	<b>0.004</b>	<b>1.12</b>	<b>1.45</b>	<b>18.6</b>

*The reserve does not report Os as it typically not included in the revenue generated from the sale of PGMs.  
5PGE = Pt+Ir+Ru+Rh+Pd*

## Geotechnical Engineering

On the most recent visit to the mine it was observed that the working pit slopes are stable and the benches and slopes conform to the design. The stripping ratio is low and will need to be increased. No major risks were observed.

In the 2013 design study, data was collected from geotechnical logging in the then current east and central pits of Tharisa Mine to determine stable slope angles. Acceptable design methodologies were used to quantify the appropriate slope angles that will allow for safe and effective extraction of the resource. Slope angles of 45° in saprolitic material and 53° overall slope angles in fresh rock up to an overall slope height of 210m were shown to be stable. Kinematic analysis suggests a possibility for toppling failure. Instability is expected to be on a bench scale and therefore catch berms must be maintained. Beside this potential minor mode of failure the safety factors are high.

An earlier geotechnical investigation was carried out by logging eight boreholes and sampling the lithological units prior to strength testing the samples. The pillar strengths and N' values for underground mining were calculated and from this pillar sizes and stope spans designed. Mining aspects require that the bord spans be limited to 6m. The planned support for the stoping and development has also been designed incorporating these design parameters.

## Metallurgy and Processing

### Introduction

The processing facilities at the Tharisa Mine are designed to treat the (Middle Group) MG Chromitite Layers of the Bushveld Complex. These layers vary in thickness, competence and chromite and Platinum Group Metals (PGM) grades. Historically some of the MG Chromitite Layers have been mined for the recovery of chromite but not for PGM's. Tharisa Minerals has undertaken metallurgical tests on samples from these layers and confirmed the economic viability of mining and processing these ores for the recovery of both the chromite and PGM concentrates and confirmed this with the subsequent operating results.

The Tharisa Mine has been developed in a phased manner as described below.

- The **first phase** of the mine development involved the production of a chromite concentrate only from a pilot plant. Trial production commenced in March 2009. This pilot plant was later adapted to provide early revenue and from November 2009 the plant treated RoM ore at a throughput rate of 38,000 tpm.
- The **second phase** of the mine development involved the expansion of the mining operation and first phase processing facility to mine and treat 100,000 tpm of RoM ore. In addition the processing facility was expanded to incorporate both a 65,000 tpm PGM recovery circuit and a secondary chromite recovery section. This combined complex is currently known as the Genesis plant. Commissioning of the Genesis plant commenced in August 2011 and was completed in February 2012.

- The **third phase** of mine development increased the mining and processing rate by a further 300,000 tpm. This was achieved through the construction of a new standalone concentrator which operates in parallel to the existing 100,000 tpm processing facility. The new 300,000 tpm concentrator, known as the Voyager plant, recovers a primary chromite concentrate, a PGM concentrate from the primary chromite tailings and a secondary chromite concentrate from the PGM tailings.

After the construction and commissioning of the Voyager plant the total mining and processing throughput capacity of the Tharisa Mine was 400,000 tpm (4.8Mtpa) of RoM ore.

The original process design was based on test work undertaken by Mintek. In addition, the Tharisa Minerals processing facility was developed on a phased basis. The different phases were structured to provide additional design information for the 300,000 tpm plant while generating an income stream through recovering chromite concentrate.

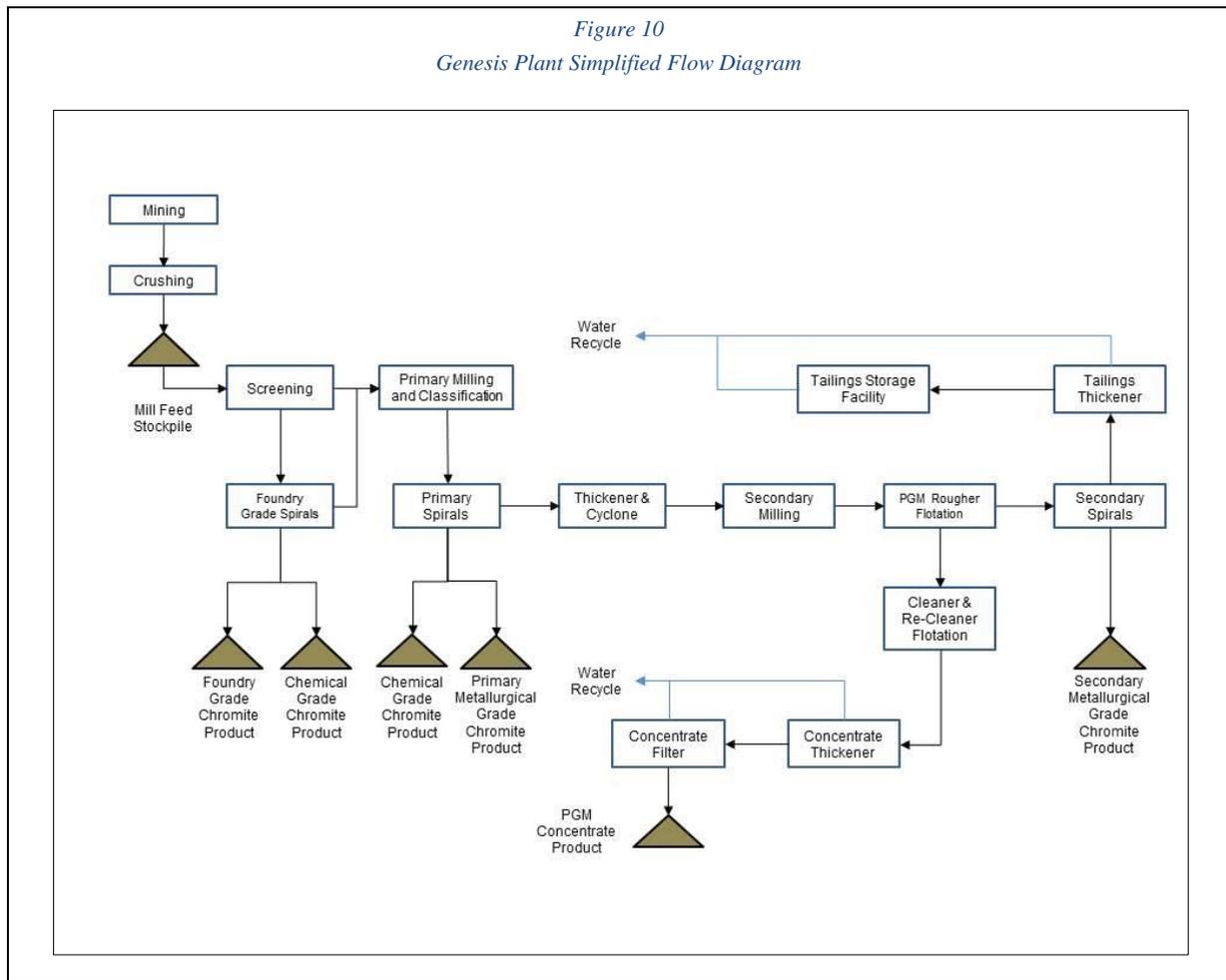
The current operational processing facilities consist of two distinct and separately operated facilities. The two facilities are described below.

#### Genesis Plant

The second phase of mine development established the Genesis processing plant with a design plant throughput of 100,000 tpm RoM. The Genesis plant processes predominantly the MG1 and MG4A Chromitite layers which contain the higher grade chromite and lower grade PGM's. The main focus of the Genesis plant is therefore to recover and produce higher value chromite products.

The current Genesis process flow is indicated in Figure 10 and described below.

Figure 10  
Genesis Plant Simplified Flow Diagram



RoM material from the open pit mining operation is received and stored on a RoM pad. The RoM material is fed either directly by truck or by front end loader into the crushing circuit. The ore is crushed to less than 12mm by a three stage crushing circuit. The crushed ore is screened at 0.6mm to remove the crushed fines. The fine material is pumped to the foundry grade spiral plant for recovery of a foundry grade and chemical grade chromite concentrate from the higher grade feed material. The chemical grade concentrate and foundry grade concentrate are dewatered separately by dewatering cyclones and stored on separate drying pads from where it is despatched by truck.

The natural fines screen coarse fraction is milled in a single stage ball mill operated in closed circuit with a vibrating screen with a 0.6mm deck size. The milled ore that passes through the screen combines with the tailings from the foundry grade spiral concentrator plant and is then pumped to the primary spiral concentrator circuit. The primary spiral circuit further recovers chromite to produce metallurgical and chemical grade chromite concentrates. The metallurgical grade chromite concentrate is dewatered by separate dewatering cyclones and stored on separate drying pads from where the concentrate is despatched by truck. The chemical grade concentrate joins the chemical grade concentrate from the foundry plant for dewatering and storage.

The primary spiral circuit tailings stream is dewatered by a cluster of cyclones from where the coarse solids gravitate to three open circuit secondary ball mills operated in parallel. The fine solids (cyclone overflow) feeds a thickener from which the thickened fine solids are also pumped to the ball mills. The milled slurry discharging from the mills is collected in a common pump tank and pumped to a flotation plant for PGM recovery. The concentrate from the initial rougher flotation stage is subjected to three stages of cleaner flotation to produce a final PGM concentrate. The PGM concentrate is dewatered by a combination of a thickener and a filter before despatch by truck.

The PGM flotation section tailings stream is pumped to a secondary spiral concentrator section where the chromite, liberated by the secondary mill, is separated from the gangue minerals to produce a second fine metallurgical grade chromite concentrate. This fine chromite concentrate is dewatered by cyclone and stored on a separate dedicated drying pad from where it is despatched by truck.

The water in the tailings from the secondary spirals section is recovered in a thickener and re-circulated as process water. The solid tailings (thickener underflow) are pumped to the final Tailings Storage Facility (TSF). Water is also recovered from the TSF and circulated back to the processing facility.

#### Voyager Plant

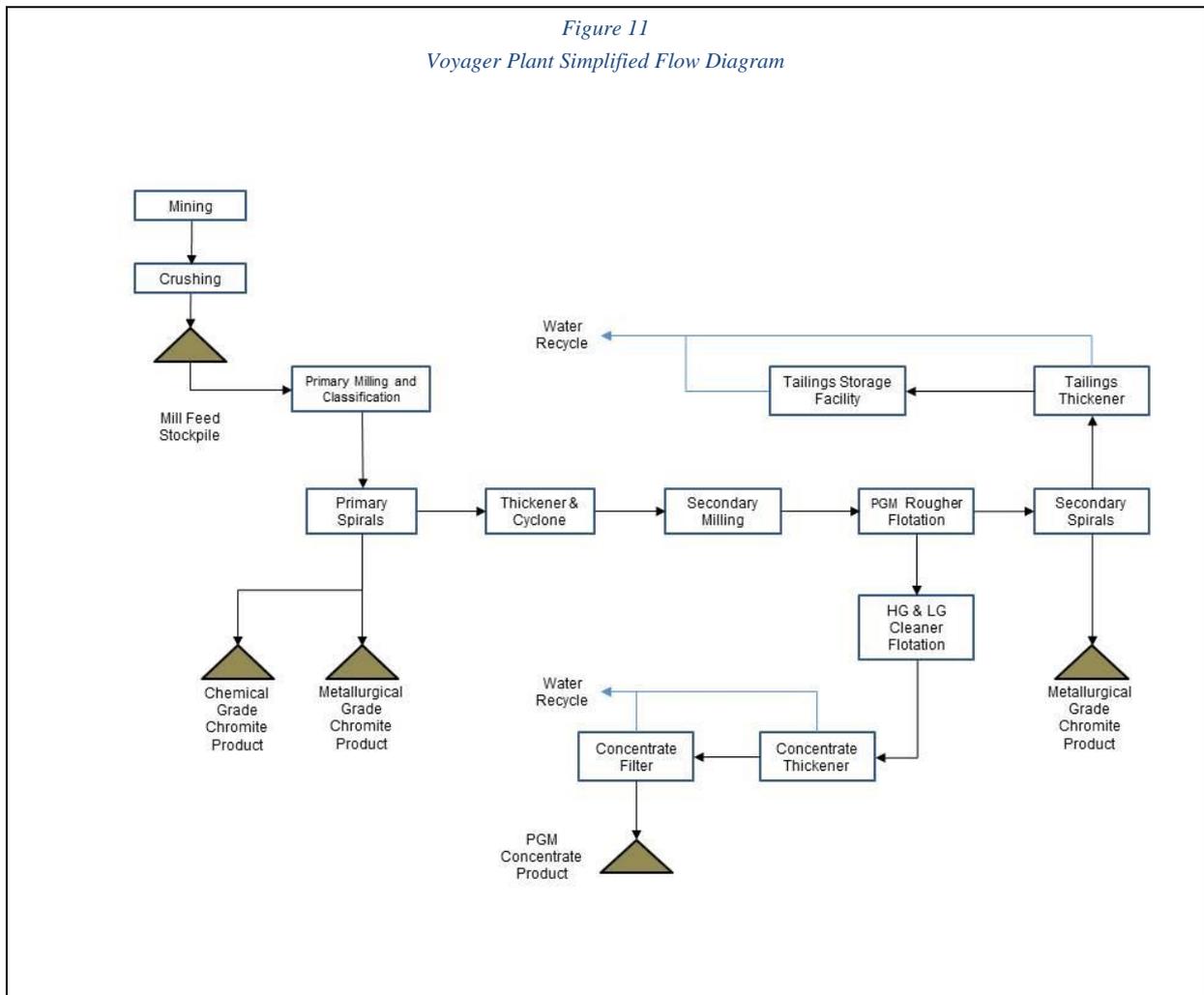
The third phase of mine development increased the throughput rate to 400,000 tpm by establishing a new processing facility rated at 300,000 tpm, known as the Voyager plant. The Voyager plant operates in parallel with the 100,000 tpm Genesis plant. The Voyager plant processes predominantly the MG2, MG3 and MG4 Chromitite layers which contain the higher PGM grades and lower chromite grades.

The current Voyager process flow is indicated in Figure 11 and described below.

The Voyager plant receives RoM ore from the open pit mining operation which is then crushed to 80% passing 22mm in a three stage crushing circuit. RoM material from the open pit mining operation is received and stored on a RoM pad. The RoM material is fed either directly by truck or by front end loader into the crushing circuit. The RoM handling allows for blending of material as required to maintain stable feed into the plant.

The crushed ore is stored on an open stockpile from where it is fed to two ball mills operating in parallel. Each 3.35 MW ball mill is in closed circuit with dedicated mill screens sizing at 0.6mm. Material coarser than 0.6mm is returned to the mills whilst the solids finer than 0.6mm pass through the screens and are pumped to the primary spiral concentrator for recovery of the coarse chromite. The bulk of the chromite concentrate recovered is metallurgical grade concentrate, but a chemical grade concentrate is also produced from the primary spiral concentrator circuit. The bulk of the chromite concentrate recovered in the Voyager plant is from the primary spiral circuit.

Figure 11  
Voyager Plant Simplified Flow Diagram



The metallurgical grade chromite concentrate from the secondary spirals joins the metallurgical grade concentrate from the primary spirals for dewatering. The combined metallurgical grade concentrate is dewatered by cyclone and stored on drying pads. Two drying pads are used, each equipped with two dewatering cyclones, allowing for four placement options for the metallurgical grade chromite concentrate. The chemical grade concentrate is dewatered by cyclone and stored on a separate drying pad. The drying pad is equipped with two dewatering cyclones, allowing for two placement options for the chemical grade chromite concentrate. The concentrates are loaded from the drying pads by front end loader and dispatched by truck.

The tailings from the primary spiral concentrator plant is pumped to a classifying cyclone cluster where coarse solids discharge via the underflow to a single 5.5 MW ball mill that operates in open circuit. The overflow from the primary cyclone cluster feeds a thickener where the contained water is recovered and returned to the process water tank. The underflow from this thickener is then pumped to the PGM recovery section flotation plant where it is combined with the mill discharge for PGM recovery and subjected to rougher flotation. The concentrate from the initial rougher flotation stage is subjected to various stages of cleaner flotation in a High grade / Low grade cleaner circuit to produce a final PGM

concentrate. The PGM concentrate is dewatered by a combination of a thickener and a filter before despatch by truck.

The PGM recovery section tailings stream is pumped to a secondary spiral concentrator section where the chromite, liberated by the secondary mill, is separated from the gangue minerals to produce a second fine metallurgical grade chromite concentrate. The fine metallurgical grade chromite concentrate joins the primary spiral metallurgical grade product for dewatering and dispatch.

The water in the tailings from the secondary spiral concentrator is recovered in a thickener and re-circulated to the processing facility whilst the solid tailings (thickener underflow) are pumped by a tailings pumping system, to the final TSF. The TSF is a shared facility with the Genesis processing facility

Construction of the Voyager plant commenced in July 2011 and was completed in September 2012. Commissioning of this plant commenced during August 2012, first ore was introduced to the plant during September 2012 and commissioning was completed in December 2012.

The Tharisa Minerals combined Genesis and Voyager process plants have been operated as production units since December 2012. From the actual 2015 production results it can be concluded that the Tharisa Minerals operation can achieve 400,000 tpm throughput.

The PGM recovery and grade improved from 2013 to 2015. The total recovery for 2015 was 65.8% at a concentrate grade of 131.6E g/t. The recovery and grade is better than originally predicted and with the expected increase in the ratio of fresh (non-oxidised) ore in the plant feed, it is expected that the improving trend will continue into future.

The average chromite feed grade declined from 2013 to 2015 from 20.7% Cr<sub>2</sub>O<sub>3</sub> to 18.3% Cr<sub>2</sub>O<sub>3</sub>. The decline was associated with a decline in the chromite concentrate grade and the chromite recovery. The chromite feed grade is expected to increase over the next three year period with corresponding increase in chromite recovery and concentrate grade. In addition current spiral plant upgrades and quality improvements will impact positively on the chromite production from 2016.

The process plant is in good operational and running condition with the operational areas clean and neat indicating good housekeeping. There is a large process improvement drive visible with various pilot scale units installed and operational in the plant. These include WHIMS, column flotation, shaking tables and replacement spirals. It is expected that the WHIMS circuit will be operational from 2016 with expected chromite recovery improvement.

Good capital cost and operating cost management is in place. The increase of operating cost from 2015 to the 2016 budget is of concern but is seen as a medium risk factor.

The overall process and metallurgy section risk is viewed as a medium risk with the main concerns the decreasing trend in chromite feed grade associated with lower recovery, the variability in chromite feed grade and an increase in operating cost.

## Tailings Storage Facilities and Waste Rock Dumps

The Tailings Storage Facilities (TSFs) design process was dominated by the need to create sufficient tailings storage capacity to serve the design life of the mine in the limited space available within the mining right area. The location of the orebody, and hence the open pit mining operations, within the mining right area necessitated that the TSFs would be constructed in close proximity to the open pit.

The proximity of the TSFs to the mining operations meant that one of the design priorities would be to minimise risks in terms of loss of life and future earnings and this in turn meant that the design of a robust impoundment would have to be adopted. A decision was thus made to use waste rock, from the open cast mining operations, to construct a tailings impoundment.

The construction of TSF 1 has been completed successfully with the construction of the next TSF (TSF 2 Phase 1) in progress. Table 5 summarises the operational life and capital costs associated with the construction of Tharisa Mine TSFs. These costs exclude rehabilitation and other life cycle costs.

Description	Operational Life	Cost
TSF 1 Phase 1	2011 - 2013	R12.2 mil
TSF 1 Expansion	2012 - 2016	R43.1 mil
TSF 2 Phase 1	2016 - 2019	R50.6 mil
TSF 2 Phase 2	2019 - 2024	R49.1 mil
Future TSF	2024 - 2044	R240.0 mil
<b>Total (excluding rehabilitation and closure costs)</b>		<b>R395.0 mil</b>

It is estimated that the tailings storage requirements for the next 20 years following 2024, i.e. after TSF 2 Phase 2 has reached full capacity, will have a capital cost implication of approximately R240 million. This estimate includes the cost of a liner system, a requirement included due to new environmental legislation, and excludes rehabilitation and closure costs.

The Waste Rock Dumps (WRDs) will serve as storage facilities to accommodate all the excess waste rock generated by the open cast mining operations not being absorbed by the construction of the TSFs as well as other construction activities. It is the mine's intention to backfill the open pits with the waste rock generated on an advancing basis once the pits have been sufficiently developed.

The WRDs were designed in such a manner to enable their on-going rehabilitation and the control of surface water runoff, as it is probable that they will become permanent features of the post mining landscape.

Tharisa Mine currently makes use of two operational WRDs for waste rock disposal namely the East Mine WRD 1 and the West Mine WRD 1 with the TSF 2 Division wall to be commissioned in December 2015. The total approximate waste rock capacity in the facilities is 81.13Mm<sup>3</sup>, which excludes the

volume of the TSF 2 Division Wall, accounted for in the TSF section of this report. Table 6 summarises the capital costs, the waste rock capacity and operational life of all WRDs.

<b>Waste Rock Dump</b>	<b>Waste Rock Capacity (m<sup>3</sup>)</b>	<b>Operation Life</b>	<b>Capital Cost</b>
East Mine WRD 1	21,700,000	September 2013 - May 2016	R3.31 mil
East Mine WRD 2	19,980,000	June 2016 - February 2019	R5.47 mil
TSF 2 Division Wall	15,340,000	December 2015 – September 2017	R0.41 mil
West Mine WRD 1	21,800,000	August 2013 - July 2020	R3.27 mil
West Mine WRD 2	15,430,000	August 2020 - October 2025	R3.75 mil
<b>Total (excluding rehabilitation and closure costs)</b>			<b>R16.22 mil</b>

## **Infrastructure**

### Logistics

Logistics management and procurement was identified as an important aspect of the Tharisa Mine. Arxo Logistics (Pty) Ltd (Arxo), a Tharisa plc group company, was mandated to manage the logistics chain for the chrome concentrate from the mine to final offtake - which is mainly in China. This includes the activities of sourcing third party services, capacity planning, technology solution, distribution planning, warehouse management and shipping.

Arxo makes use of both rail and road distribution channels to move the mine's product to the Richards Bay and Durban ports for shipment abroad. A dedicated rail siding has been allocated to Tharisa Minerals which is located 6km from the mine site. Arxo has secured adequate trucking and warehousing facilities to cater for the full requirement of 160,000 tpm of chromite concentrate at steady state production.

### Roads

The mining right area is traversed east/west by local un-surfaced roads originally constructed to service the local farming community. In a north/south direction the mine is split by a local tarred road connecting Buffelspoort with Marikana. This in turn is linked to the N4 Bakwena Highway locally linking Rustenburg to Brits, and internationally linking Mozambique to Botswana and Namibia.

### Rail

A rail siding was secured 6km from the mine at Marikana to facilitate the raiing of the chrome product to the port at Richards Bay.

### Electricity

Electrical power supply for the mine's requirements at full production has been secured from Eskom's Selene-Middlekraal and Bighorn-Middlekraal sub stations as a dedicated ring supply.

### Water

Tharisa Mine has established a groundwater well field on the property which in addition to pit dewatering, supplies sufficient water as 'make up water' for the processing facilities. These two sources will be sufficient to supply the mine's water requirements at the planned steady state and for the anticipated LoM. This is supplemented by Rand Water as well as excess water from nearby mining companies.

## **Environmental Baseline**

In 2008, baseline environmental studies were undertaken to determine the state of the pre-mine environment and to assess potential environmental impacts relating to the mining activities at the mine. These were updated, where relevant, in 2014 to cater for changes to the mine's operations and infrastructure.

Geology: Other than the potential for mineral sterilisation (which can be avoided) no impacts relating to the geology underlying the mine were identified.

Climate: No impacts relating to climate were identified, but climate data was used to assess air quality and surface water related impacts.

Topography: Potential impacts that were identified were safety issues relating to hazardous excavations and visual impacts.

Soil and Land Capability: Potential impacts that were identified related to soil contamination, compaction and erosion.

Land Use: Potential Impacts on and around the mine such as impacts from blasting and traffic/public road disturbance were identified.

Biodiversity: Potential impacts relating to destruction of sensitive habitats were identified.

Surface Water: Potential impacts relating to pollution of surface water and destruction of non-perennial water courses were identified.

Groundwater: Potential groundwater impacts relating to contamination and depletion of third parties groundwater and effects on baseflow were identified.

Air Quality: Potential air quality impacts relating to the generation of both small inhalable dust particulates and larger fallout dust were identified.

Noise: A potential impact relating to high noise levels to third parties was identified.

Sites of Archaeological and Cultural Interest: Potential impacts relating to the discovery of resources such as stone walled settlements, graveyards, a historical village and homestead, mining heritage remains, isolated and randomly scattered stone tools, historical houses and outdated and discarded agricultural implements, were identified.

Socio-economic: Potential impacts relating to positive economic benefits such as capital investment, employment, support services, and foreign exchange income were identified. In addition, a number of potential negative impacts were also identified. These included issues associated with involuntary relocation, informal settlements and associated problems of crime, disease and security concerns, pressure on housing infrastructure and services, and issues around land sales and impacts on land values.

## **Environmental Approvals, Reporting and Management**

### Environmental Assessment Process

As the mine incorporates several listed environmental activities, the 2008 environmental assessment process was undertaken in terms of the National Environmental Management Act, 107 of 1998 (NEMA) and the regulations under Regulation 385 of 21/04/2006. In addition, the mine environmental assessment process was also undertaken in accordance with the requirements of the MPRDA and the regulations there under (Regulation 527 of 23/04/2004). To cater for changes in the mine's operations and infrastructure, an environmental assessment process was completed in 2014. The process was undertaken in terms of Section 102 of the MPRDA and the NEMA and the regulations under Regulation 543 of 18/06/2010.

The Tharisa Mine has an approved Environmental Management Plan (EMP) by the DMR and the Provincial Department of Rural, Environment and Agricultural Development (DREAD). The EMP makes provision for the rehabilitation of the mining footprint and associated infrastructure.

### Water License

In order to conduct all water use and waste disposal activities lawfully an integrated license is required from the Department of Water Affairs (DWA) in terms of the National Water Act, 36 of 1998. The water use license was granted in July 2012. An amendment to the Tharisa water use license in terms of the National Water Act (NWA), 36 of 1998, is required as changes to the mine's operations and infrastructure incorporate water uses changes.

### Additional Licences and Authorisations required by the Tharisa Mine

Tharisa Minerals management is cognizant of the various permits and authorisations required as per the 2008 and 2014 EIA/EMP reports namely:

- Amendment of the mine's water use license to cater for water uses associated with changes addressed in the 2014 EIA/EMP report and if required, updating of the existing dam safety risk registrations;

- An air emission license (AEL) for the drying of mineral solids at the chrome sand drying plant;
- Permit for the removing or damaging of any protected plant species as needed;
- Any changes to the approved deviation as a result of the east pit extension will need to be discussed and agreed to with the North West Department of Transport Roads and Community Safety; and
- Permit for damaging or removing heritage resources such as graves and historical houses/complexes within the central waste rock dump footprint;

#### Ongoing Environmental Management, Monitoring and Reporting

An assessment of compliance was carried out in July 2013 (for the EMP and WUL) and in December 2014 (for the WUL) at which time some deviations from the EMP and water licence requirements were found. The required management interventions and/or authorisation processes are underway or imminent. More recent compliance assessments (for the EMP and WUL) were conducted in December 2015 with a final report due in February 2016. The findings will be presented to management and recommendations considered, budgeted and actioned where necessary.

#### **Environmental Rehabilitation: Financial Closure Liability**

Current legislation requires that mining operations make financial provision for environmental rehabilitation and closure prior to commencement of any operations under the MPRDA. The calculations of the current financial closure liability associated with the Tharisa Mine were completed in accordance with the Guideline Document for the Evaluation of the Quantum of Closure-Related Financial Provision Provided by a Mine as published by the DMR, previously the Department of Minerals and Energy (DME), dated January 2005. The EMP requirement is for the financial closure liability to be updated and submitted to the DMR annually. The most recent calculation values the closure liability at R143.8million (as at 31 December 2015).

This calculation allows for making any remaining open pit voids safe but excludes the cost of backfilling the open pit voids, which is in accordance with the amended closure objective to only partially backfill the open pits based on a revised mine plan. This amended closure objective to only partially backfill the open pit voids has been approved by the DMR.

The September 2015 closure liability calculation is only planned to be submitted to the DMR for feedback and approval in December 2015. Tharisa Minerals currently provide a financial guarantee to the value of R117.4 million through a Guardrisk Insurance Company Limited policy.

On 20 November 2015, new financial provision regulations in terms of the National Environmental Management Act, for prospecting, exploration, mining and production operations came into effect. These regulations require mining companies to develop detailed closure plans that support a financial provision calculation to varying degrees of accuracy (depending on the predicted life of mine) and based on actual rates. Existing operations have a period of 15 months from the 20 November 2015 to comply.

## Valuation/Mine Economics

A Technical Economic Model (TEM) for the Tharisa Mine has been constructed by Coffey in order to confirm the feasibility of the mine and to substantiate the declaration of mineral reserves.

Tharisa is contemplating capital expenditures to improve the efficiencies on the mine. Coffey thus did TEM's for two scenarios:

- TEM Excluding Optimisation Projects
- TEM Including Optimisation Projects

Most of the planned underground production would mine inferred mineral resources. The TEM was initially constructed for mining opencast and then start moving underground in year 2030 for a 53 years LoM. Rather than to look at a TEM model that excludes the inferred mineral resources from the production profile, consideration was given to rather exclude the underground mining component. This assessment considers that the ZAR2bn necessary to establish the underground mine will not be recouped by the 18,649Mt Probable Reserves available for underground mine production.

Table 7 presents aspects of the TEM in which the underground mine has been excluded as a close proxy for exclusion of the inferred mineral resources from the production profile.

<b>Table 7</b>					
<b>Tharisa Mine Technical Economic Model</b>					
<b>Effect of Underground Production/Inferred Resources on DCF Valuation</b>					
Parameter	Unit	Excluding Optimisation		Including Optimisation	
		Including Underground	Excluding Underground	Including Underground	Excluding Underground
Life of Mine	Years	53	21	53	21
ROM over LOM	Mt	235.44	90.60	235.44	90.60
LOM C <sub>2</sub> O <sub>3</sub>	Mt	65.33	24.6	82,221	29.44
LOM PGM's	Moz	7.35	2.60	7.93	2.892
Capital	ZAR Million	5,089	1,871	5,964	2,437
Discount Rate	%	8.5%	8.5%	8.5%	8.5%
High NPV	ZAR Million	15,947	13,178	21,355	12,655
Low NPV	ZAR Million	6,049	6,018	7,001	5,546
<b>Preferred NPV</b>	<b>ZAR Million</b>	<b>11.474</b>	<b>10,655</b>	<b>14,703</b>	<b>9,923</b>
The underground mine has been excluded as a close proxy for exclusion of the inferred mineral resources from the production profile.					

Coffey prefers the results of the Discounted Cash Flow (DCF) model that excludes the underground production as a close proxy for exclusion of inferred mineral resources.

The model confirmed that the mine is feasible with a positive Net Present Value (NPV). The model further confirmed that the mine is most sensitive to changes in revenue and least sensitive to changes

in capital. This is because relatively little capital is spent on mining equipment as this is a contract open pit mining operation.

As a second valuation methodology, the Market Approach was applied. Recent transactions involving PGM producers as well as opencast chrome projects were used to attribute PGM and chrome market values to Tharisa mine.

Coffey prefers the Cash Flow Approach to valuating the Tharisa mine as it is a producing mine with known production and cost parameters.

The Market Approach valuation is based on a combination of transactions for properties that are somewhat dissimilar to the Tharisa Mine. Coffey considers it is not a true reflection of the market price of Tharisa Mine. Coffey thus values the Tharisa Mine on 31 December 2015 as shown in Table 8.

Table 8 Tharisa Mine Valuations of the Tharisa Mine on 31 December 2015 (ZAR Million)					
Valuation Methodology	DCF Excluding Optimisation		DCF Including Optimisation		Comparative Transaction
	Including Underground	Excluding Underground	Including Underground	Excluding Underground	
High NPV	15,947	13,178	21,355	12,655	17,229
Low NPV	6,049	6,018	7,001	5,546	14,404
<b>Preferred NPV</b>	<b>11.474</b>	<b>10,655</b>	<b>14,703</b>	<b>9,923</b>	<b>15,817</b>

The value of the Tharisa Mine as at 31 December 2015 is considered to lie in the range of ZAR 6.302 billion to ZAR 15.792 billion with a preferred value of **ZAR 12.923 billion**.

## Risk Summary

A summary of the perceived risks associated with the mine is presented in Table 9.

Table 9 Tharisa Minerals Technical Risk Summary	
Item	Relative Risk
Geology and Mineral Resources	Low
Mining Engineering and Mineral Reserves	Low to Medium
Geotechnical Engineering	Low
Metallurgy and Processing	Medium
Infrastructural	Low to Medium
Environmental	Medium
Manpower and Management	Low to Medium

Based on the above risk summary, Coffey considers the Tharisa Mine to have an overall **Low to Medium Risk**.

## **1 Introduction and Terms of Reference**

### **1.1 Scope of the Report**

Coffey Mining (South Africa) (Proprietary) Limited (Coffey) was requested by Tharisa plc, formerly Tharisa Limited (Tharisa or the Company), to complete a Mineral Expert Report (MER) on the Tharisa Mine located in the North West Province, South Africa. The MER is required to support a listing on the London Stock Exchange (LSE) and has been compiled in accordance with the requirements of the LSE.

### **1.2 Site Visits**

Messrs Lomborg, Lotheringen, van Wyngaard, Stobart, Bornman and Dr James have visited the property on a regular basis over a period of approximately seven years since 2007.

### **1.3 Mineral Expert Report**

This report complies with the Listing Requirements of the LSE; specifically the particular requirements applicable to Mineral Companies (Section 12) and is prepared in accordance with the guidelines of “The South African Code for Reporting of Exploration Results, Mineral Resources and Reserves (prepared by the South African Mineral Resource Committee (SAMREC) Working Group) (2007 and as amended in 2009)” (SAMREC Code) and “The South African Code for the Reporting of Mineral Asset Valuation (2008)(as amended in July 2009)” Prepared by The South African Mineral Asset Valuation Committee (SAMVAL) Working Group (SAMVAL Code).

### **1.4 Qualifications and Experience**

Coffey is part of Coffey International Limited, a specialist professional services consultancy with expertise in geosciences, international development (foreign aid programme assistance), and project management. Coffey is an integrated Australian-based consulting firm, which has been providing services and advice to the international mineral industry and financial institutions since 1987. Coffey, previously RSG Global, has maintained a fully operational office at in Johannesburg, South Africa, since 1999 to support expanding activities within southern and eastern portions of the continent.

Coffey has over 50 years of experience supplying specialist services to the mining industry and has completed projects in more than 70 countries, across most commodity types. Coffey provides ‘turn-key’ consulting, operational support and optimisation services, independent reports and a range of technical audits and studies. Coffey is professionally accredited in all mining jurisdictions globally and supported by a network of mining offices throughout the Americas, Africa and Australia.

The participants consist of a number of technical experts brought together by Coffey to complete the MER and are all “Competent Persons” as defined in the SAMREC code. The compilation of the MER in accordance with the reporting requirements of the LSE was

supervised by Mr Lomberg. The participants in the MER and their individual areas of responsibility are listed as follows:-

**Ken Lomberg, Senior Principal Consultant, Coffey**

B.Sc. (Hons) Geology, B.Com., M.Eng., FGSSA, Pr.Sci.Nat.

Project management, mineral resources, geological interpretations, site visits, report preparation.

Mr Lomberg has some 25 years experience in the minerals industry (especially platinum and gold). He has been involved in exploration and mine geology and has had the privilege of assisting in bringing a mine to full production. His expertise is especially in project management, mineral reserve and resource estimation.

Mr Lomberg has undertaken mineral resource and reserve estimations and reviews for platinum, chromite, gold, copper, uranium and fluorite projects. He has assisted with the reviews or estimation of diamond and coal projects. He has assisted with or compiled Mineral Expert Reports/NI 43-101 for various companies that have been listed on the TSX, JSE and AIM.

**Alan Goldschmidt, Senior Principal Consultant, Coffey**

B.Sc. (Honours), GDE, Pr.Sci.Nat.

Mineral resources, geological interpretations, report preparation.

Mr Goldschmidt has some 29 years' experience in the minerals industry. He has been involved in exploration and mine geology. His expertise is project management, reserve, and resource estimation. Primarily he has been involved with geological block models and geostatistical resource estimation. He is registered with the South African Council for Natural Scientific Professions.

**Jaco Lotheringen, Associate Consultant – Ukwazi Mining Solutions**

B.Eng., MSAIMM, Pr.Eng.

Mining engineering, mineral reserve estimation, infrastructure, site visits, report preparation.

Mr. Lotheringen is a member in good standing of the Southern African Institute of Mining and Metallurgy (SAIMM) and is a registered Professional Mining Engineer with the Engineering Council of South Africa (ECSA). He has more than 14 years' experience in the Mining and Minerals industries with the last nine years focussed primarily on the estimation and audit of mineral reserve estimates. Mr. Lotheringen has more than five years relevant experience in the planning and reserve estimation of similar platinum and chrome open cast operations.

Mr Lotheringen has undertaken mineral reserve estimations and reviews for platinum, gold, copper, chrome, manganese and iron ore projects. He has assisted on Mineral Expert Reports/NI 43-101 for various projects that have been listed on the TSX, JSE and AIM.

**Jacques van Wyngaard, Associate Consultant – MDM Engineering**

B.Eng. (Hons) Metallurgical Engineering, FSAIMM, Professional Engineer (ECSA 20090177)  
Process engineering, infrastructure, site visits, report preparation.

Mr Van Wyngaard has over 18 years' experience in the metallurgical industry of which the last 8 years have been specifically in the metallurgical project development field. He has been involved in the execution of numerous feasibility studies and implementation projects covering a wide range of minerals including platinum and chromite. These studies and projects have included establishment and management of metallurgical test campaigns, process development, detailed plant design, construction and commissioning of the constructed metallurgical plants. Mr Van Wyngaard has undertaken studies and projects for the extraction of base metals, precious metals, energy minerals and industrial minerals and has been involved in the operation and management of base metals, coal processing and metallurgical research facilities.

**Alex Pheiffer, Associate Consultant – SLR Consulting (previously Metago)**

B.Sc. (Honours), M.Sc., Pr.Sci.Nat.  
Environmental and social, report review.

Mrs Pheiffer has some 11 years experience in the minerals industry in the field of mine permitting and environmental and social assessment. Mrs Pheiffer has undertaken permitting, environmental and social reviews for platinum, chrome, uranium, coal, and gold projects. She has assisted with or compiled feasibility contributions for various listed projects. She is registered with the South African Council for Natural Scientific Professions.

**Guy Wiid, Associate Consultant – Epoch Resources**

B.Sc.(Eng) (Civil), M.Sc. (Eng) (Civil), Pr.Eng.  
Tailings facility design, site visits, report preparation.

Mr Wiid has been involved in the mining waste and environmental management field for 19 years during which time he has worked in the fields of power station and mining waste management, rehabilitation and closure design, implementation of environmental management systems, surface water management, due diligence investigations and project management of construction and rehabilitation contracts.

**Dr John James, Associate Consultant – Celtis Geotechnical**

B.Sc. (Hons) (Geology), PhD, FSAIMM, FSANIR, MGSSA  
Geotechnical Engineering, site visits, report preparation.

Dr James is the principal consultant for Celtis Geotechnical CC, consulting to various mining companies on projects in South Africa, Zambia, Botswana and Australia. While with Rodio SA, he managed exploration drilling, grouting, surface and underground geotechnical contracts in Turkey and South Africa.

He has experience in open pit mining, involved with supervising slope stability consultants at the then JCI's Platinum Mines and while with Rand Mines on outcrop mining. He has a total of 20 years experience in practical rock mechanics and design on gold mines, with Anglo-American, Rand Mines and JCI; this includes considerable experience in wide orebody mining, geology and all aspects of support design and backfill behaviour and placement; the Technology, Rock Mechanics and Design of hard rock, coal and base metal mines as well as tunnelling, and has also directed projects and research into mine design, technology transfer and auditing and assessment systems.

He was jointly awarded the M D G Salamon prize for the most important contribution to Rock Mechanics in 1997. He has published numerous publications on rock support and other relevant rock engineering topics.

**Hannes Bornman, Manager Mining, Coffey**

B.Eng. (Mining), MBA, Pr.Eng., FSAIMM  
Economic valuation, site visit, report preparation.

Mr Bornman has 10 years production experience of hard rock mining in South African gold and platinum mines. He has broad experience in feasibility and due diligence studies both in South African and International contexts. He has travelled extensively within Central Asia and Russia. He has undertaken project risk assessment studies on mining projects in South Africa as well as in Mozambique and Mali.

**1.5 Independence**

Neither Coffey, nor the key personnel nominated for the completed and reviewed work, has any interest (present or contingent) in Tharisa plc and its subsidiaries, its directors, senior management, advisers or the mineral properties reported on in this report. The proposed work, and any other work done by Coffey for Tharisa plc, is strictly in return for professional fees. Payment for the work is not in any way dependent on the outcome of the work, nor on the success or otherwise of Tharisa plc's own business dealings. As such there is no conflict of interest in Coffey undertaking the MER as contained in this document.

**1.6 Legal Proceedings**

Coffey is not aware of any legal proceedings against the Company that could adversely affect its ability or right to exploit the Tharisa Mine's mineral resource and reserve.

## 2 Disclaimer

This report was prepared as a Mineral Expert Report, in accordance with both the SAMREC and SAMVAL Codes for Tharisa plc, by Coffey. The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in Coffey's services and based on:

- i) information available at the time of preparation by Tharisa plc and its subsidiaries,
- ii) third party technical reports prepared by Government agencies and previous tenement holders, along with other relevant published and unpublished third party information, and
- iii) the assumptions, conditions and qualifications set forth in this report.

This report is intended to be used by Tharisa plc, subject to the terms and conditions of its contract with Coffey.

The sole purpose of this report is for the use of the Directors of Tharisa plc and its Sponsor and advisors in connection with Tharisa plc's listing prospectus and the report should not be used or relied upon for any other purpose.

Neither the whole nor any part of this report nor any reference thereto may be included in or with or attached to any document or used for any other purpose, without Coffey's written consent to the form and context in which it appears.

A final draft of this report was provided to Tharisa plc, along with a written request to identify any material errors or omissions, prior to lodgement.

Neither Coffey, nor the authors of this report, are qualified to provide extensive comment on legal facets associated with ownership and other rights pertaining to Tharisa Minerals', mineral properties. Coffey did not see or carry out any legal due diligence confirming the legal title of Tharisa Minerals, to the mineral properties.

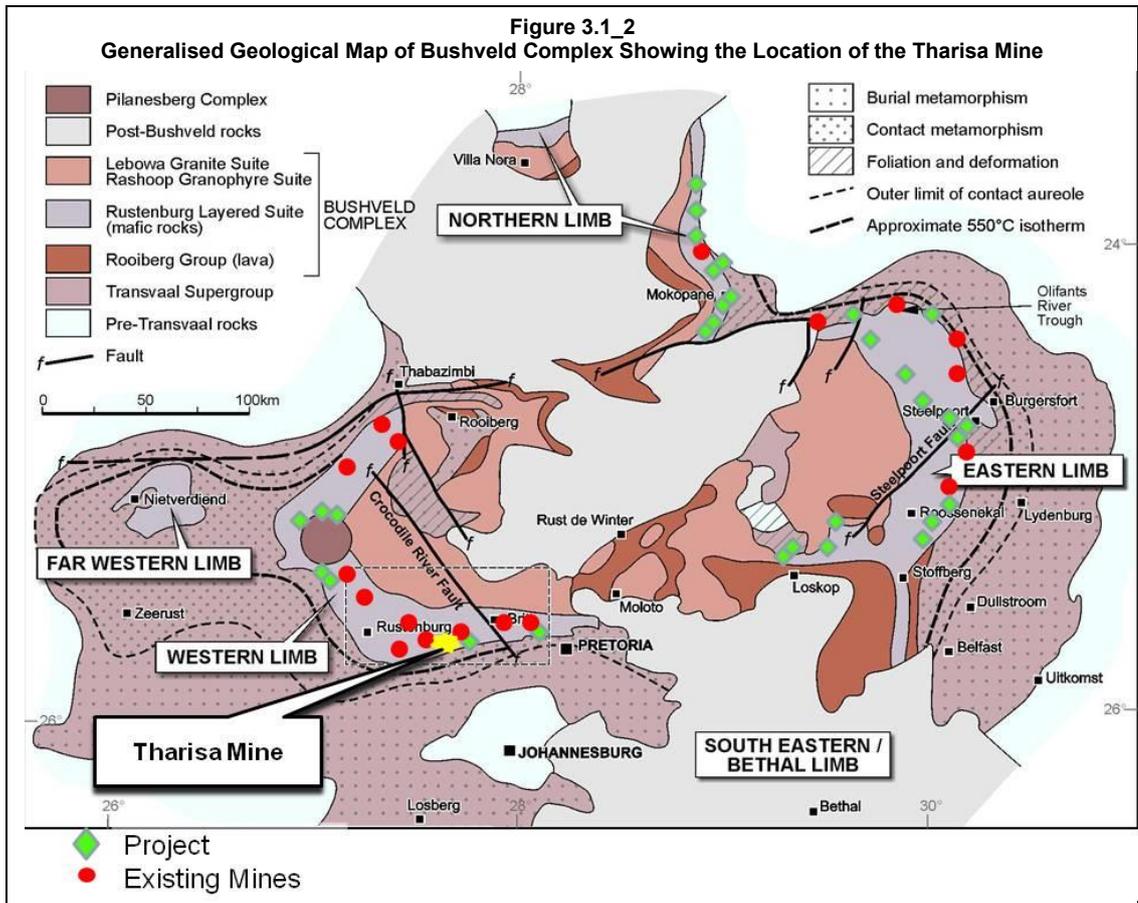
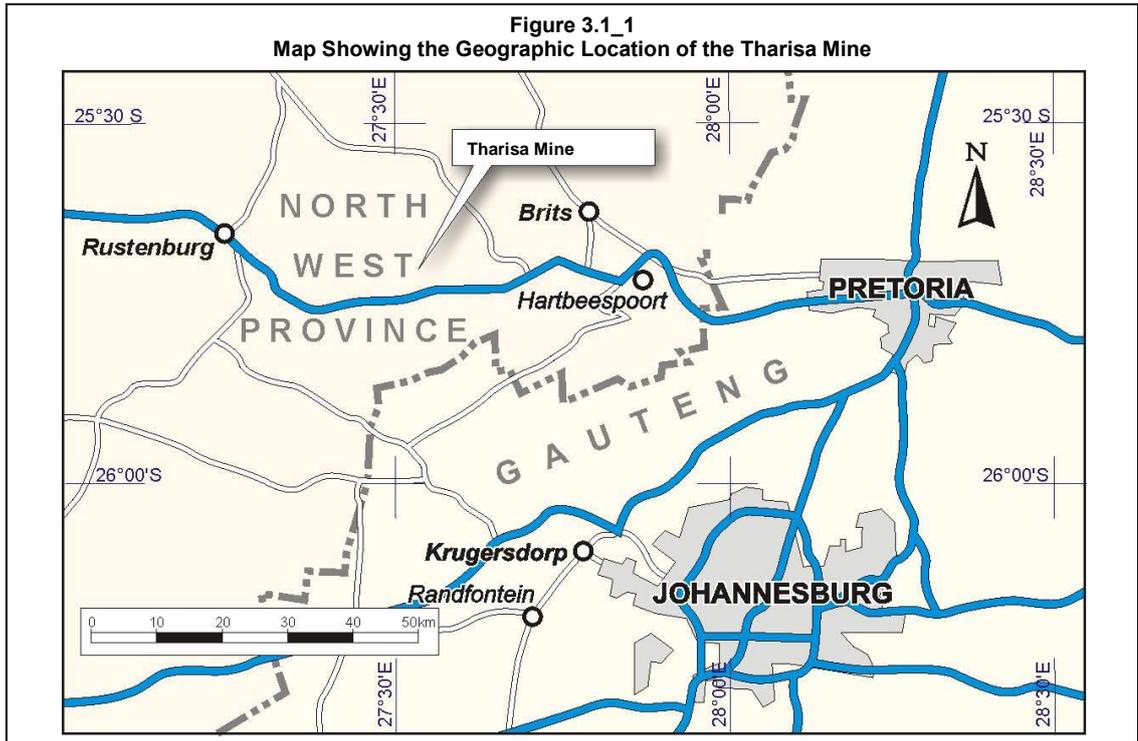
### **3 Property Description and Location**

#### **3.1 Mine Description and Location**

Tharisa Minerals, a 74% held subsidiary of Tharisa plc, operates the Tharisa Mine. Tharisa Minerals holds a mining right, granted by the Department of Mineral Resources (DMR) on 19 September 2008 and registered on 13 August 2009, to various portions of the property of Farm 342JQ (in respect of PGMs (Platinum Group Metals), nickel, copper, silver and chrome) and to the whole property of Rooikoppies 297JQ (in respect of the PGMs, nickel, copper, silver and chrome contained within the MG Chromitite Layers only). The Tharisa Mine is located in the North West Province some 35km east of the city of Rustenburg (Figure 3.1\_1) in the Marikana section of the south-western limb of the Bushveld Complex (Figure 3.1\_2). The Marikana section is separated from the Brits section to the east by Wolhulterkop and from the Rustenburg section to the west by the Spruitfontein upfold.

The Tharisa Mine is located approximately 5km north of the Magaliesberg Mountains. These mountains are formed by quartzites (Transvaal Sequence), which are common as floor or basement rocks to the Bushveld Complex.

The nearest major road is the N4 National Road which links Pretoria with Rustenburg and crosses the south-eastern corner of the Farm 342JQ property immediately south of the outcrop of the Middle Group (MG) Chromitite Layers. A secondary road bisects the property in a north-south direction providing access to the town of Marikana. The east west Rustenburg-Brits railway line bisects the Rooikoppies property with a station located in the town of Marikana on the Rooikoppies property.



## 3.2 Mining Industry of South Africa

### Background

The mining industry in South Africa was traditionally controlled by six large mining conglomerates: Anglo American - De Beers, Gencor - Billiton, Gold Fields, JCI, Anglovaal and Rand Mines, which dominated gold, platinum, chrome, coal and base metal production. Sweeping changes in the industry have taken place as a result of a rising cost structure due to ageing mines and the impact of a new democratic constitution. This has led, in part, to the establishment of a growing mid-tier and junior developer and producer sector.

### Historical Perspective - Legislative Development

Since about 1860, mining regulation in South Africa has evolved to keep pace with changing technological, economic, and socio-political needs to grow and sustain the country's world-class mining industry.

Enactment of the Minerals Act, 50 of 1991 (Minerals Act) marked the consolidation of a substantial legislative modernisation that began in the 1960s. After the first democratic elections in 1994, all government policies and legislation were subject to fundamental review. A White Paper (government discussion document) on minerals and mining policy was published in October 1998. Mine health and safety was given first priority with the enactment of the Mine Health and Safety Act, (Act No 29 of 1996). The South African Parliament passed the Mineral and Petroleum Resources Development Act, Act 28 of 2002 (MPRDA) in August 2002, which was subsequently promulgated by the State President (Government Gazette, 1 May 2004).

### Mineral and Petroleum Resources Development Act, 2002

The concept of state custodianship of mineral rights (now embodied in the MPRDA) has replaced the common law principles previously embodied in the Minerals Act. Enactment of the MPRDA places South Africa in line with global mineral ownership principles.

The mechanics for converting mineral rights previously held under the Minerals Act to mineral rights recognised under the MPRDA, were set out.

### The Mineral and Petroleum Royalty Act, 2008

The Government has imposed the payment of royalties through the Mineral and Petroleum Royalty Act 28 of 2008 (Royalty Act) which gives effect to the MPRDA and which came into effect during the first half of 2010, but uncertainties surrounding its interpretation and implementation still exist. The Royalty Act requires that compensation be given to the State (as custodian) of the country's Mineral and Petroleum Resources for the country's "permanent loss of non-renewable resource". The Royalty Act distinguishes between refined and unrefined mineral resources, where refined minerals have been refined beyond a condition specified by the Royalty Act, and unrefined minerals have undergone limited beneficiation as specified by the Royalty Act.

The royalty rate structure is based on a formula that takes into account the profitability of Tharisa Minerals as follows:-

$$\text{Unrefined: } \textit{RoyaltyRate} (\%) = 0.5 + \frac{\textit{EBIT}}{\textit{Gross Sales (unrefined)}*9} * 100$$

$$\text{Refined: } \textit{RoyaltyRate} (\%) = 0.5 + \frac{\textit{EBIT}}{\textit{Gross Sales (refined)}*12.5} * 100$$

The maximum percentage royalty for refined mineral resources is 5%, whereas the maximum percentage royalty for unrefined mineral resources is 7%. The royalty is determined by multiplying the Gross sales value of the operation in respect of that mineral resource in a specified year by the percentage determined in accordance with the royalty formula. Both operating and capital expenditure incurred is deductible for the determination of earnings before interest and tax (EBIT).

In the case of the Tharisa Mine, the chromite concentrate and Platinum Group Metal (PGM) concentrate produced both classify as an 'unrefined mineral resource'.

Electronic copies of the MPRDA and other regulations can be found on the DMR website: [www.dmr.gov.za](http://www.dmr.gov.za).

### 3.3 South African Taxes

Mining companies in South Africa are taxed at the standard corporate tax rate of 28%. In addition, a withholding tax on dividends is payable at the rate of 15% by the company. No other tax or withholding tax is payable in respect of dividends paid to shareholders.

Corporate tax is paid on all income, plus 50% of capital gains, less deductible operating expenditure and a capital expenditure allowance. Deductible expenditure includes rehabilitation expenditure actually incurred and annual contributions to an approved rehabilitation trust. Prospecting and capital development expenditure is treated as follows:

all prospecting and capital development expenditure is carried forward to the year of commencement of production;

thereafter the accumulated prospecting expenditure and all future prospecting expenditure is allowed as a deduction either in full or in annual instalments as determined by the South African Revenue Service;

in the year of commencement of production and thereafter the accumulated and future annual capital expenditure on shaft-sinking, mine equipment and mine development is deductible in full up to the amount of taxable income from mining before allowing for this capital expenditure allowance. Any excess of capital expenditure over such taxable income is carried forward for deduction from future taxable income from mining;

capital expenditure in respect of employees' housing, hospitals, schools, shops, recreational buildings and facilities and railway lines is deductible in 10 equal annual instalments. Capital

expenditure in respect of motor vehicles intended for the private use of employees is deductible in five equal annual instalments. Each annual instalment is included in the above capital expenditure which is subject to the annual limit of taxable income from mining;

no deduction is allowed in respect of the cost of land and mineral rights; and

proceeds on the disposal of any asset previously included in the capital expenditure allowance are first deducted from any excess capital expenditure not already deducted and thereafter are included in full in taxable income. Such proceeds do not give rise to capital gains.

Value Added Tax (VAT) at 14% is payable on most goods and services in South Africa, however as it is claimable against any VAT charged on sales of product, it does not represent a cost to the Tharisa Mine.

### 3.4 Mining Tenure

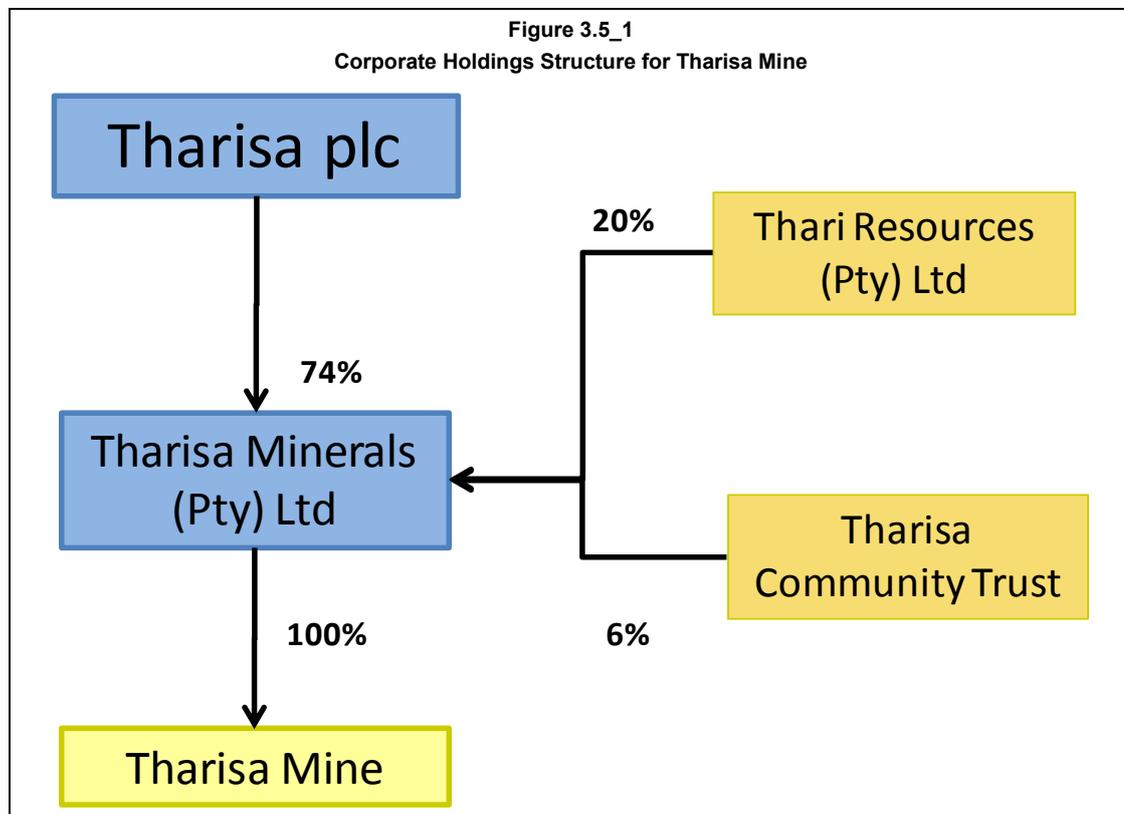
A summary of the pertinent aspects of the mineral exploration and mining rights for South Africa are provided in Table 3.2\_1.

**Table 3.2\_1**  
**Summary of Pertinent Aspects of the Mineral Exploration and Mining Rights**  
**(South Africa)**

<b>South Africa</b>	<b>Mineral Exploration And Mining Rights</b>
Mining Act :	Mineral and Petroleum Resources Development Act, No. 28 of 2002 (Implemented 1 May 2004)
State Ownership of Minerals :	State custodianship
Negotiated Agreement :	In part, related to work programmes and expenditure commitments.
<b><u>Mining Title/Licence Types</u></b>	
Reconnaissance Permission :	Yes
Prospecting Right :	Yes,
Mining Right :	Yes
Retention Permit :	Yes
Special Purpose Permit/Right :	Yes
Small Scale Mining Rights :	Yes.
<b><u>Prospecting Right</u></b>	
Name :	Prospecting Right
Purpose :	All exploration activities including bulk sampling.
Maximum Area :	No limit, Ministerial discretion
Duration :	Up to 5 years.
Renewals :	Once for 3 years
Area Reduction :	No
Procedure :	Apply to Regional Department of Mineral Resources.
Granted by :	Minister
<b><u>Mining Right</u></b>	
Name :	Mining Right
Purpose :	Mining and processing of minerals
Maximum Area :	No limit, Ministerial discretion
Duration :	Up to 30 years, Ministerial discretion
Renewals :	Yes, with justification, Ministerial discretion
Procedure :	Apply to Regional Department of Mineral Resources
Granted by :	Minister

### 3.5 Company Structure

The corporate holdings structure of the Tharisa Mine with the various Historically Disadvantaged South African (HDSA) shareholders is presented in Figure 3.5\_1



Tharisa plc was listed on the Johannesburg Stock Exchange and commenced trading on 10 April 2014.

### 3.6 License Status

#### 3.6.1 Mining Right

Tharisa Minerals holds a mining right, granted by the DMR (then the DME) in terms of the MPRDA on 19 September 2008, for a period of 30 years, to various portions of the property Farm 342JQ (in respect of PGMs, gold, nickel, copper, silver and chrome) and the whole of the property Rooikoppies 297JQ (in respect of PGMs, gold, nickel, copper, silver and chrome contained within the MG Chromitite Layers only) (Figure 3.6.1\_1). On 13 August 2009, the mining right was registered in the Mining and Petroleum Titles Registration Office, under Reference No 49/2009(MR).

On 7 March 2008 a mining right in respect of chrome was granted over Portions 96 and 183 of the property Farm 342JQ to South African Producers and Beneficiators of Chrome Ore (Pty)

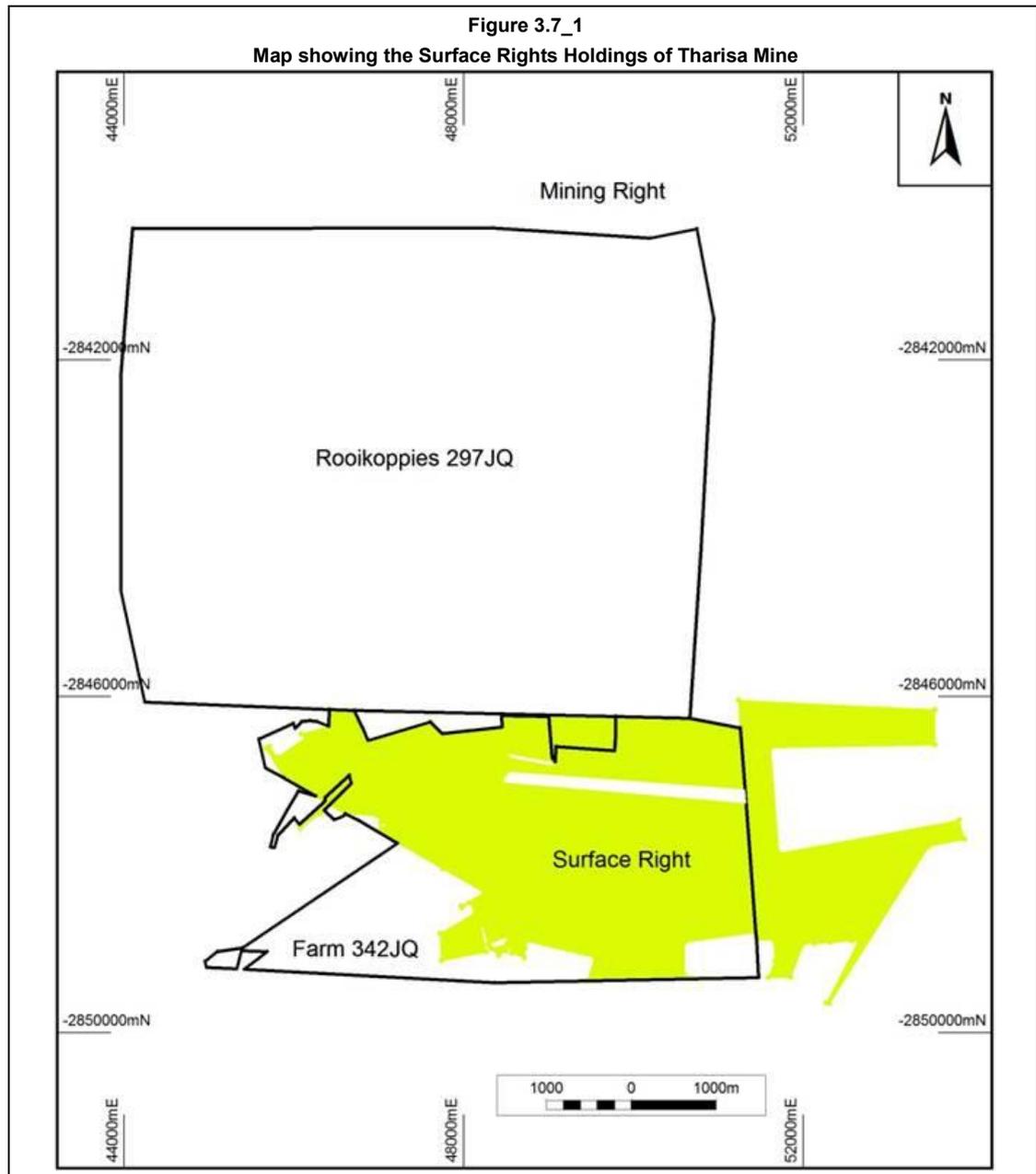
Ltd and registered on 27 July 2009. These rights were purchased by Tharisa Minerals on 18 March 2008.

In July 2011, an application was granted in terms of Section 102 of the MPRDA, to amend the existing mining right by the addition of Portions 96 (46.38ha), 183 (15.18ha) and 286 (13.29ha) of the property Farm 342JQ to the mining right 49/2009(MR).



### 3.7 Surface Rights

The surface rights of several of the portions of Farm 342JQ have been purchased by Tharisa Minerals with the stated intent of obtaining other surface rights (Figure 3.7\_1). It should be noted that should Tharisa Minerals not acquire all the surface rights of the area defined in the mining right, it will not be precluded from mining there.



## **4 Accessibility, Climate, Local Resources, Infrastructure and Physiography**

### **4.1 Mine Access**

The nearest major road is the N4 National Road which links Pretoria with Rustenburg and crosses the south-eastern corner of the Farm 342JQ property immediately south of the outcrop of the MG Chromitite Layers. A secondary road bisects the property in a north-south direction providing access to the town of Marikana. The east west Rustenburg-Brits railway line bisects the Rooikoppies property with a station located in the town of Marikana on the Rooikoppies property.

The mine is located approximately 35km from the mining city of Rustenburg and 95km from Johannesburg.

### **4.2 Climate**

A typical summer rainfall climate prevails in the area. Summer rain occurs mainly in the form of thunderstorms with a mean annual precipitation of approximately 680mm, and evaporation is about 1,800mm per year. Winds are generally light and blow predominantly from the north-west. Winters are cool and dry. Extreme weather conditions occur in the form of frost (2 to 20 occurrences per annum) and the occasional hail storm.

The average annual temperature for the year is approximately 19°C, with average maximum temperatures ranging between 22°C and 32°C and average minimum temperatures ranging between 2°C and 18°C. The hottest months are December to February. During April and May there is a noticeable drop in temperature, which signals the commencement of winter. The coldest months are June and July.

The area generally has a high S-Pan evaporation rate in the summer months from November to January. This gives rise to a high relative humidity. Evaporation is greater in summer than in winter, due to higher ambient temperatures.

### **4.3 Physiography**

The topography on the Tharisa Mine property is gently undulating. The elevation ranges from 1,140m in the south-west to approximately 1,320m in the north. Immediately north of the project are a number of gabbro-norite hills. Approximately 5km to the south of the mine is the Magaliesberg Mountain range where the peaks rise to approximately 1400m above mean sea level (amsl). The perennial Sterkstroom and various non-perennial tributaries run through the mine area.

This area is located within the savannah biome, and consists typically of scattered trees and shrubs with continuous grass ground cover. Shrub and tree density increases along rivers and in the gabbro-norite hills. Land use is predominantly agricultural in the south with the Marikana operations of Lonmin plc (Lonmin) being situated on the northern part of the

Rooikoppies property and the chrome operations of Samancor situated to the east of the mine.

#### 4.4 Soils

Soils in and around the mine area include those of the orthic phase (Mispah, Glerosa and Hutton), structured forms (Milkwood, Mayo, Shortlands, Sterkspruit, Swartland and Valsrivier), and hydromorphic forms (Sepane, Rensburg and Bonheim). The heavy structured black and dark brown clay soils (Sterkspruit, Mayo and Swartland soil forms) are commonly referred to as “black-turf” or “Cotton Soils”.

#### 4.5 Land Use

Land use around the Tharisa Mine consists of a mixture of farming, mining, residential, small business and general community activities. It is expected that agricultural production took place in the area for both subsistence farming by informal settlers and commercial farming, including crop production (maize, sunflowers, wheat, livestock feed) and livestock grazing. Due to overgrazing and subsistence farming practices by informal dwellers as well as the collection of vegetation mainly for firewood, parts of the general area were transformed. River systems within the area also show evidence of disturbance by agricultural activities.

A 275KV power line associated Eskom servitude, crosses through the eastern boundary of the mine area in a north-south direction. Smaller rural power lines and telephone lines currently service the residential areas within the western and eastern sections of the mine area. Infrastructure (pipes and canals) associated with the Buffelspoort Irrigation Board traverse various sections of the mine area in a south-north direction. There is also a network of tarred and gravel roads which exists in the area.

#### 4.6 Flora and Fauna

The Tharisa Mine is located within the savannah biome, characterised by open Acacia karoo woodlands, which occur in valleys and slightly undulating plains, and some lowland hills. This vegetation unit is of significance because it is listed as endangered mainly due to severe impacts from transformation through cultivation and urbanisation. The following vegetation/habitat zones exist within the Tharisa Mine area:

- scattered open woodland (338 ha);
- transformed cultivated land and built up areas (1276 ha);
- rocky outcrops (23 ha);
- wetland: river system and associated riparian vegetation (26 ha); and
- azonal vegetation units.

Mammal species identified on site, through actual observation or capture, and through evidence of presence include *Lepus saxatilis* (scrub hare), *Sylricapra grimmia* (common duiker), *Raphicerus campestris* (steenbok), *Helogale parvula* (dwarf mongoose) and *Hystrix*

africaeaustralis (porcupine). Bird species identified on site, through actual observation or capture, and through evidence of presence include *Ardea melanocephala* (Black - headed Heron), *Plectropterus gambensis* (Spur- winged Goose), *Streptopelia senegalensis* (Laughing Dove), *Streptopelia capicola* (Cape Turtle Dove) and *Ploceus velatus* (Southern Masked Weaver). Reptile and amphibian species identified on site, through actual observation or capture, and through evidence of presence include *Kassina senegalensis* (Bubbling Kassina), *Phrynomantis bifasciatus* (Banded Rubber Frog), *Afrana angolensis* (Common River Frog), *Schismaderma carens* (Red Toad), *Bitis arietans* (Puff Adder), *Pachydactylis affinis* (Transvaal Gecko) and *Trachylepis striata* (Eastern Striped Skink).

Invertebrate species that were identified on site, through actual observation or capture, and through evidence of presence include *Astylus atomaculatus* (Spotted Maise Beetle), *Musca domestica* (Robber Flies), *Anoplolepis custodiens* (Pugnacious Ant), *Junonia hierta cebrene* (Yellow Pansy), *Gryllus bimaculatus* (Common Garden Cricket) and *Olorunia* spp (Grass Funnel-web Spiders).

#### 4.7 Groundwater

Ground water in and around the Tharisa Mine is typically between 10m and 30m below ground level. Ground water flow is generally influenced by the topography in the mine area. In general, the flow is from the higher ground in the south to lower lying areas in the north and towards water courses which occur in lower lying areas. The Tharisa Mine is underlain by a shallow upper weathered aquifer and a deeper fractured aquifer. The interface between these features is relatively impermeable. In the vicinity of the water courses, alluvium replaces the weathered overburden and the water courses do lose and gain water to the alluvium aquifer. Ground water is generally of good quality and can either be classified as ideal or good. Most of the boreholes in the vicinity of the mine are used for domestic and agricultural (livestock and irrigation) purposes.

#### 4.8 Surface Water

The Tharisa Mine is located within the upper reaches of the A21K quaternary catchment, which falls within the Lower Crocodile Secondary catchment and the Crocodile West and Marico Water Management Area. The mine area is drained by the perennial Sterkstroom, which flows from the Buffelspoort Dam, south of the N4, in a northerly direction through the centre of the mine area and two unnamed non-perennial tributaries of the Brakspruit, an unnamed non-perennial tributary of the Maretlwane and an unnamed non-perennial tributary of the Elandsdriftspruit. Non-perennial tributaries of the Brakspruit traverse the western edge of the proposed mining area, the Maretlwane tributary originates in the eastern open pit, and the Elandsdriftspruit tributary traverses through the preferred tailings dam site and will need to be diverted for the project (Figure 4.8\_1). Apart from the Sterkstroom, drainage lines within the mine area are not well defined and do not have distinct channels.

The run-off for the catchments associated with the mine area is not gauged. The mean annual runoff (MAR) was therefore simulated using rainfall-runoff response parameters from

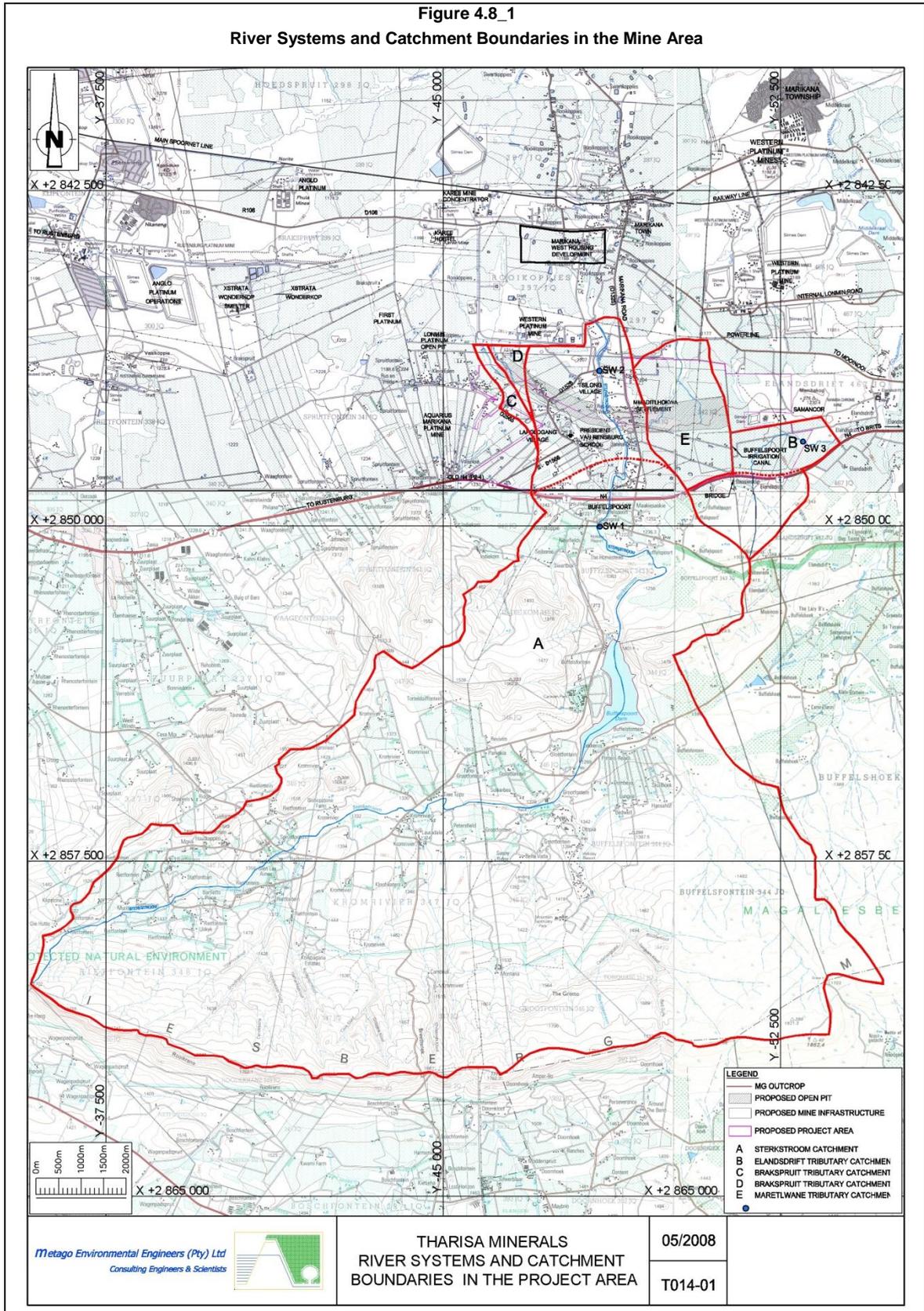
WR90. The rainfall-runoff response of the catchment was assumed to be the same as the regional rainfall-runoff response as determined for quaternary catchment A21K and set out in WR90. According to Midgley et al (1994) the MAR for quaternary catchment A21K is 31.9Mm<sup>3</sup>/year. The normal dry weather flow for the non-perennial Elandsdriftspruit, Brakspruit and Maretlwane tributaries in the mine area is zero. The normal dry weather flow of the Sterkstroom is dependent on the rate of release from the Buffelspoort Dam situated about 3.25km upstream of the mine.

The regional maximum flood (RMF) peak flow rate was determined using Kovács method (1980). The peak flow rates and flood volumes calculated using the calculated flood peaks and the time of concentration for each catchment are also summarised in Table 4.8\_1.

<b>Table 4.8_1</b>					
<b>Tharisa Mine</b>					
<b>Calculated Peak Flow Rates and Flood Volumes</b>					
<b>Catchment</b>	<b>Area (km<sup>2</sup>)</b>	<b>Return period</b>			<b>Regional Maximum Flood RMF</b>
		<b>1:20</b>	<b>1:50</b>	<b>1:100</b>	
<b>Peak Flow Rate (m<sup>3</sup>/s)</b>					
Sterkstroom	140.3	314	444	544	1185
Elandsdriftspruit	3.3	25	35	43	181
<b>Flood Volume (x10<sup>6</sup> m<sup>3</sup>)</b>					
Sterkstroom	140.3	7.36	10.39	12.73	-
Elandsdriftspruit	3.3	0.14	0.19	0.24	-

Flood lines for the Sterkstroom River were determined using the software package HEC-RAS River Analysis System version 3.1.3 (2005). Preliminary observations for the Sterkstroom indicate that the water quality is of a good quality. Water from the Sterkstroom is used for domestic purposes such as washing and bathing, livestock watering and for agricultural purposes. There are features that exhibit wetlands components within the mining area because of the associated biodiversity present. No pans or other wetlands occur in the mine area.

Figure 4.8\_1  
River Systems and Catchment Boundaries in the Mine Area



#### **4.9 Local Resources and Infrastructure**

The Tharisa Mine is located 95km from Johannesburg and 35km east of the city of Rustenburg, which is a major centre for the platinum and chrome mining industries in the surrounding area. Rustenburg is located within the Rustenburg Local Municipality and Madibeng Local Municipalities and is part of the Bojanala Platinum District Municipality of the North West Province of South Africa. The city of Rustenburg serves as a base for providing a full range of urban amenities, including world class medical, educational, financial, retail and commercial services. Basic facilities and services are present within the immediate surrounding rural areas.

## **5 History**

### **5.1 Ownership History**

Thari Resources (Pty) Ltd (Thari) which was incorporated in January 2005, acquired prospecting rights for chrome and PGMs over various portions of the property Farm 342JQ and to the property Rooikoppies 297JQ in March 2006. Thari is a HDSA and woman controlled company focused on the minerals and energy sectors.

In March 2006 Thari established Tharisa Minerals as a wholly owned subsidiary. In September 2008, the prospecting rights were transferred from Thari to Tharisa Minerals after obtaining the necessary Ministerial approval in terms of Section 11 of the MPRDA.

Tharisa plc was incorporated in February 2008 and after obtaining the necessary Ministerial approval acquired 74% of Tharisa Minerals on 9 February 2009. The remaining 26% is held by Thari (20%) and The Tharisa Community Trust (6%).

On 19 September 2008, the prospecting rights, for PGM and chrome, over various portions of Farm 342JQ and the whole of Rooikoppies, held by Tharisa Minerals, were converted into a mining right with the approval of the DMR. This mining right was registered to Tharisa Minerals on 13 August 2009. Subsequently, the mining right for chrome over portions 96 and 183 of the Farm 342 JQ was purchased from South African Producers and Beneficiators of Chrome Ore (Pty) Limited.

In July 2011, an application was granted in terms of Section 102 of the MPRDA, to amend the existing mining right by the addition of Portions 96, 183 and 286 of the property Farm 342JQ to the mining right 49/2009(MR).

### **5.2 Work undertaken by the Previous License Holders**

Prior to Thari obtaining the prospecting rights, the only known exploration activities undertaken on the properties had been the regional mapping undertaken by the Geological Survey (now Council of Geoscience) and the drilling of six cored boreholes by an entrepreneur Mr Hennie Botha on Farm 342JQ and the adjacent property Spruitfontein 341JQ.

### **5.3 Historical Mineral Resources and Mineral Reserves**

The mineral resource was initially estimated in 2008 and depleted based on the tonnage mined. The mineral resource reported as at December 2013 is presented in Table 5.3\_1. The mineral reserve has been re-estimated a number of times utilising revised mining approaches and revised revenue and cost projections. The mineral reserves of December 2013 are reported in Tables 5.3\_2 and 5.3\_3.

**Table 5.3\_1  
Mineral Resource Statement for the Tharisa Mine (31 December 2013)**

**MG4A CHROMITITE LAYER**

	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Au	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Au:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	6.709	1.43	3.69	24.89	0.40	0.15	0.12	0.00	0.25	0.04	0.05	0.67	59:22:18:0	1.01	39:15:12:0:25:4:5	1.12	219	761
<b>Indicated</b>	15.927	1.59	3.70	24.29	0.40	0.15	0.13	0.00	0.25	0.04	0.05	0.68	59:23:18:1	1.03	39:15:12:0:25:4:5	1.10	526	762
<b>Inferred</b>	68.516	1.44	3.70	25.18	0.39	0.14	0.13	0.00	0.26	0.05	0.05	0.67	59:21:19:1	1.03	38:14:12:0:26:4:5	1.11	2,265	763

**MG4 and MG4(0) CHROMITITE LAYER Package**

	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Au	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Au:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	19.645	4.14	3.75	26.52	0.70	0.19	0.17	0.003	0.33	0.06	0.08	1.07	66:18:16:0	1.53	46:13:11:0:21:4:5	1.18	966	784
<b>Indicated</b>	29.785	3.00	3.65	24.76	1.08	0.22	0.21	0.003	0.36	0.08	0.11	1.51	71:15:14:0	2.06	52:11:10:0:18:4:6	1.20	1,972	730
<b>Inferred</b>	170.733	3.72	3.62	22.60	0.99	0.19	0.19	0.003	0.34	0.07	0.10	1.36	72:14:14:0	1.88	53:10:10:0:18:4:6	1.15	10,319	697

**MG3 CHROMITITE LAYER**

	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Au	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Au:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	12.369	3.74	3.25	13.07	0.60	0.35	0.15	0.006	0.22	0.04	0.06	1.10	54:32:14:1	1.42	42:25:11:0:15:3:4	0.99	563	486
<b>Indicated</b>	23.451	4.13	3.22	18.01	0.75	0.44	0.19	0.005	0.27	0.05	0.08	1.39	54:32:14:0	1.80	42:25:11:0:15:3:4	1.08	1,354	603
<b>Inferred</b>	67.376	3.10	3.20	25.65	1.01	0.58	0.26	0.005	0.38	0.08	0.10	1.86	54:31:14:0	2.42	42:24:11:0:16:3:4	1.13	5,247	784

**MG2 CHROMITITE LAYER**

	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Au	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Au:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	14.555	3.30	3.62	19.33	1.07	0.28	0.15	0.004	0.27	0.05	0.08	1.51	71:18:10:0	1.90	56:15:8:0:14:3:4	0.98	891	732
<b>Indicated</b>	41.692	3.59	3.67	17.79	0.98	0.28	0.15	0.004	0.24	0.05	0.07	1.42	69:20:10:0	1.78	55:16:8:0:14:3:4	0.92	2,386	733
<b>Inferred</b>	286.164	5.72	3.62	13.26	0.70	0.21	0.11	0.004	0.19	0.04	0.05	1.02	69:20:11:0	1.30	54:16:8:0:15:3:4	0.75	11,975	674

MG1 CHROMITITE LAYER																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>												0.00	#DIV/0!	0.00	#DIV/0!		-	
<b>Indicated</b>	14.322	1.23	3.89	33.38	0.34	0.22	0.11	0.004	0.48	0.08	0.08	0.67	50:32:17:1	1.30	26:17:9:0:37:6:6	1.34	599	810
<b>Inferred</b>	57.245	1.23	3.89	32.26	0.33	0.20	0.11	0.003	0.45	0.08	0.07	0.64	51:31:17:1	1.24	26:16:9:0:36:6:6	1.29	2,277	803
MG0 CHROMITITE LAYER																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	1.801	0.50	3.74	26.07	0.57	0.18	0.16	0.004	0.30	0.05	0.07	0.92	62:19:18:0	1.33	43:13:12:0:22:4:5	1.09	77	747
<b>Indicated</b>	3.188	0.72	3.75	27.08	0.61	0.19	0.17	0.004	0.32	0.06	0.07	0.98	62:20:17:0	1.44	43:14:12:0:22:4:5	1.10	147	752
<b>Inferred</b>	0.011	0.17	3.73	23.76	0.45	0.17	0.15	0.006	0.24	0.04	0.05	0.77	58:22:19:1	1.11	41:15:13:1:22:4:5	1.00	0.40	711
UG1 CHROMITITE LAYER																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>																		
<b>Indicated</b>	1.500	2.17	3.75	23.68	0.36	0.28	0.14	0.030	0.21			0.82	44:35:17:4			1.12	39	
<b>Inferred</b>																		
TOTAL MINERAL RESOURCE																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	55.079	2.68	3.71	21.39	0.73	0.24	0.16	0.004	0.28	0.05	0.07	1.14	64:21:14:0	1.53	48:16:10:0:18:3:5	1.07	2,717	699
<b>Indicated</b>	129.864	2.45	3.73	22.24	0.80	0.27	0.16	0.004	0.31	0.06	0.08	1.24	65:22:13:0	1.68	48:16:10:0:18:3:5	1.09	7,034	713
<b>Inferred</b>	650.045	3.11	3.73	19.93	0.74	0.23	0.15	0.004	0.28	0.05	0.07	1.13	66:21:13:0	1.54	49:15:10:0:18:4:5	0.98	32,083	712
<b>Total</b>	<b>834.989</b>	<b>2.95</b>	<b>3.73</b>	<b>20.38</b>	<b>0.75</b>	<b>0.24</b>	<b>0.15</b>	<b>0.004</b>	<b>0.28</b>	<b>0.05</b>	<b>0.07</b>	<b>1.15</b>	<b>66:21:13:0</b>	<b>1.56</b>	<b>48:15:10:0:18:4:5</b>	<b>1.00</b>	<b>41,834</b>	<b>712</b>
<p>Note: The mineral resource is declared to a depth of 750m below surface.</p> <p>The consideration of realistic eventual extraction necessitates that the mineral resource considers the MG Chromitite Layer to be a geological unit and that all platinumiferous and chromiferous horizons will be mined and all PGM, Cu, Ni and Cr<sub>2</sub>O<sub>3</sub> recovered.</p> <p>The UG1 Chromitite Layer is declared for the part that falls within the current proposed open pit</p> <p>The mineral resource is reported inclusive of the mineral reserve</p>																		

**Table 5.3 2**  
**Tharisa Mine: Open Pit Mineral Reserve (December 2013) (SAMREC Code)**

Proved Mineral Reserve													
Chromitite Layer	Tonnes ('000)	Pt (g/t)	Pd(g/t)	Rh(g/t)	Au (g/t)	3PGE+Au (g/t)	Ru(g/t)	Ir(g/t)	5PGE+Au (g/t)	Cr <sub>2</sub> O <sub>3</sub> (%)	Cu (%)	Ni (%)	Cr (%)
MG0													
MG1													
MG2	11,817	1.03	0.26	0.15	0.004	1.45	0.25	0.07	1.77	18.31	0.002	0.070	12.53
MG3	10,412	0.56	0.32	0.14	0.005	1.03	0.20	0.06	1.29	12.23	0.003	0.046	8.37
MG4	11,010	1.06	0.22	0.21	0.003	1.49	0.35	0.11	1.95	25.72	0.003	0.075	17.60
MG4A	5,234	0.34	0.13	0.11	0.003	0.58	0.22	0.04	0.85	21.44	0.002	0.066	14.67
<b>Total</b>	<b>38,474</b>	<b>0.79</b>	<b>0.25</b>	<b>0.15</b>	<b>0.004</b>	<b>1.19</b>	<b>0.27</b>	<b>0.08</b>	<b>1.53</b>	<b>19.21</b>	<b>0.002</b>	<b>0.064</b>	<b>13.14</b>
Probable Mineral Reserve													
Chromitite Layer	Tonnes ('000)	Pt(g/t)	Pd(g/t)	Rh(g/t)	Au (g/t)	3PGE+Au (g/t)	Ru(g/t)	Ir(g/t)	5PGE+Au (g/t)	Cr <sub>2</sub> O <sub>3</sub> (%)	Cu (%)	Ni (%)	Cr (%)
MG0	4,473	0.40	0.13	0.12	0.003	0.665	0.23	0.05	0.93	19.16	0.002	0.060	13.11
MG1	8,005	0.29	0.18	0.10	0.003	0.57	0.41	0.07	1.05	28.89	0.003	0.069	19.77
MG2	21,454	1.02	0.28	0.15	0.004	1.45	0.25	0.07	1.77	18.11	0.002	0.070	12.39
MG3	18,825	0.59	0.34	0.15	0.005	1.06	0.21	0.06	1.33	12.81	0.001	0.047	8.76
MG4	9,960	1.08	0.24	0.21	0.003	1.52	0.36	0.11	1.99	25.30	0.003	0.073	17.31
MG4A	6,043	0.35	0.14	0.11	0.004	0.59	0.22	0.04	0.85	20.83	0.002	0.066	14.25
<b>Total</b>	<b>68,761</b>	<b>0.74</b>	<b>0.26</b>	<b>0.15</b>	<b>0.004</b>	<b>1.15</b>	<b>0.27</b>	<b>0.07</b>	<b>1.49</b>	<b>19.26</b>	<b>0.002</b>	<b>0.064</b>	<b>13.18</b>
Total Mineral Reserve													
Chromitite Layer	Tonnes ('000)	Pt(g/t)	Pd(g/t)	Rh(g/t)	Au (g/t)	3PGE+Au (g/t)	Ru(g/t)	Ir(g/t)	5PGE+Au (g/t)	Cr <sub>2</sub> O <sub>3</sub> (%)	Cu (%)	Ni (%)	Cr (%)
MG0	4,473	0.40	0.13	0.12	0.003	0.66	0.23	0.05	0.93	19.16	0.002	0.060	13.11
MG1	8,005	0.29	0.18	0.10	0.003	0.57	0.41	0.07	1.05	28.89	0.003	0.069	19.77
MG2	33,272	1.03	0.27	0.15	0.004	1.45	0.25	0.07	1.77	18.18	0.002	0.070	12.44
MG3	29,237	0.58	0.34	0.15	0.005	1.06	0.21	0.06	1.33	12.78	0.001	0.048	13.68
MG4	20,970	1.07	0.23	0.21	0.003	1.50	0.36	0.11	1.97	25.52	0.003	0.074	17.46
MG4A	11,277	0.34	0.13	0.11	0.003	0.59	0.22	0.04	0.85	21.11	0.002	0.066	14.44
<b>Total</b>	<b>107,235</b>	<b>0.76</b>	<b>0.25</b>	<b>0.15</b>	<b>0.004</b>	<b>1.17</b>	<b>0.27</b>	<b>0.07</b>	<b>1.51</b>	<b>19.29</b>	<b>0.002</b>	<b>0.064</b>	<b>13.20</b>

**Table 5.3\_3**  
**Tharisa Mine: Underground Mine Mineral Reserve (December 2013)**  
**Reported in terms of the guidelines of the SAMREC Code**

<b>Proved Mineral Reserve</b>													
<b>Chromitite Layer</b>	<b>Tonnes ('000)</b>	<b>Pt (g/t)</b>	<b>Pd(g/t)</b>	<b>Rh(g/t)</b>	<b>Au (g/t)</b>	<b>3PGE+Au (g/t)</b>	<b>Ru(g/t)</b>	<b>Ir(g/t)</b>	<b>5PGE+Au (g/t)</b>	<b>Cr<sub>2</sub>O<sub>3</sub> (%)</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Cr (%)</b>
<b>MG2AB</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>MG4</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Probable Mineral Reserve</b>													
<b>Chromitite Layer</b>	<b>Tonnes ('000)</b>	<b>Pt(g/t)</b>	<b>Pd(g/t)</b>	<b>Rh(g/t)</b>	<b>Au (g/t)</b>	<b>3PGE+Au (g/t)</b>	<b>Ru(g/t)</b>	<b>Ir(g/t)</b>	<b>5PGE+Au (g/t)</b>	<b>Cr<sub>2</sub>O<sub>3</sub> (%)</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Cr (%)</b>
<b>MG2AB</b>	6,646	0.70	0.21	0.10	0.002	1.02	0.20	0.05	1.27	17.37	0.060	0.002	11.88
<b>MG4</b>	12,002	0.89	0.18	0.17	0.002	1.25	0.31	0.10	1.66	20.39	0.061	0.002	14.10
<b>Total</b>	<b>18,649</b>	<b>0.82</b>	<b>0.19</b>	<b>0.15</b>	<b>0.002</b>	<b>1.17</b>	<b>0.27</b>	<b>0.08</b>	<b>1.52</b>	<b>19.31</b>	<b>0.060</b>	<b>0.002</b>	<b>13.31</b>
<b>Total Mineral Reserve</b>													
<b>Chromitite Layer</b>	<b>Tonnes ('000)</b>	<b>Pt(g/t)</b>	<b>Pd(g/t)</b>	<b>Rh(g/t)</b>	<b>Au (g/t)</b>	<b>3PGE+Au (g/t)</b>	<b>Ru(g/t)</b>	<b>Ir(g/t)</b>	<b>5PGE+Au (g/t)</b>	<b>Cr<sub>2</sub>O<sub>3</sub> (%)</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Cr (%)</b>
<b>MG2AB</b>	6,646	0.70	0.21	0.10	0.002	1.02	0.20	0.05	1.27	17.37	0.060	0.002	11.88
<b>MG4</b>	12,002	0.89	0.18	0.17	0.002	1.25	0.31	0.10	1.66	20.39	0.061	0.002	14.10
<b>Total</b>	<b>18,649</b>	<b>0.82</b>	<b>0.19</b>	<b>0.15</b>	<b>0.002</b>	<b>1.17</b>	<b>0.27</b>	<b>0.08</b>	<b>1.52</b>	<b>19.31</b>	<b>0.060</b>	<b>0.002</b>	<b>13.31</b>

## 5.4 Occupational Health and Safety

A summary of the Tharisa Mine safety statistics are presented in Table 5.4\_1.

Table 5.4_1						
Tharisa Mine						
Progressive Safety Statistics to September 2015						
	2010	2011	2012	2013	2014	2015
<b>Fatalities</b>	0	0	0	1	1	1
<b>Fatality Free shifts</b>	129,268	349,907	945,926	347,705	95,054	115,375
<b>Injury Free Shifts</b>	129,268	4,654	72,967	139,011	95,054	25,212
<b>Lost Time Injuries (LTI)</b>	0	3	5	3	3	4
<b>Lost Time Injury Rate per 200,000hrs</b>	0	0.3	0,19	0.13	0.1	0.13

## 5.5 Production History

Other than various small scale chrome mining operations, no significant production is known to have occurred within the Tharisa Mine area prior to the obtaining of the prospecting rights by Thari.

The Tharisa Mine started conducting trial mining in October 2008, with the objective of testing the viability of the mining method and the veracity of the assumptions of the feasibility study, then being undertaken.

RoM ore was first produced on a small scale in March 2009 with the focus at the time being to build and operate a small chrome concentrator, with a capacity of some 38,000 tpm. The mine was able to generate early revenue which was used to secure surface infrastructure and fund moderate expansion.

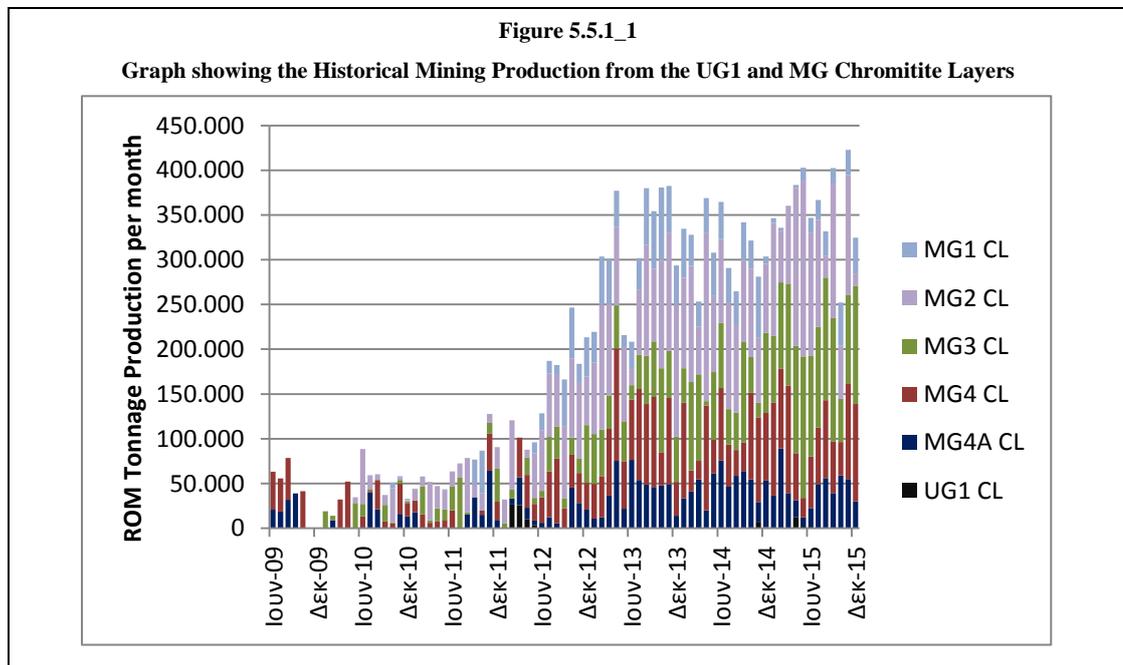
### 5.5.1 Current Mining Operations

In Phase 2 of the mine's development, the mining rate was increased to 100,000 tpm, in order to feed the Phase 2 processing facility expansion. This consisted of an increase in the pilot plant throughput capacity to 100,000 tpm as well as the incorporation of a PGM recovery circuit and additional chrome scavenging circuit. The Phase 2 processing facility was commissioned in February 2012. A 300,000 tpm concentrator was commissioned to treat the increased RoM production in parallel to the existing 100,000 tpm Phase 2 plant. The current mine capacity is 4.8Mtpa.

The historical mine production is presented in Figure 5.5.1\_1:

- As at 31 December 2015. the Tharisa Mine has produced 2,095,000t of 42% Cr<sub>2</sub>O<sub>3</sub> chromite concentrate
- The mining cost is currently R205 per Run of Mine (RoM) tonne

Tharisa Mine has secured sufficient supply of water and electricity to meet its requirements for steady state production for the LoM.



Mining is being undertaken by the Tharisa Mine's appointed mining contractor – MCC.

While the Phase 2 and 3 process facility expansions were underway, mine production was limited to 38,000 tpm of RoM ore throughput. With the commissioning of the 100,000t plant in February 2012, and the 300,000 tpm plant in December 2012, RoM production has increased to 380,000 tpm.

The depth of mining is currently up to 29m and the mine is producing fresh material from the six MG Chromitite Layers, namely the MG4A, MG4, MG3, MG2, MG1 and MG0. The shallow MG1 Chromitite Layer was mined underground to a limited extent on the eastern boundary of the property by the previous mining right holder.

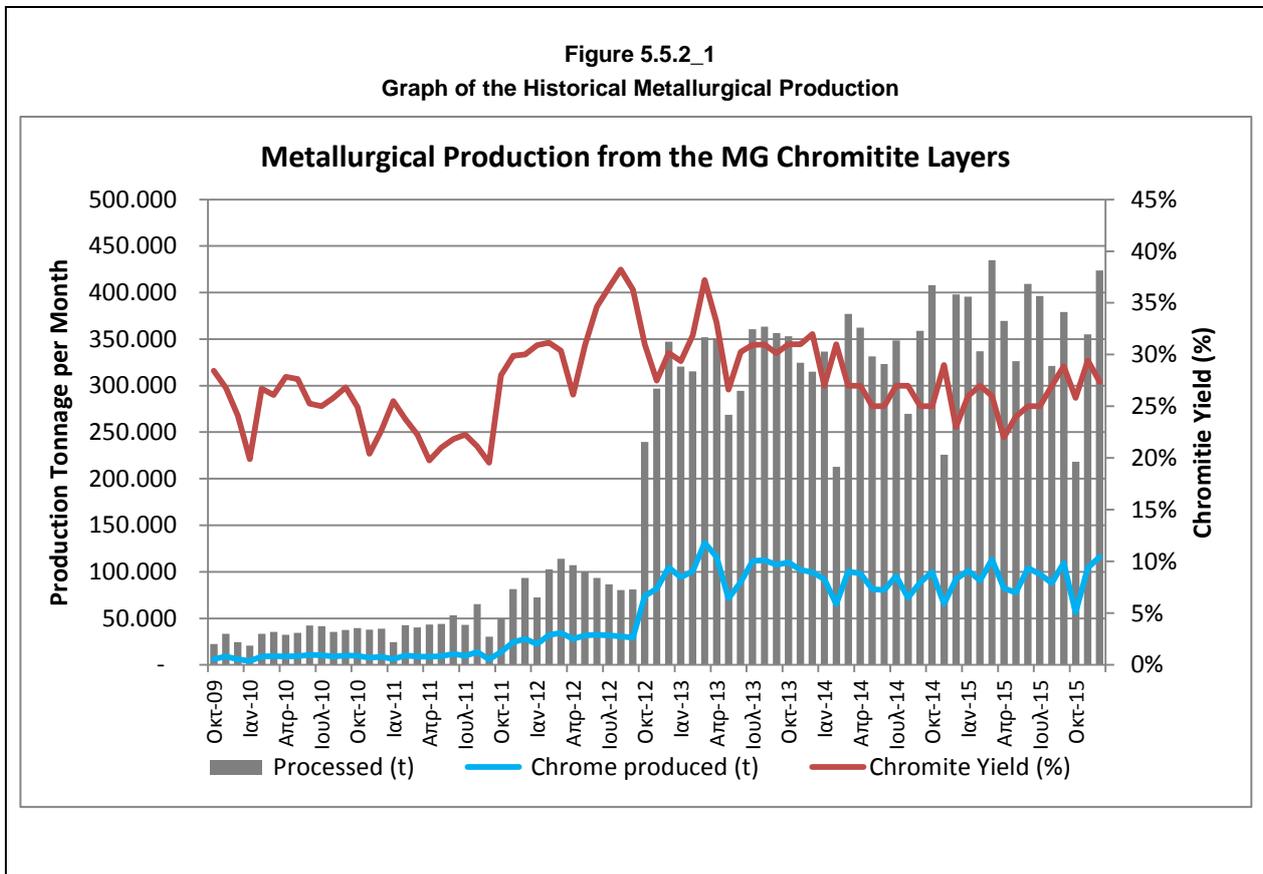
The current mine plan is based on two open pit operations east and west of the Sterkstroom river which runs north south through the Tharisa Mine area. The pits are designed to protect the water course and the local infrastructure running parallel to the river. Currently RoM production is 380,000 tpm.

The open pits will fulfil the production requirements until 2032, after which time production will transition to underground bord and pillar mining. The last open pit tonnage will be mined in 2038.

The mine design and schedule was completed by Ukwazi Mining Solutions (Proprietary) Limited (Ukwazi). The production profile has been designed to ensure steady ore to the processing facility.

### 5.5.2 Current Metallurgical Production

The historical production from the Tharisa processing facilities is presented in Figure 5.5.2\_1.



As at 31 December 2015 a RoM stockpile of 67,500t existed with an additional stockpile of crushed material of 20,600t. The historical tailings from the chrome plant (arising prior to the commissioning of the Phase 2 plant, and therefore containing recoverable PGMs and chrome) have been stockpiled separately for future treatment through the PGM recovery section. As at 31 December 2015 the PGM stockpile tonnage is estimated to be some 58,000t. This stockpile will eventually be processed for chromite and PGM's.

### 5.5.3 Mine Personnel

The Tharisa Mine's current staffing levels are summarised in Table 5.5.3\_1.

<b>Table 5.5.3_1</b> <b>Tharisa Mine</b> <b>Summary of Current Mine Staffing Levels (December 2015)</b>					
<b>Category</b>	<b>In Service</b>	<b>Planned</b>	<b>Category</b>	<b>In Service</b>	<b>Planned</b>
General Management	15	17	Process	80	84
Technical Management	19	31	Operations	178	188
Safety	9	9	Engineering	94	100
Human Resources	41	59	IT	5	5
Finance	29	29	Security	1	3
<b>Total Tharisa Minerals</b>				<b>471</b>	<b>518</b>

## 6 Geological Setting

### 6.1 Regional Setting

The stable Kaapvaal and Zimbabwe Cratons in southern Africa are characterised by the presence of large mafic to ultramafic layered complexes, the best known of which are the Great Dyke in the Zimbabwe Craton and the Bushveld and Molopo Complexes in the Kaapvaal Craton. By far the largest, best-known and economically most important of these is the Bushveld Complex, which was intruded about 2,060 million years ago into rocks of the Transvaal Supergroup, largely along an unconformity between the Magaliesberg quartzite of the Pretoria Group and the overlying Rooiberg felsites. The total estimated extent of the Bushveld Complex is some 66,000 km<sup>2</sup>, of which about 55% is covered by younger formations. The mafic rocks of the Bushveld Complex host layers rich in PGM, chromium and vanadium, and constitute the world's largest known resource of these metals.

#### 6.1.1 Bushveld Complex Stratigraphy

The mafic rocks (collectively termed the Rustenburg Layered Suite) can be divided into five zones known as the Marginal, Lower, Critical, Main and Upper Zones from the base upwards (Figure 6.1.1\_1).

The **Marginal Zone** is comprised of generally finer grained rocks than those of the interior of the Bushveld Complex and contains abundant xenoliths of country rock. It is highly variable in thickness and may be completely absent in some areas and contains no known economic mineralisation.

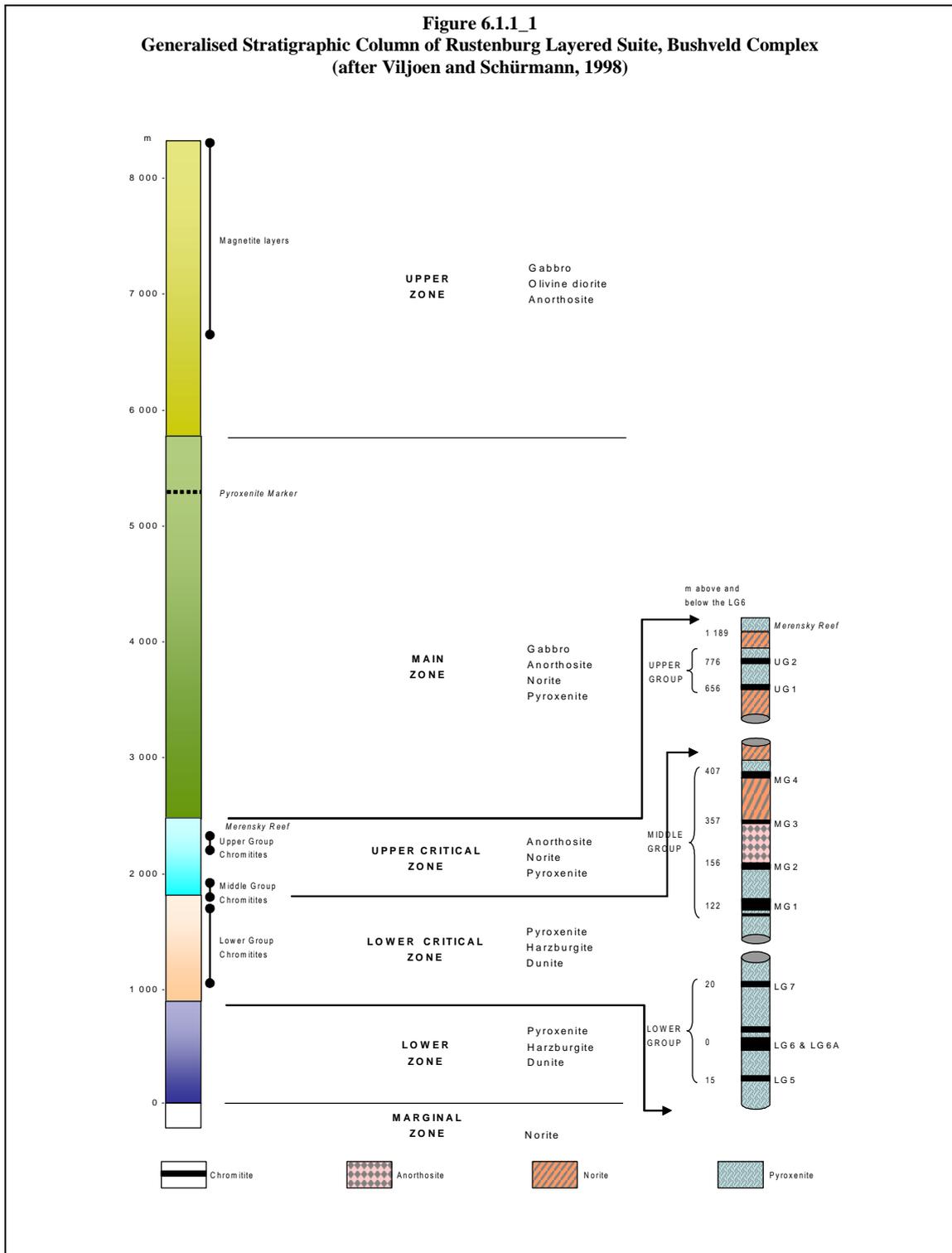
The **Lower Zone** is dominated by orthopyroxenite with associated olivine-rich cumulates in the form of harzburgites and dunites. The Lower Zone may be completely absent in some areas.

The **Critical Zone** is characterised by regular and often fine-scale rhythmic, or cyclic, layering of well-defined layers of cumulus chromite within pyroxenites, olivine-rich rocks and plagioclase-rich rocks (norites, anorthosites etc). The economically important PGM deposits are part of the Critical Zone.

The Critical Zone hosts all the chromitite layers of the Bushveld Complex, of which up to 14 have been identified. The first important cycle is the lower of the two Upper Group (UG) Chromitite Layers (the UG1 Chromitite Layer). This unit consists of a chromitite layer and underlying footwall chromitite layers that are interlayered with anorthosite. The most important of the chromite cycles for PGM mineralisation is the upper of the two UG Chromitite Layers (the UG2 Chromitite Layer) which averages some 1m in thickness and is mined throughout the Bushveld Complex.

Underlying the UG Chromitite Layers are the MG Chromitite Layers which consists of five groups of chromitite layers over an overall thickness of 50 – 80m. These chromitite layers are important as they contain significant concentrations of chromite and PGMs.

**Figure 6.1.1\_1**  
**Generalised Stratigraphic Column of Rustenburg Layered Suite, Bushveld Complex**  
 (after Viljoen and Schürmann, 1998)



The two uppermost units of the Critical Zone are the Merensky and Bastard units. The former is also of great economic importance as it contains at its base the PGM-bearing Merensky Reef, a feldspathic pyroxenitic assemblage with associated thin chromitite layers that rarely exceeds 1m in thickness. The top of the Critical Zone is generally defined as the top of the robust anorthosite (the Giant Mottled Anorthosite) that forms the top of the Bastard cyclic unit.

The Critical Zone may be subdivided into the Upper and Lower Critical Zones based on the last appearance of cumulus feldspar. This boundary is considered to be between the UG and MG Chromitite Layers.

The economically viable chromite reserves of the Bushveld Complex, most of which are hosted in the Critical Zone, are estimated at 68% of the world's total, whilst the Bushveld Complex also contains 56% of all known platinum group metals. The Merensky Reef, which developed near the top of the Critical Zone, can be traced along strike for 280km and is estimated to contain 60,000t of PGM to a depth of 1 200m below surface. The pyroxenitic Platreef mineralisation, north of Mokopane (formerly Potgietersrus), contains a wide zone of more disseminated style platinum mineralisation, along with higher grades of nickel and copper than occur in the rest of the Bushveld Complex.

The well-developed **Main Zone** consists of norites grading upwards into gabbronorites. It includes several mottled anorthosite layers in its lower sector and a distinctive pyroxenite layer two thirds of the way up, termed the Pyroxenite Marker.

The base of the overlying **Upper Zone** is defined by the first appearance of cumulus magnetite above the Pyroxenite Marker. In all, 25 layers of cumulus magnetite punctuate the Upper Zone, the fourth (Main Magnetite layer) being the most prominent. This is a significant marker, some 2m thick, resting upon anorthosite, and is exploited for its vanadium content in the eastern and western limbs of the Bushveld Complex.

### 6.1.2 Platinum Mineralisation

The Merensky Reef has traditionally been the most important platinum producing layer in the Bushveld Complex. Seismic surveys undertaken by the Council for Geoscience indicate that reflectors associated with the Merensky Reef can be traced as far as 50km down dip, to depths of 6,000m below surface. The Merensky Reef varies considerably in its nature, but can be broadly defined as a mineralised zone within, or closely associated with the ultramafic cumulate at the base of the Merensky cyclic unit.

In addition to the PGM mineralisation associated with the Merensky Reef, all chromitites in the Critical Zone at times contain elevated concentrations of PGMs. The UG2 Chromitite Layer is the only chromitite layer that is significantly exploited for PGMs at present.

The major geological features that affect the UG2 Chromitite Layer are faults, dykes, potholes and mafic/ultramafic pegmatites. Potholes are features of subsidence or erosion where the igneous layer is absent or occurs at a lower elevation in a modified form. Typically the PGM concentration and the thickness of the layer are modified. Potholes typically approach a circular shape. Potholes occur within all stratigraphic units of the Bushveld Complex including the MG Chromitite Layer. Poor ground conditions may be associated with potholes and pothole edges. On some mines, such as Bokoni (formerly known as Atok) and Northam, potholes may cause a geological loss of ground of up to 25%.

Another unique feature of the geology of the Bushveld Complex is the mafic/ultramafic pegmatites sometimes referred to as iron rich ultramafic pegmatites (IRUP's) or replacement pegmatites. While these often destroy the structure of the chromitite layer, the PGMs may be

unaffected. However, it can result in a mining problem, especially underground, as it becomes difficult to identify the mineralised horizons.

### 6.1.3 Chromite Mineralisation

The first record of chrome in the Bushveld Complex is noted as an outcrop in the Hex River near Rustenburg in 1865. By the 1920s the various chromitite layers had been identified and traced over the known extent of the Bushveld Complex. Chromite mining started in earnest at about that time but it was not until the 1960s that South Africa became a major producer.

The Bushveld Complex hosts stratiform chromite deposits that are present as layers of massive chromitite. These layers are present in the Critical Zone and have been designated as the Lower Group (LG), MG and UG Chromitite Layers. The lower Critical Zone is host to the LG Chromitite Layers that consists of seven chromitite layers. The thickest and most significant being the LG6 Chromitite Layer. The MG Chromitite Layers consist of five individual chromite packages of which three are in the lower Critical Zone and two are in the upper Critical Zone. There are two UG Chromitite Layers with the UG2 Chromitite Layer being the most significant as a major source of PGM mineralisation.

Although remarkably consistent and continuous across the Bushveld Complex, the variations along strike have allowed the definition of 14 sections each with a unique character. The Tharisa Mine is located in the Marikana Section.

The LG6, MG1 and UG2 Chromitite Layers are the most exploited because of their mineralogical composition and because they can be mined by mechanised equipment both in open pit and underground. The LG6 Chromitite Layer is typically up to 1.05m thick and has a Cr<sub>2</sub>O<sub>3</sub> grade of 46% to 48% and a Cr:Fe ratio of 1.56 – 1.60. Locally the LG Chromitite Layers may have much higher Cr:Fe ratios such as at Grasvaley (2.13 – 2.83) and Nietverdeind (1.88 – 2.06). The grade at Nietverdiend ranges from 48% to 51% Cr<sub>2</sub>O<sub>3</sub>.

The UG2 Chromitite Layer is typically up to 1m thick and has a Cr<sub>2</sub>O<sub>3</sub> grade of 43.6% and a Cr:Fe ratio of 1.26 to 1.40. It has a significant PGM grade and so has been mined extensively to recover the PGMs.

The MG1 Chromitite Layer has been sporadically mined with the largest underground mining section being immediately east of the Tharisa Mine and mined by Samancor.

## 6.2 Local Geology

### 6.2.1 Tharisa Mine Area

The Tharisa Mine is located on the south-western limb of the Bushveld Complex in the Marikana section, on the properties Farm 342JQ and Rooikoppies 297JQ. The Marikana section is separated from the Brits section to the east by Wolhulterskop and the Rustenburg section to the west by the Spruitfontein upfold (Figure 6.2.1\_1).

The MG Chromitite Layers outcrop on Farm 342JQ striking roughly east - west and dipping at 12-15° to the north to a depth estimated at over 1,000m. The total strike length is some 5,400m but only the first 3,900m has been declared in the mineral resource statement as the most westerly part is considered too narrow to be considered to have a “reasonable and realistic prospects for eventual economic extraction” (SAMREC, 2009). Towards the western extent of

the outcrop, the dip is steeper with a gentle change in strike to NW-SE (Figure 6.2.1\_2). The stratigraphy typically narrows to the west and steepens (Figure 6.2.1\_3). The dip typically shallows out at depth across the extent of the mine area. The UG1 Chromitite Layer which occurs between 165m to 18m stratigraphically above the MG4A Chromitite Layer on the Farm 342JQ property and 163m (downdip) to 18m (near surface) on the Rooikoppies property also outcrops on the Farm 342JQ property. Both the UG2 Chromitite Layer (between 300m to 150m above MG4A Chromitite Layer) and the Merensky Reef (between 400m (east) to 290m (west) above MG4A Chromitite Layer) outcrop on the Rooikoppies property. Poorly developed chromitite layers below the MG Chromitite Layer were intersected in boreholes and are interpreted as the LG Chromitite Layers.

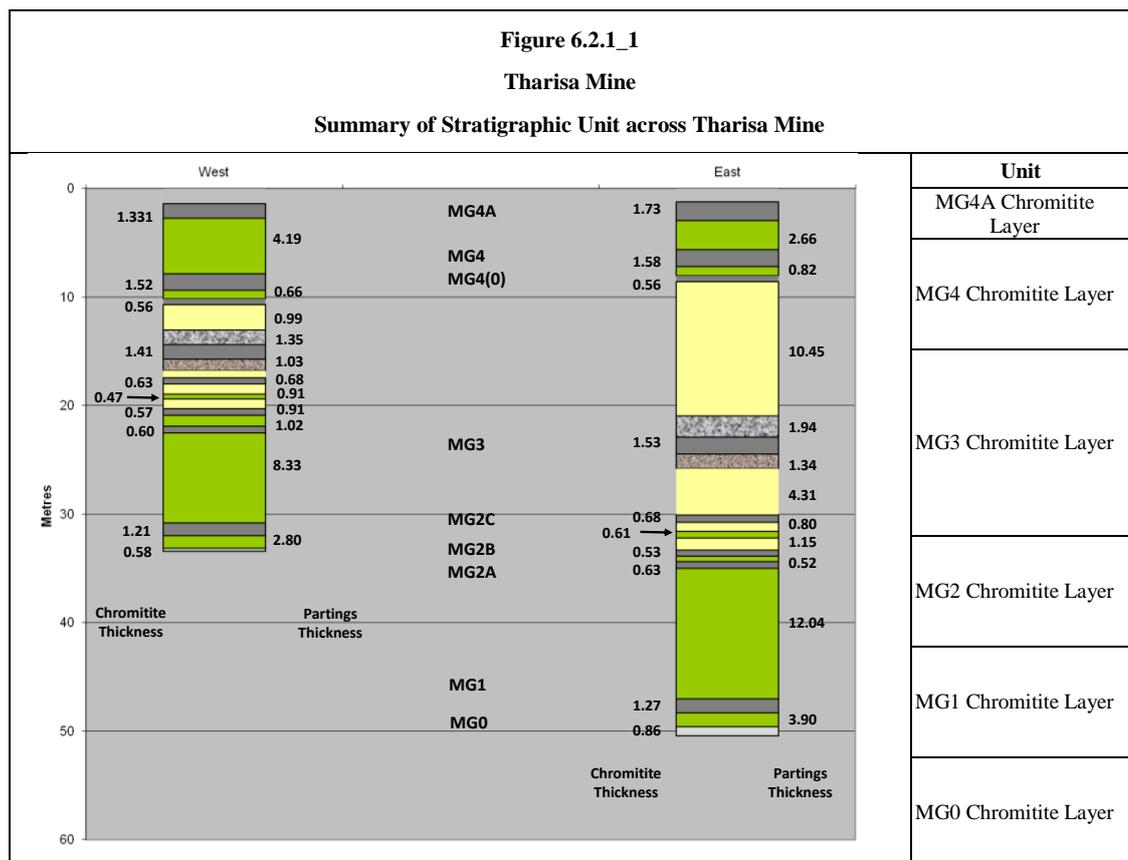
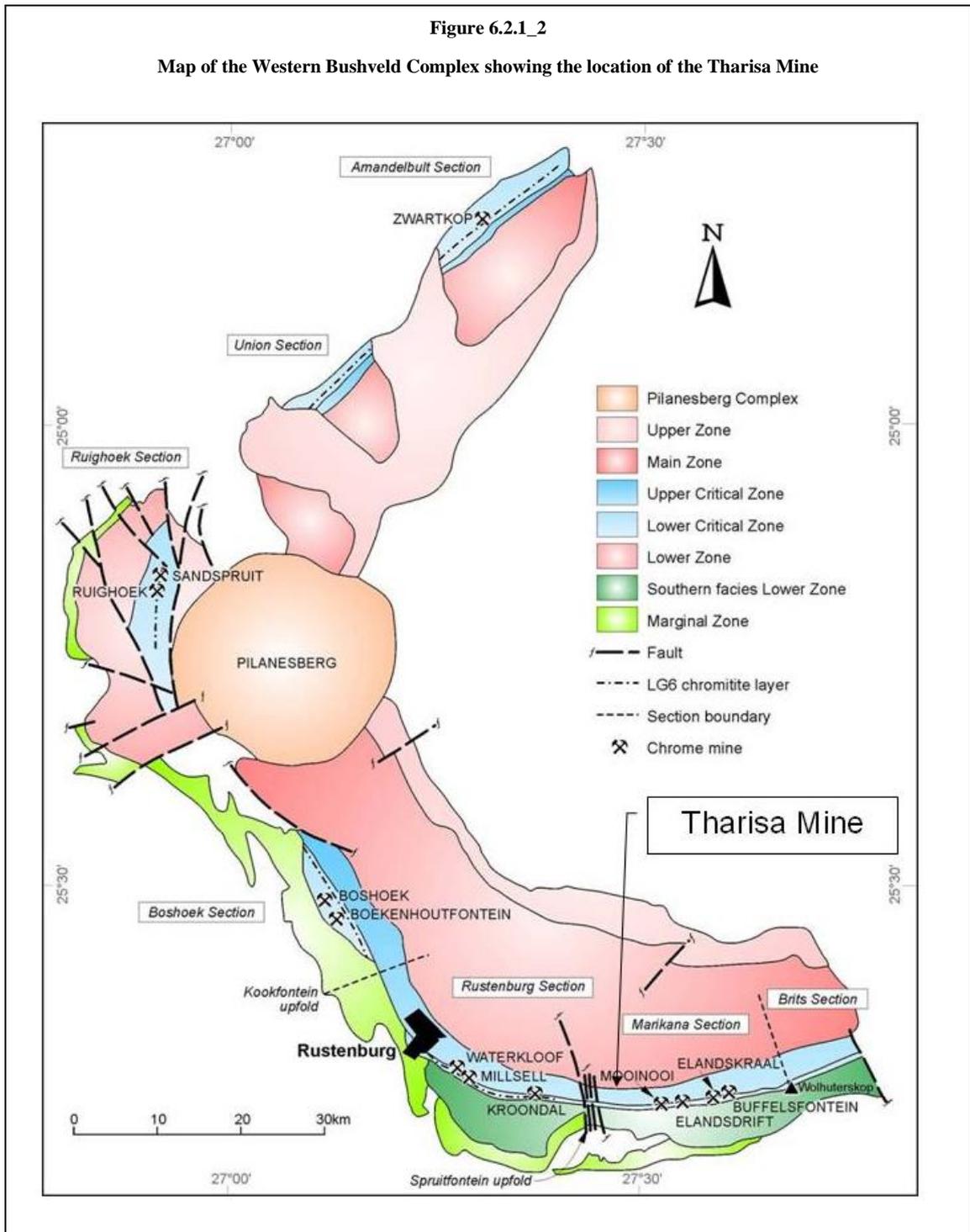
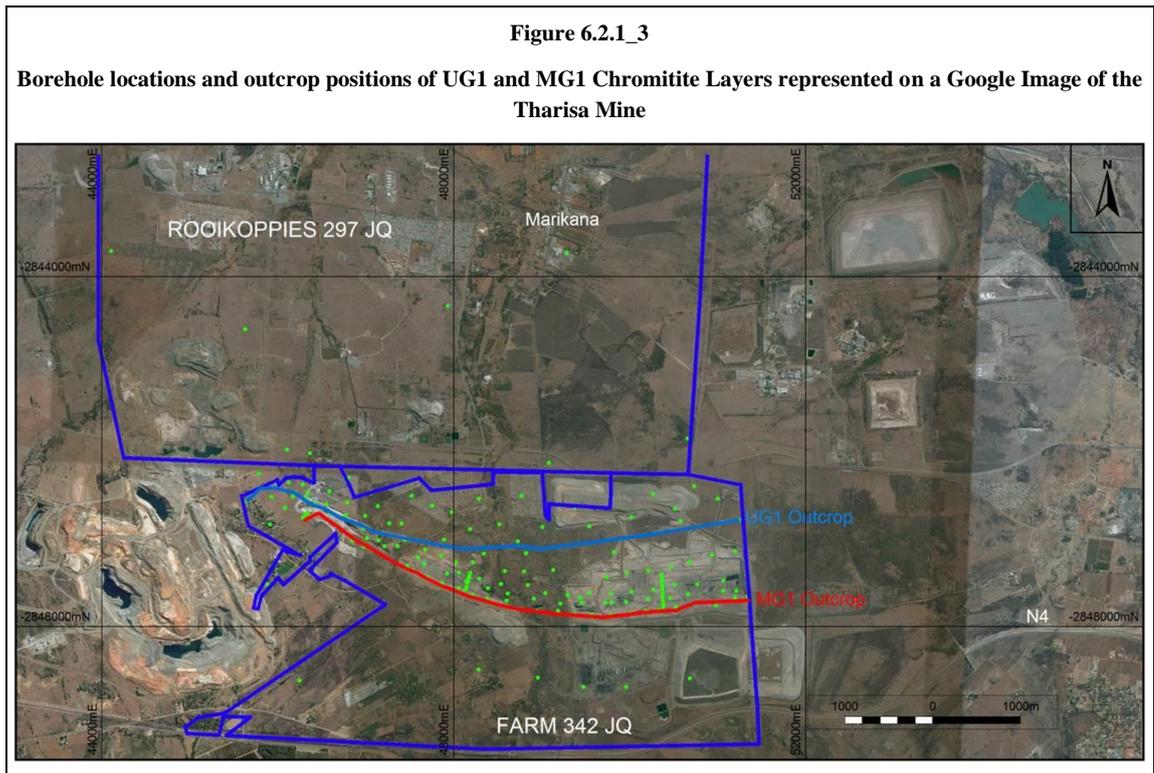


Figure 6.2.1\_2

Map of the Western Bushveld Complex showing the location of the Tharisa Mine





### 6.2.2 Middle Group Chromitite Layers

The MG Chromitite Layer package consists of five groups of chromitite layers (the MG0 Chromitite Layer, MG1 Chromitite Layer, the MG2 Chromitite Layer (subdivided into C, B and A Chromitite Layers), the MG3 Chromitite Layer and the MG4 Chromitite Layer (subdivided into the MG4(0), MG4 and MG4A Chromitite Layers) (Figure 6.2.2\_1). The MG0 Chromitite Layer may be defined but formation of these chromitites is very erratic, thin and generally considered uneconomical in the mine area. However, where the MG1 Chromitite Layer immediately above is mined, there is merit in mining the MG0 Chromitite Layer as well. The MG0 Chromitite Layer Mineral Resource is declared for the area of the planned open pit.

The MG Chromitite Layer package (MG1 Chromitite Layer to MG4A Chromitite Layer) is developed over an average thickness of 74m in the East but thins to 50m in the West. The average thickness of the various units and subunits and a summary of the composite statistics are presented in Table 6.2.2\_1. Down dip all partings thickness increase except for the MG4A – MG4 Chromitite Layer parting that decreases downdip. Figure 6.2.2\_2 and Figure 6.2.2\_3 are schematic representations of the variation within the MG Chromitite Layer packages and the parting thicknesses along strike and down dip respectively.

The entire MG and LG Chromitite Layers are truncated by the UG2 Chromitite Layer in the west at the neighbouring Spruitfontein upfold. The UG2 Chromitite Layer is reported to have a pothole morphology where it overlies the Transvaal Sequence rocks and truncates the MG and LG Chromitite Layers.



<b>Table 6.2.2_1</b>					
<b>Average Intersection Thicknesses of the MG Chromitite Layers and Partings</b>					
Unit or sub unit	Mine Average (m)	3PGE+Au (g/t)	Pt:Pd:Rh:Au	Cr <sub>2</sub> O <sub>3</sub> (%)	Cr:Fe
<b>MG4 Chromitite Layer</b>					
MG4A Chromitite Layer	1.49	0.68	59:22:18:1	25.07	1.11
Parting MG4A-MG4	4.19	0.14	56:23:19:2	4.98	0.35
MG4 Chromitite Layer	1.55	1.76	70:15:15:0	28.28	1.22
Parting MG4-MG4(0)	0.79	1.04	77:12:0:0	15.18	0.99
MG4(0) Chromitite Layer	0.56	1.31	69:17:13:0	29.00	1.21
MG4 to MG4(0)	2.90	1.39	71:15:13:0	24.69	1.17
<b>MG3 Chromitite Layer</b>					
Parting MG4(0)-MG3	9.68				
MG3 Disseminated	1.61	0.75	47:38:14:1	5.43	0.59
MG3 Chromitite Layer	1.41	1.84	54:32:14:0	25.66	1.16
MG3 - Zebra	1.17	0.54	66:21:13:1	5.14	0.65
<b>MG2 Chromitite Layer</b>					
Parting MG3-MG2C	3.84				
MG2C Chromitite Layer	0.63	2.07	69:19:11:0	28.89	1.20
PEGM+	0.86	0.96	74:16:9:0	5.02	0.37
PEGM	0.53	2.66	73:17:10:0	16.21	0.87
PEGM-	1.03	0.69	68:21:11:1	6.96	0.48
Parting MG2C-MG2B	2.42	1.12	72:18:10:0	9.97	0.63
MG2B Chromitite Layer	0.57	1.27	68:17:14:0	31.49	1.24
Parting MG2B-MG2A	0.82	0.64	68:19:12:1	11.95	0.71
MG2A Chromitite Layer	0.60	2.01	71:21:8:0	29.09	1.20
MG2 package	5.04	1.56	71:19:10:0	19.74	0.98
<b>MG1 Chromitite Layer</b>					
Parting MG2A-MG1	11.03	0.21	49:38:11:2	4.53	0.33
MG1 Chromitite Layer	1.21	0.64	51:32:17:1	31.92	1.30
<b>MG0 Chromitite Layer</b>					
Parting MG1 - MG0	3.70				
MG0 Chromitite Layer	0.58	0.87	61:19:19:1	26.31	1.19

Figure 6.2.2\_2

Along strike section showing the variations in MG Chromitite Layer partings

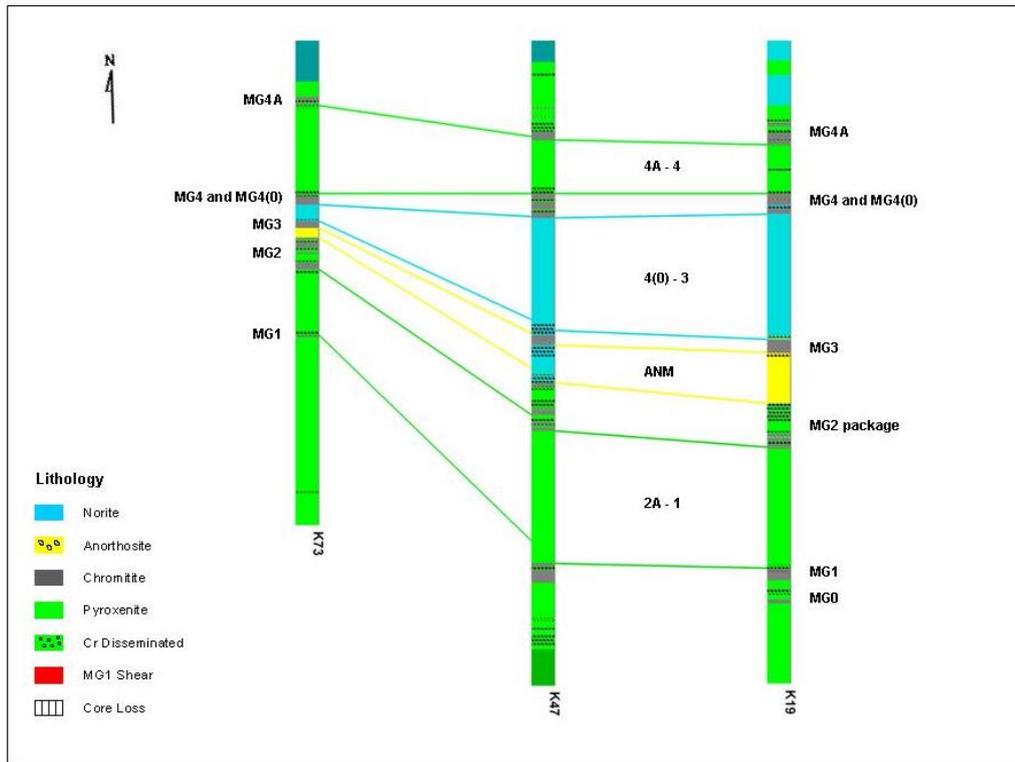
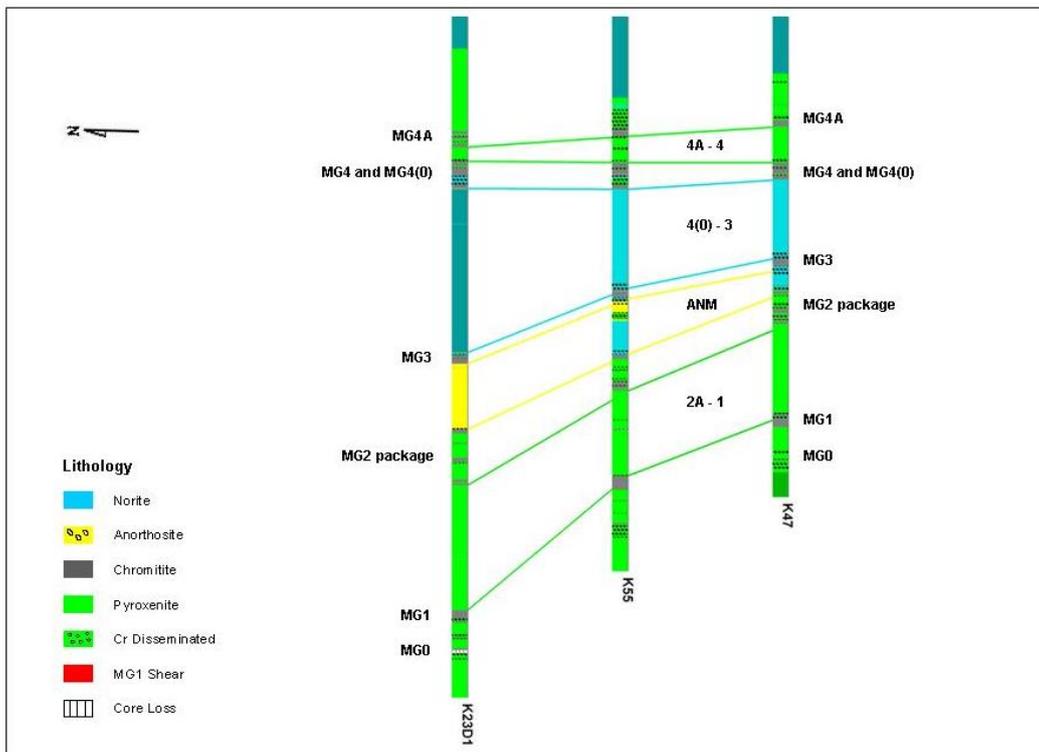


Figure 6.2.2\_3

Downdip section showing the variations in MG Chromitite Layer partings



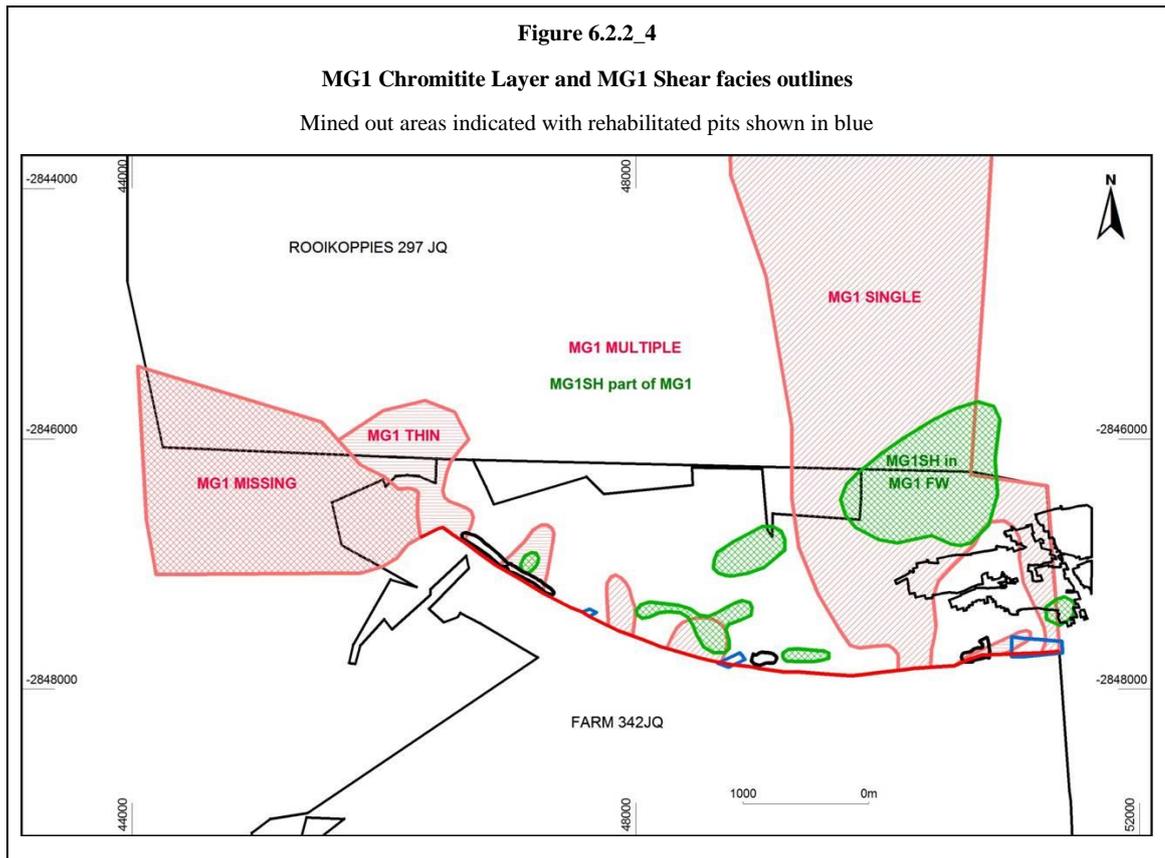
#### Description of the MG0 Chromitite Layer

Some dissemination and more chromitite layers and stringers are developed in the footwall pyroxenite of the MG1 Chromitite Layer. These are termed the MG0 Chromitite Layer. The number of stringers and layers vary and little consistency was noticed within the MG0 Chromitite Layer.

#### Description of the MG1 Chromitite Layer

At the base of the MG Chromitite Layer Package is the MG1 Chromitite Layer (1.3m thick) with a feldspathic pyroxenite developed above for some 12m and which underlies the MG2 Chromitite Layer. The MG1 Chromitite Layer is typically a massive chromitite with minor feldspathic pyroxenite partings or layering. In some areas the MG1 Chromitite Layer has developed into two chromitite layers separated by a feldspathic pyroxenite. A textural feature called mottling is common in both the MG1 Chromitite Layer and MG2B Chromitite Layer. The mottles reflect large rounded individual silicate crystals (5mm in diameter), called oikocrysts (Schurmann, 1998). The MG1 Chromitite Layer becomes thinner to the west with a transition from 1.3m thick in the east to an average of 0.75m thick in the west. The MG1 Chromitite Layer has a relatively simple structure.

Borehole intersections and trench exposures clearly demonstrate that the MG1 Chromitite Layer thins towards the NW near surface and eventually disappears. Although outcrop of the MG1 Chromitite Layer disappears, it was intersected again downdip below 50m depth. It is not uncommon for the MG1 Chromitite Layer to split into more than one layer. The facies outlines defined are single, multiple (where the MG1 Chromitite Layer splits into various bands), thinning and missing (Figure 6.2.2\_4). Shearing in and around the MG1 Chromitite Layer is common and can occasionally be present in the hanging wall but is more common within the MG1 Chromitite Layer or its immediate footwall.

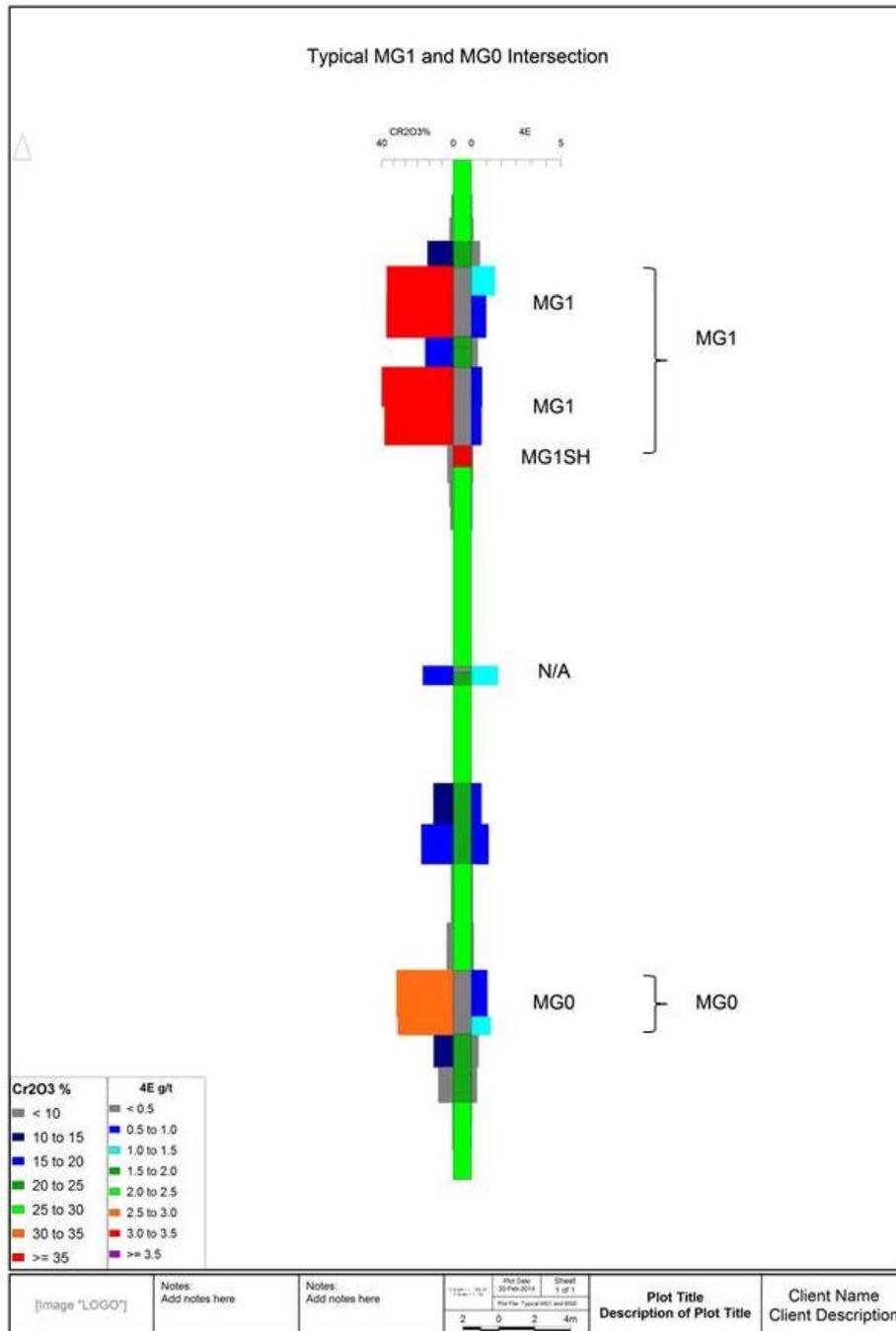


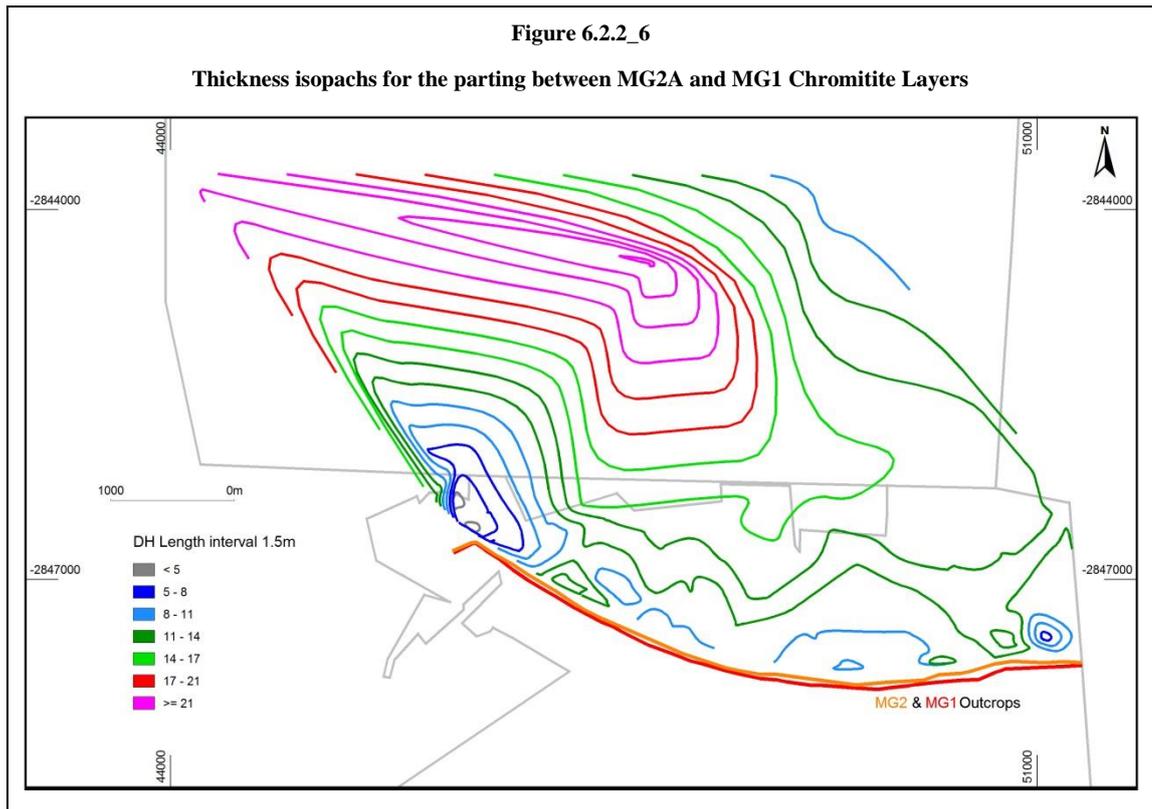
The MG1 Chromitite Layer carries the highest Cr content of all the MG Chromitite Layers with an average  $\text{Cr}_2\text{O}_3$  grade of 33.9% and a Cr:Fe ratio of 1.34. The PGM concentration is low (0.6g/t 3PGM+Au). A definite geochemical signature is recognised where the top contact of the MG1 Chromitite Layer has the highest PGM concentrations grading down linearly to its bottom contact (Figure 6.2.2\_5).

Midway between the MG1 Chromitite Layer and the overlaying MG2A Chromitite Layer, a thin chromitite stringer or some chromite dissemination is typically present within the felspathic pyroxenite. Figure 6.2.2\_6 shows the parting/middling thickness between the MG1 and the MG2 Chromitite Layers.

Figure 6.2.2\_5

Typical MG1 Chromitite Layer Cr<sub>2</sub>O<sub>3</sub> and 3PGE+Au geochemical signature

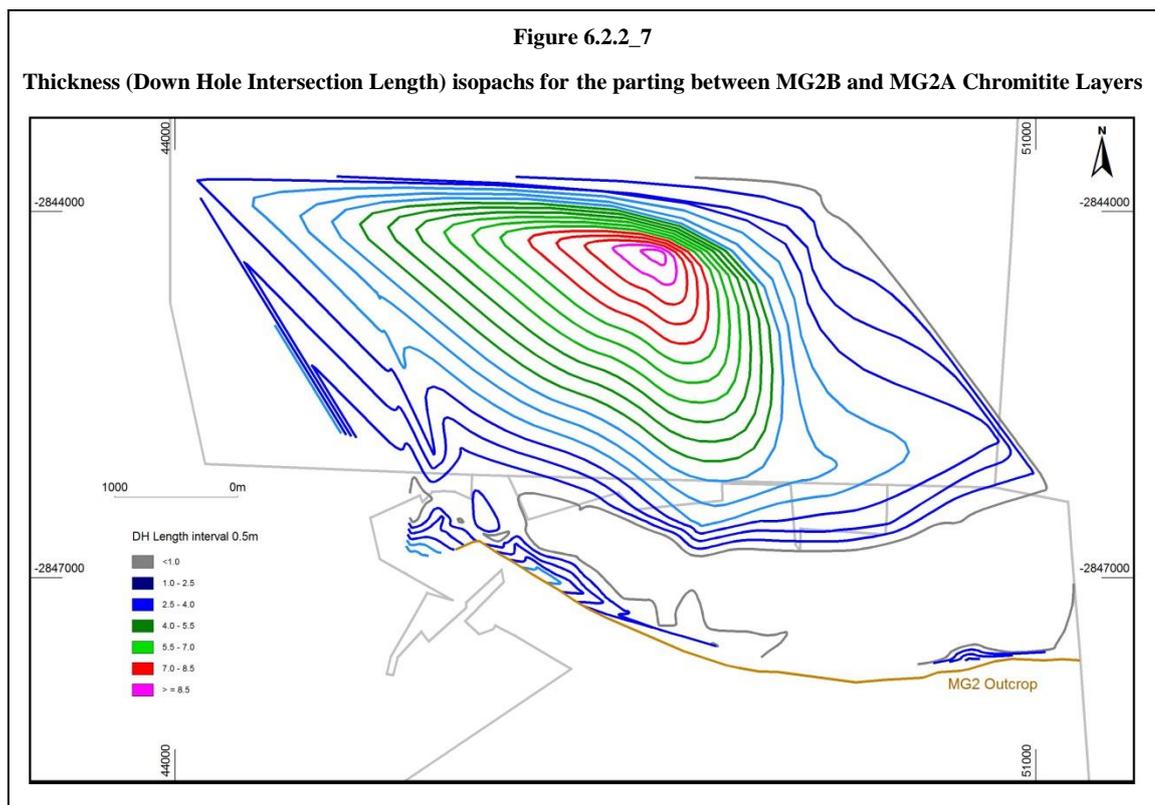




#### Description of the MG2 Chromitite Layer

The MG2 Chromitite Layer (some 4.6m thick) consists of three groupings of chromitite layers which from the base are the MG2A Chromitite Layer (0.6m thick), MG2B Chromitite Layer (0.6m thick) and the MG2C Chromitite Layer (0.6m thick). The partings are typically feldspathic pyroxenite with the parting between the MG2A Chromitite Layer and MG2B Chromitite Layer being on average 0.5m thick. The parting between the MG2B Chromitite Layer and MG2C Chromitite Layer is typically 2.4m thick and includes a platinumiferous chromitite stringer (PGEM). Some 5.6m above the MG2C Chromitite Layer is the MG3 Chromitite Layer. The parting is generally an anorthosite or norite which forms the overlying Anorthosite Marker.

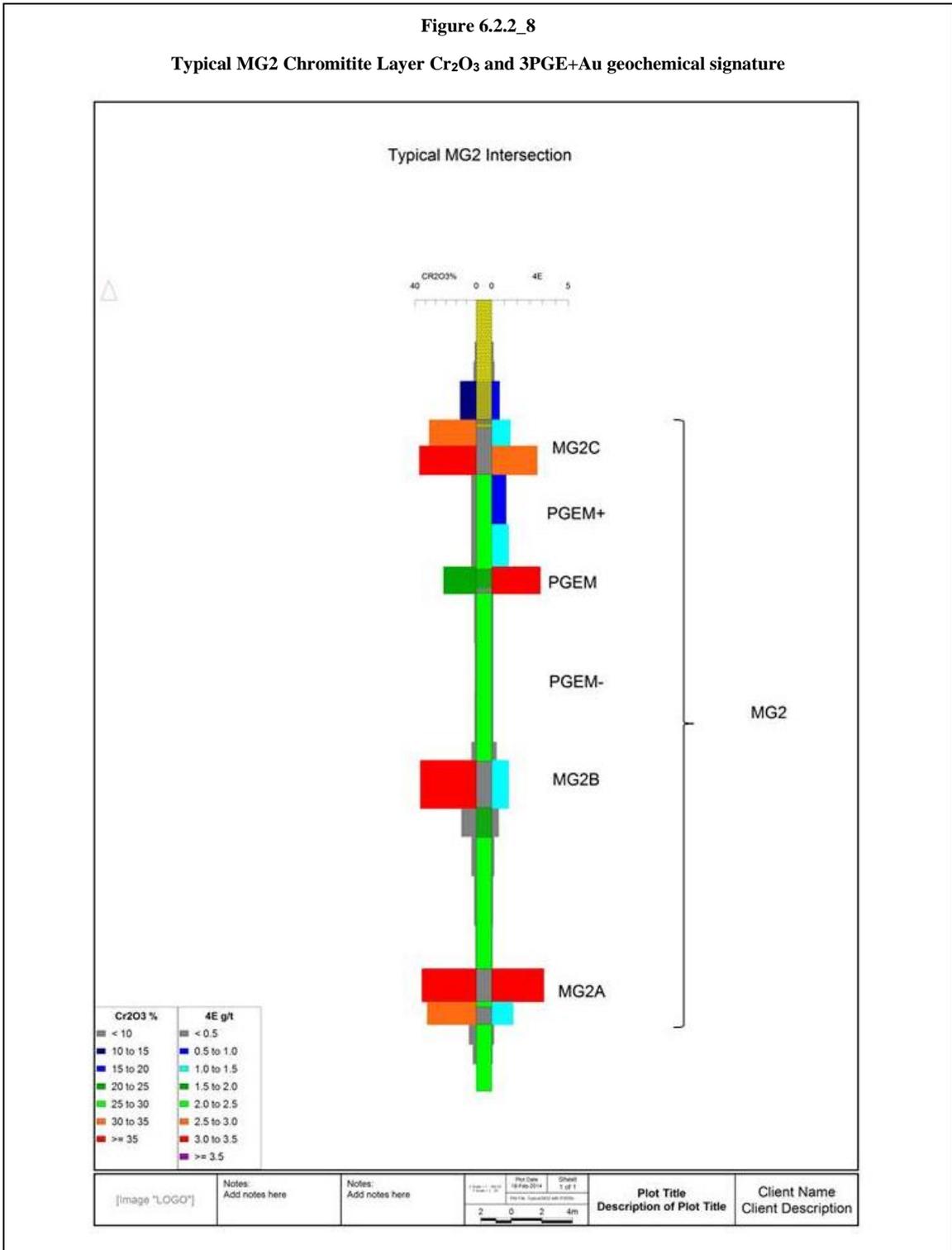
The MG2A Chromitite Layer separates from the MG2B Chromitite Layer towards the NW along strike and downdip, with more than a metre separation closer to surface and up to 9m further downdip. Figure 6.2.2\_7 presents the parting thickness between the MG2B and MG2A Chromitite Layers.



The MG2A and MG2B Chromitite Layers occasionally form a single chromitite layer but can be distinguished by a definite analytical signature. PGM concentrations are much higher in the MG2C and MG2A Chromitite Layers ( $\pm 2\text{g/t}$  (3PGE+Au)) with a much lower concentration in the MG2B Chromitite Layer ( $\pm 1\text{g/t}$  (3PGE+Au)). A few chromitite stringers, disseminated chromite within the middling pyroxenite and sometimes a chromitite layer at the base of these stringers, appear between the MG2C and MG2B Chromitite Layers. These have been coded PGEM and carry the highest concentration of PGMs within the MG2 Chromitite Layer at approximately  $4\text{g/t}$  (3PGE+Au). A typical geochemical signature is presented in Figure 6.2.2\_8. Typically an increase in PGM concentration from the MG2C Chromitite Layer top contact to the MG2C Chromitite Layer bottom contact can be noted. The MG2A Chromitite Layer displays the opposite signature.

Figure 6.2.2\_8

Typical MG2 Chromitite Layer Cr<sub>2</sub>O<sub>3</sub> and 3PGE+Au geochemical signature



The Anorthosite Marker (ANM), a prominent anorthosite, norite or a combination of the two, separates the MG2 Chromitite Layer from the overlying MG3 Chromitite Layer. Chromitite stringers are often present within the marker close to the top and bottom contacts and they may have high PGM concentration.

### Description of the MG3 Chromitite Layer

The MG3 Chromitite Layer is occasionally a massive chromitite layer but more often a very irregular, assemblage of chromitite layers and stringers within a norite and/or anorthosite, which is difficult to correlate. The top of the package typically consists of thin chromitite stringers and dissemination of chromite in norite which develops into a more massive layer at the base. Due to numerous chromitite layers and stringers comprising the MG3 Chromitite Layer, it is not easy to define the core of the MG3 Chromitite Layer package or the most appropriate mining unit. The mining unit is defined largely by the presence of massive chromitite. The upper or lower limits of the mining cut was defined where the immediate hanging or footwall becomes largely noritic or anorthositic with disseminations of chromite. This typically correlates with the reduction in PGM concentration. The chromitite is mineralised with PGM bearing minerals with the disseminated chromite bearing lithologies being much less mineralised or barren. The top contact of the MG3 Chromitite Layer is not always very clearly defined and hence the use of the bottom contact as the reference contact.

The mining cut of the MG3 Chromitite Layer (1.5m thick) consists of a chromitite with disseminated chromite in a norite or anorthosite immediately above and below the chromitite (Figure 6.2.2\_9). The PGM concentrations are very erratic and no definite geochemical signature is defined (Figure 6.2.2\_9).

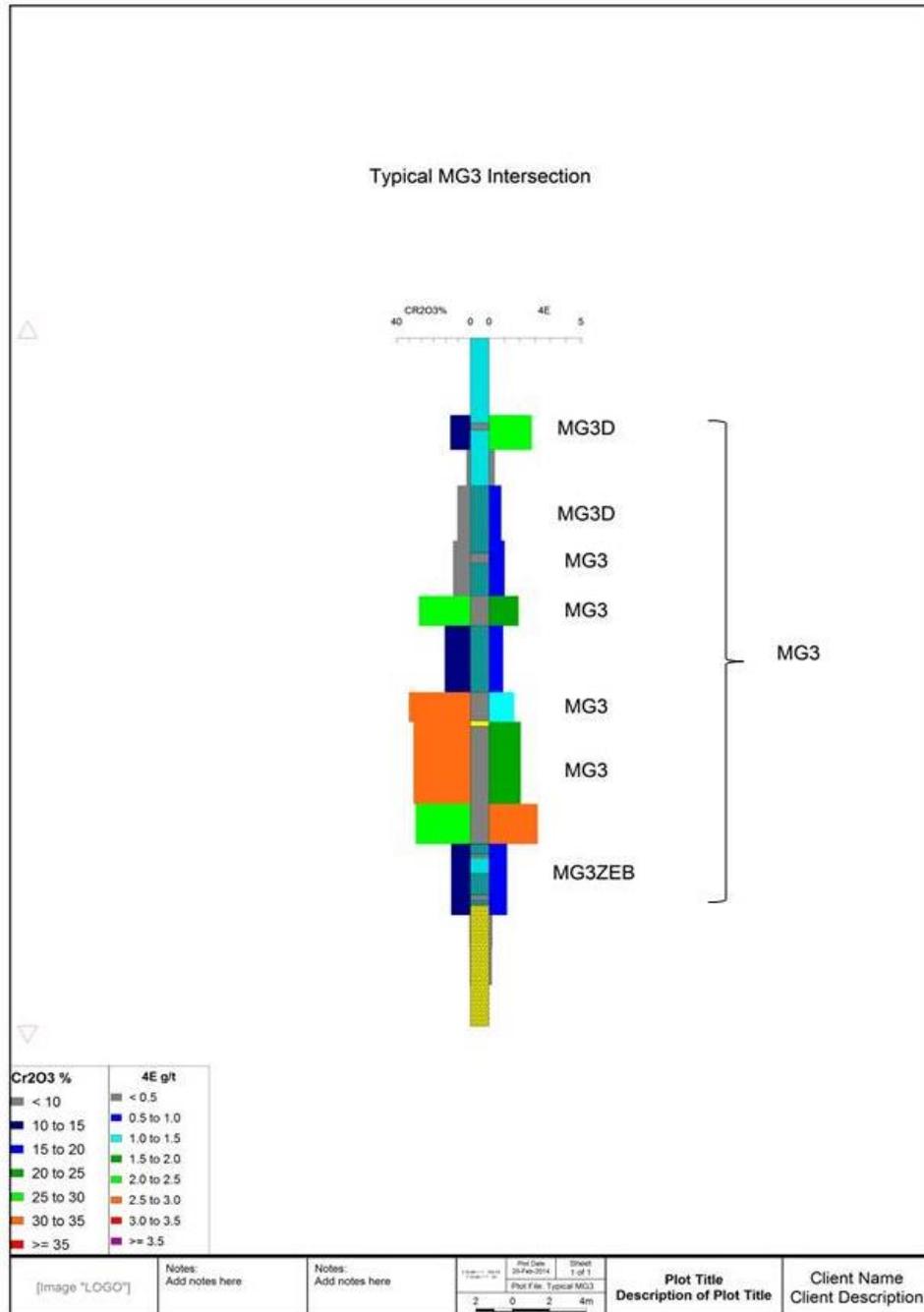
Above the massive MG3 Chromitite Layer, a layer containing disseminated chromitite with an average thickness of 1.6m has been identified. This unit has sufficient lateral continuity that it has been possible to identify it in within the open pit and within exploration boreholes. The unit is referred to as the MG3 Disseminated or Hangingwall and coded as MG3D.

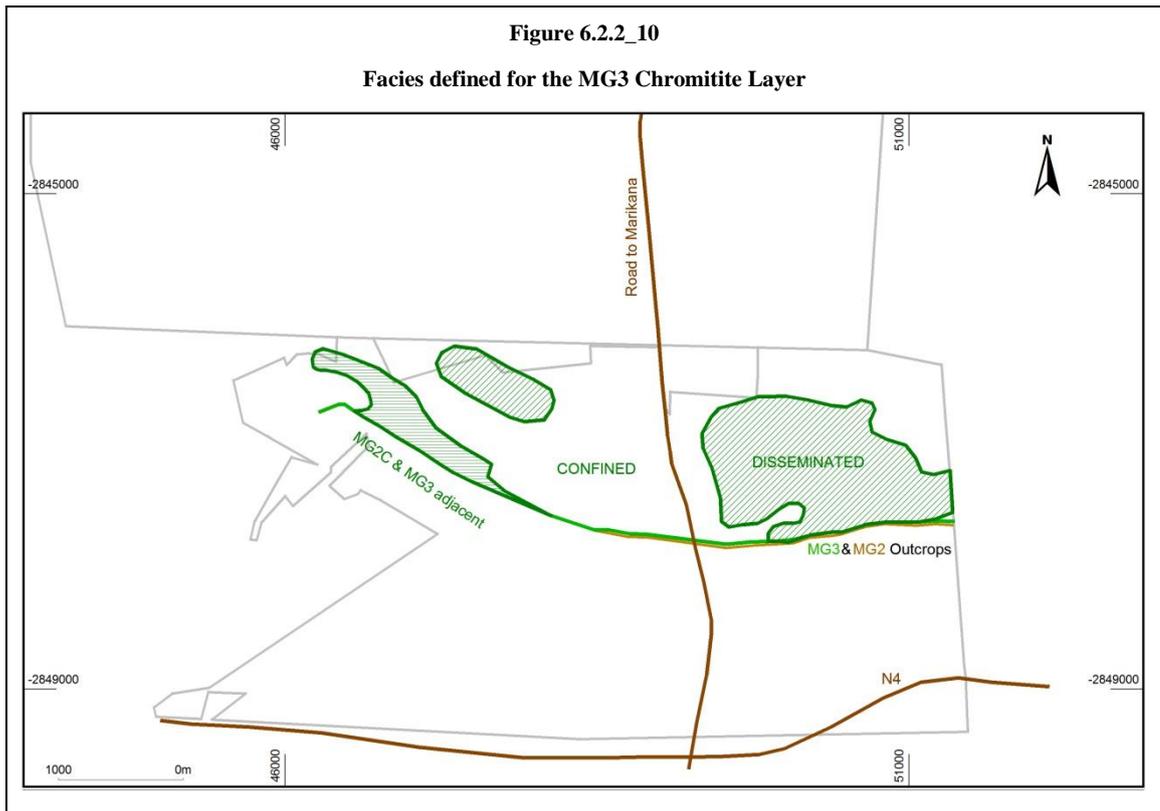
Immediately below the massive MG3 Chromitite Layer a zone in which chromitite layers are developed between layer of anorthosite and norite or disseminated within these lithologies, is developed. This zone is also of sufficient lateral continuity such that it has been possible to identify and was considered of economic significance. The zone is referred to as the MG3 Zebra because of the stripey appearance.

Based on geological and geochemical features, various facies of the MG3 Chromitite Layer can be defined (Figure 6.2.2\_10). The MG4(0) Chromitite Layer is some 12m above the MG3 Chromitite Layer.

Figure 6.2.2\_9

Typical MG3 Chromitite Layer Cr<sub>2</sub>O<sub>3</sub> and 3PGE+Au geochemical signature





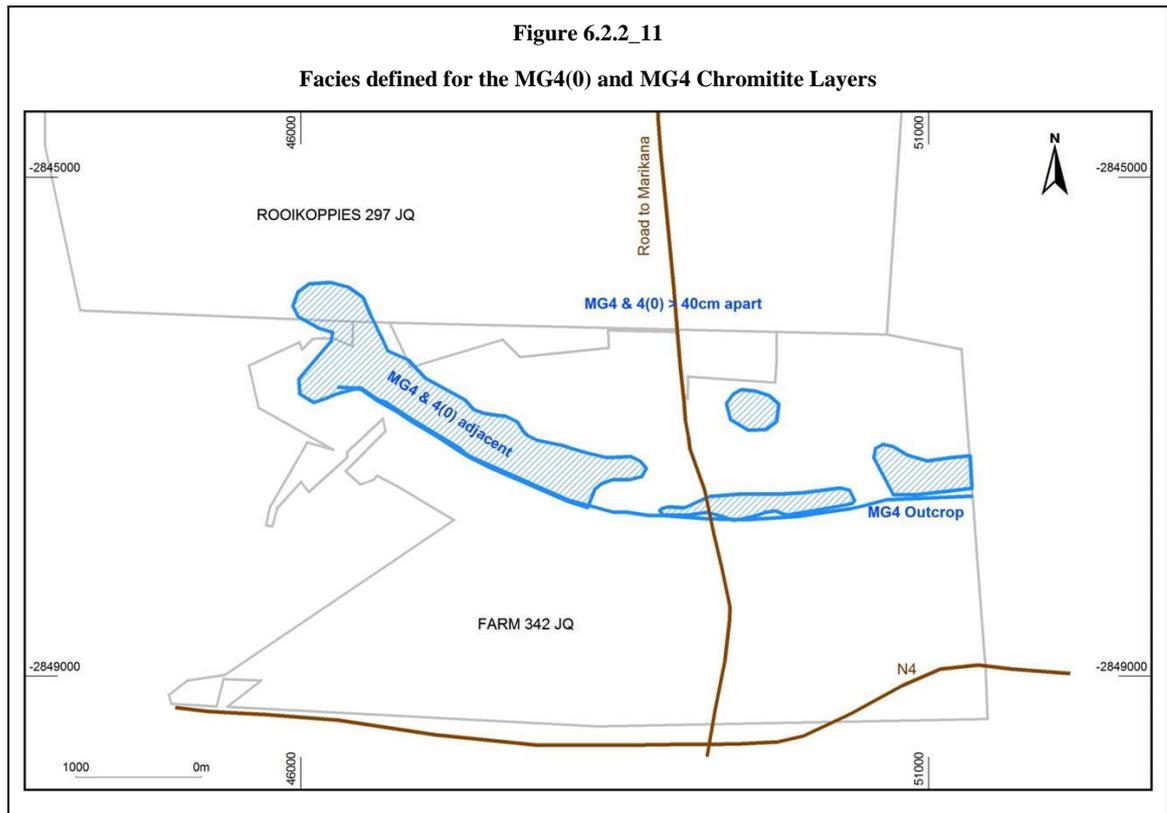
#### Description of the MG4 Chromitite Layer and MG4(0) Chromitite Layer

The MG4 Chromitite Layer consists of a lower chromitite (MG4(0) Chromitite Layer) (approximately 0.6m thick) immediately overlain by a norite (approximately 0.85m thick) followed by the chromitite layer of the MG4 Chromitite Layer (approximately 1.8m thick), overlain by another parting, of feldspathic pyroxenite composition, some 3.2m thick and finally overlain by the chromitite of the MG4A Chromitite Layer (approximately 1.5m thick).

The MG4 Chromitite Layer is consistent throughout the property in that it has a pyroxenite hangingwall and a norite footwall. At its base a chromitite layer (or layers) - the MG4(0) Chromitite Layer. This subdivision is based on a geochemical signature which does not necessarily correspond to an obvious parting above the last chromitite layer.

The MG4 Chromitite Layer has a relatively simple structure similar to the MG1, MG2 and MG3 Chromitite Layers.

Both the MG4 and MG4(0) Chromitite Layers may comprise more than one chromitite layer. The parting between MG4 and MG4(0) Chromitite Layers is mostly a norite with disseminated chromite or disseminated chromite in pyroxenite. The parting is up to 2m thick at its thickest but can also be entirely absent. Based on the geology of the MG4 and MG4(0) Chromitite Layers, various facies are defined (Figure 6.2.2\_11).

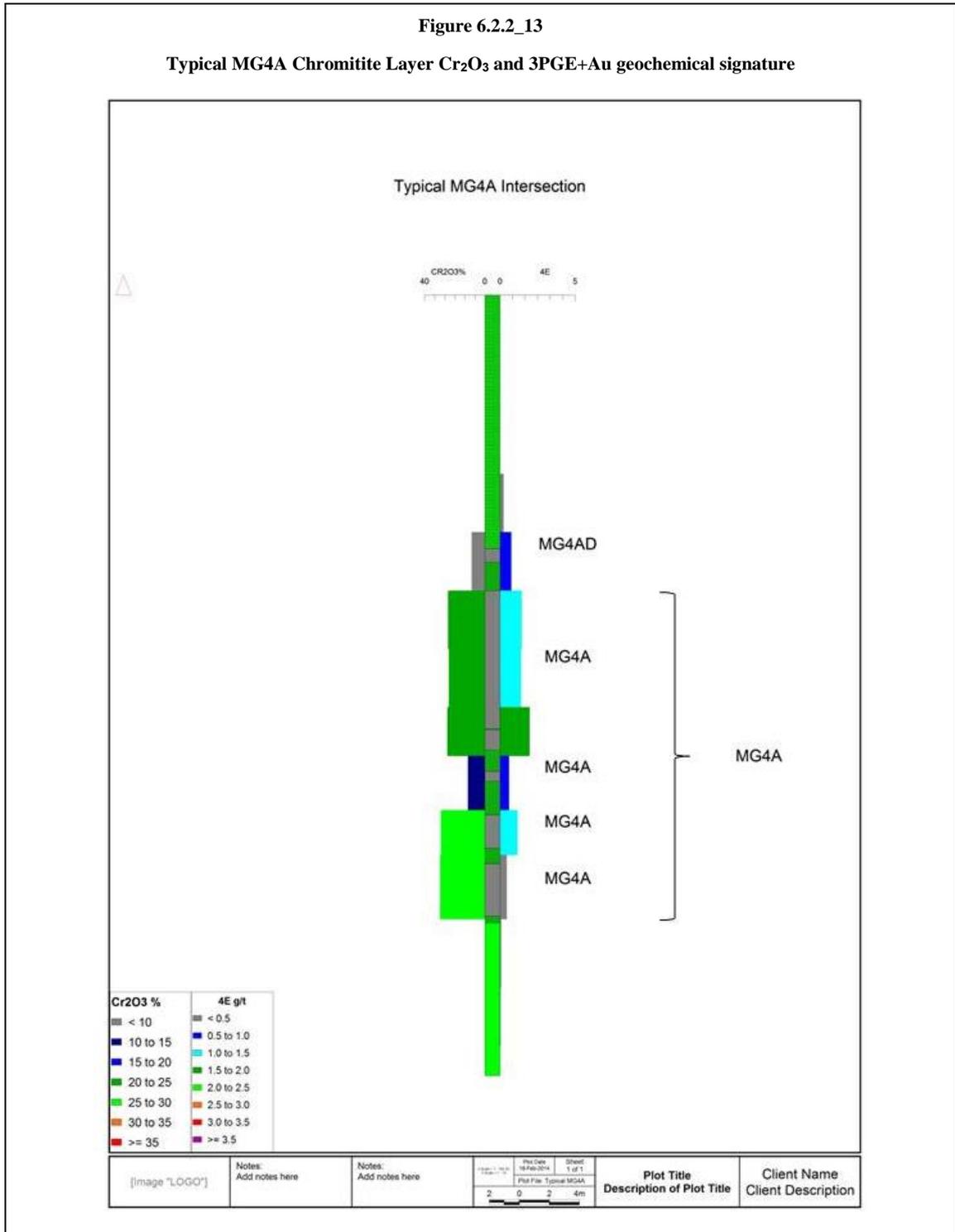


The typical geochemical signatures of MG4 and MG4(0) Chromitite Layers are presented in Figure 6.2.2\_12. The PGM concentration of the MG4(0) Chromitite Layer is approximately 1.3g/t (3PGE+Au) lower than the grade of the MG4 Chromitite Layer which has a PGM concentration of approximately 1.7g/t (3PGE+Au).



Figure 6.2.2\_13

Typical MG4A Chromitite Layer Cr<sub>2</sub>O<sub>3</sub> and 3PGE+Au geochemical signature



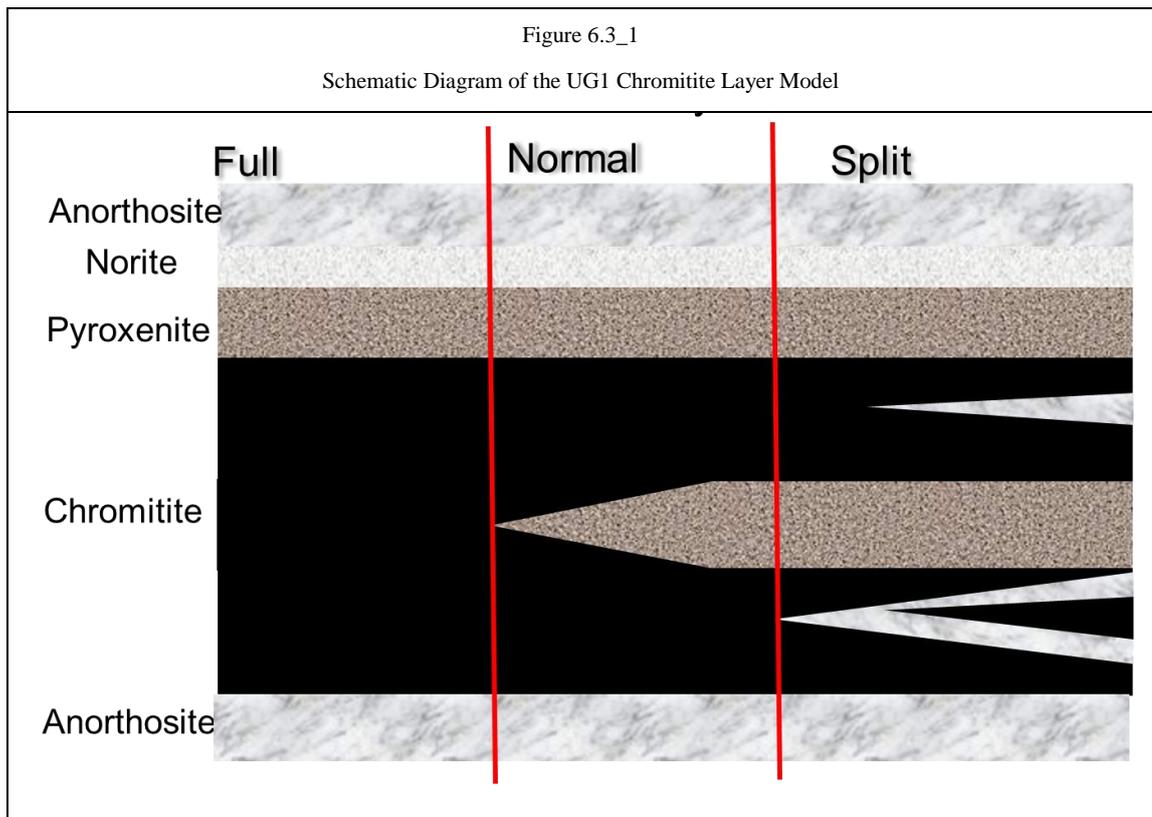
### 6.3 Geology of the UG1 Chromitite Layer

The UG1 Chromitite Layer is stratigraphically situated in the Upper Critical Zone and is well developed in the Bushveld Complex. It comprises the massive chromitite, chromitiferous pyroxenite, bands of anorthosite, chromitite and norites and stringers of chromitites. The UG1 Chromitite Layer has a strike direction of east-west and dips to the north with the dip varying from 10° in the east to 25° in the west.

The thickness of the UG1 Chromitite Layer ranges from few centimetres up to 3m in places. The lenses of anorthosite and pyroxenite are seen impregnated with numerous chromite grains in places. The hanging wall changes from pyroxenite to anorthositic norites. The footwall is formed by bifurcated bands of anorthosite and chromite lenses.

At Tharisa Mine, the UG1 Chromitite Layer has three distinguishable facies (Figure 6.3\_1):

- Full UG1 Chromitite Layer
- Normal Reef
- Split Reef Facies



### 6.3.1 Full UG1 Chromitite Layer

This facies contributes 1% of the UG1 Chromitite Layer at Tharisa Mine. It is more prevalent to the west. It comprises a single massive chromitite layer with an average thickness of 2.5m.

### 6.3.2 Normal Reef

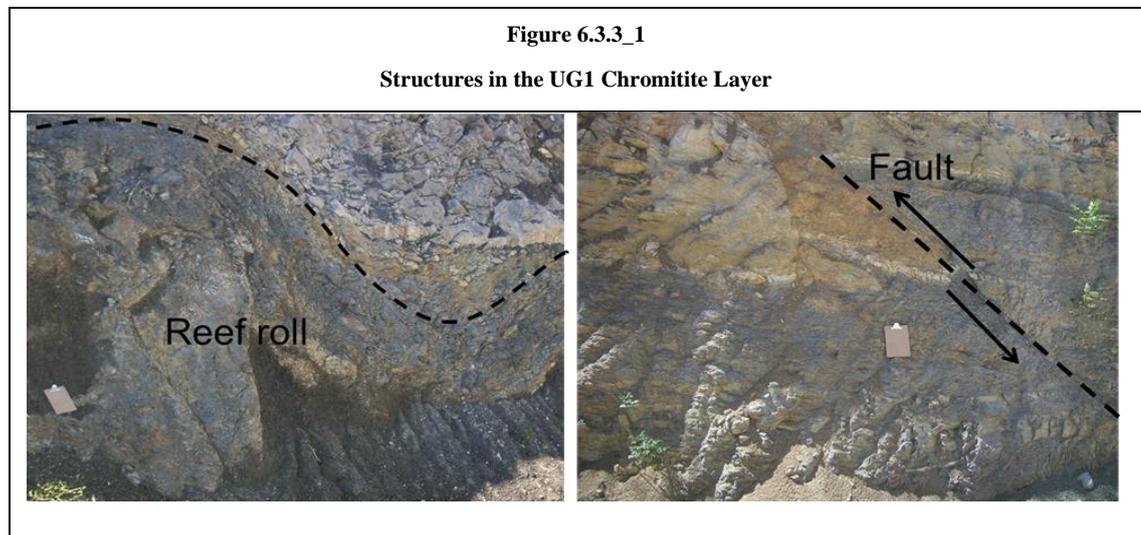
The Normal Reef facies of the UG1 Chromitite Layer comprises the massive chromitite with 10 to 100cm internal waste. The top and bottom chromitite layers have different geochemistry signatures suggesting that they were formed under different conditions and from different sources. The thicknesses of top and bottom layers differ considerably throughout the property. The thickness varies from 0.5m to 1.50m per layer.

This facies contribute 95% of the UG1 Chromitite Layer in the property.

### 6.3.3 Split Reef Facies

The Split Reef facies contributes 4% of the UG1 Chromitite Layer at Tharisa. It comprises of numerous layers of chromitite, anorthosite and pyroxenite as shown in Figure 6.3.3\_1.

The UG1 Chromitite Layer is affected by geological structures such as reef rolls, faults, potholing, intrusives such as iron-rich ultramafic pegmatites and dykes.



## 6.4 Structure

The structural interpretation of the Tharisa Mine area is based on the aeromagnetic data and the drilling data. The MG Chromitite Layers at the Tharisa Mine are a stack of tabular deposits.

An Air Tractor 402A aircraft was used to conduct a high resolution aeromagnetic survey over the Tharisa Mine area during August 2007 (Figure 6.4\_1). Total field magnetics were calculated with the use of 2 Cesium Vapour magnetometers. A DTM was constructed using real time differential GPS and a laser altimeter. A total of 900 line-km were covered. The survey lines were 0 degrees (true north) with 100m spacing. Tie lines perpendicular to the survey lines were spaced at 500m. Sample spacing was at 6.5m along the flight lines and ground clearance was 40m.

The only significant fault in the mine area is a steeply dipping NW-SE trending normal fault (Figure 6.4\_1) with a downthrow of less than 30m to the east. This fault occurs only on the far north-eastern corner of the property and will have little effect on mining of the MG Chromitite Layers on Farm 342JQ. This fault was confirmed in both Lonmin underground operations and Samancor stopes.

A low angled WNW-ESE trending thrust fault (Lonmin interpretation) is a prominent lineation on the aeromagnetic image. The fault is expected to have little impact on the mining of the MG Chromitite Layers.

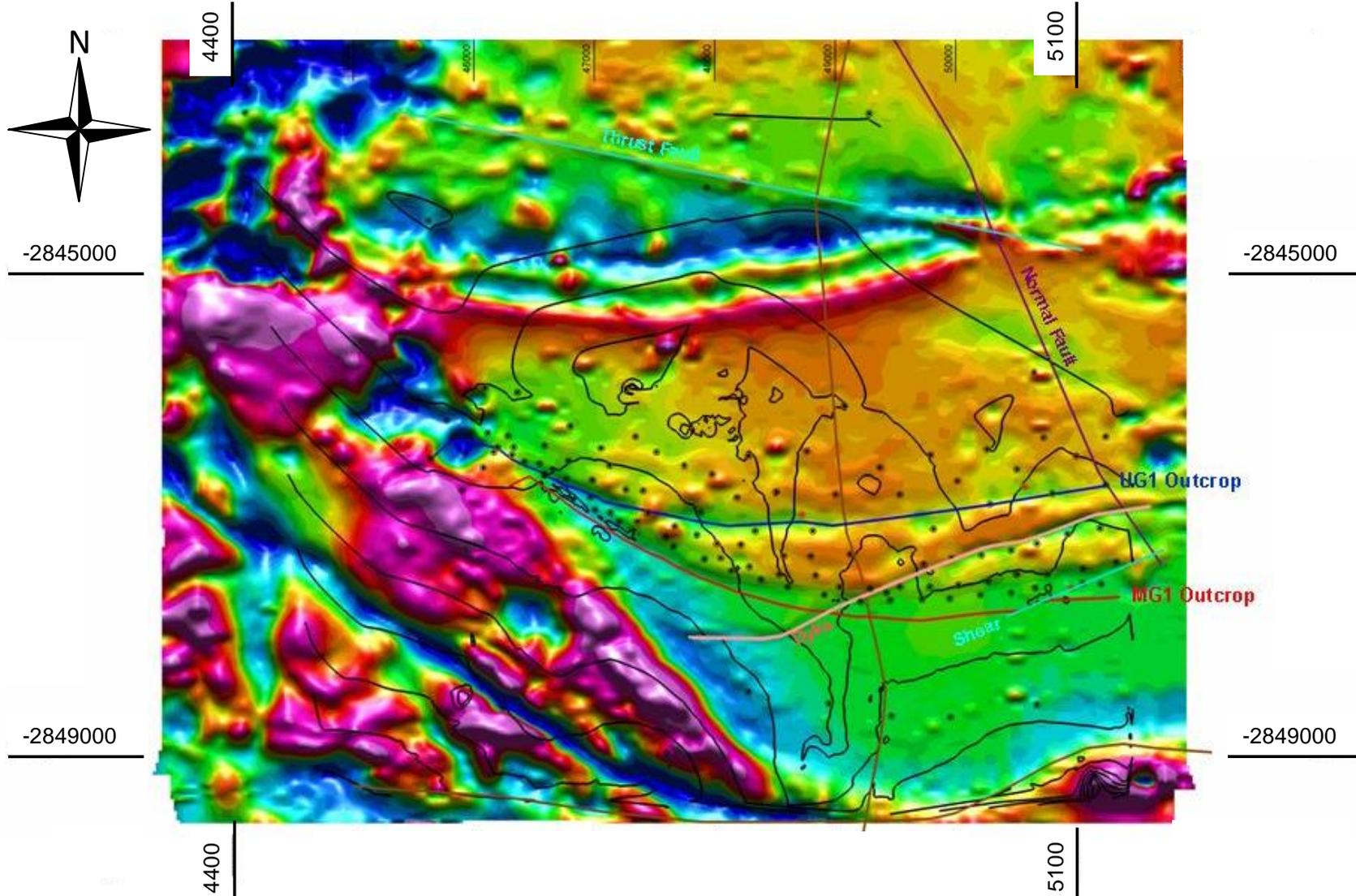
A NE-SW striking sub-vertical dyke of approximately 10m thickness was interpreted from the aeromagnetic survey. This dyke was not fully intersected in any of the boreholes but was intersected in the East Mine box-cut and is 11m wide.

A NE-SW trending sub-vertical shear is exposed in the far eastern pit on Farm 342JQ. Evidence of this shear was seen in boreholes K94, K6A and K20. It is evident as a lineation on the aeromagnetic survey. The MG1 Chromitite Layer thickness is reduced around the shear. Future open pit activities are not affected as the thinned MG1 Chromitite Layer has already been exploited in the area around the shear.

An aeromagnetic anomaly north of the MG Chromitite outcrops, following the north-westerly curve along strike is interpreted as the anorthosite and norite in the UG1 Chromitite Layer footwall.

The only other major structural feature of interest is the Spruitfontein upfold or pothole to the west of the Tharisa Mine. It affects the UG2 Chromitite Layer as well as the rest of the Critical Zone below. The area around the pothole which is on the adjacent property was not accessible to further investigation.

Figure 6.4\_1  
Map Showing High Resolution Aeromagnetic Survey Interpretation



## **7 Exploration and Drilling**

### **7.1 Previous Exploration**

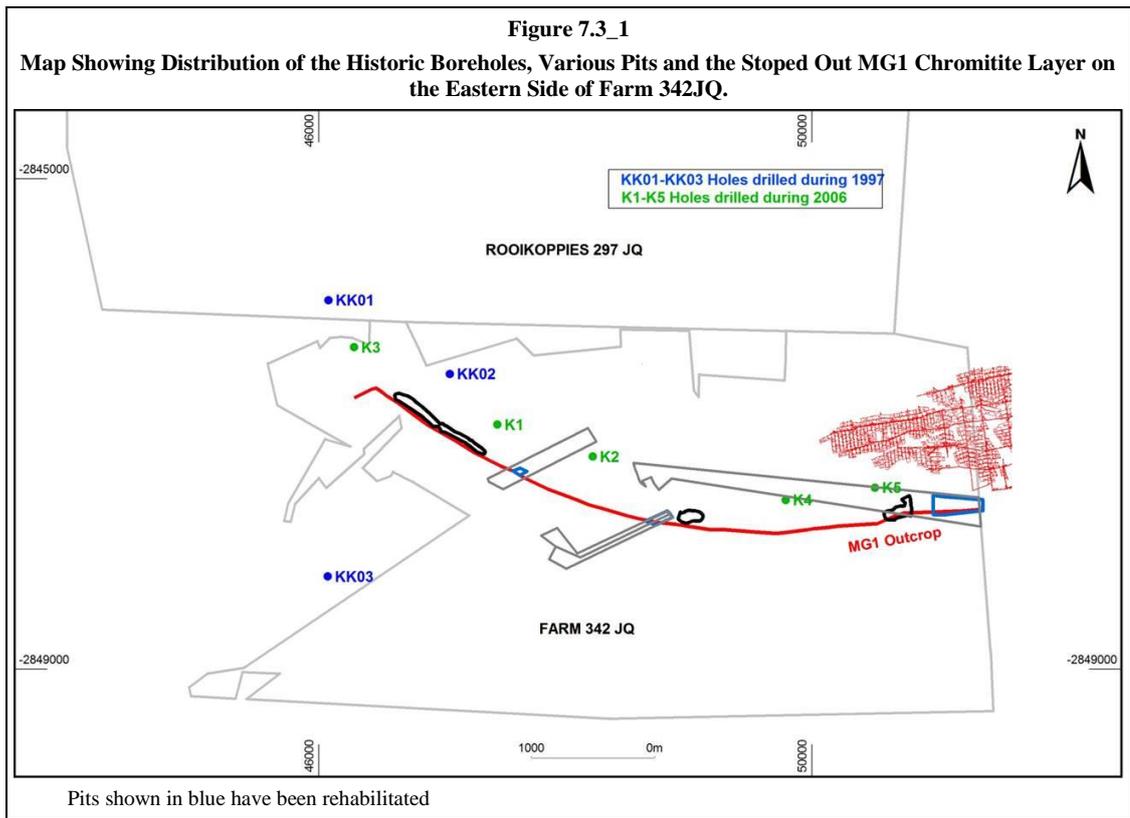
The Tharisa Mine area has been explored for its mineral potential since the early 1900s. Initially this was in the form of erratic exploration activities which included trenching and small open pits.

### **7.2 Exploration by Thari**

The mineral resource estimate is based predominately on a diamond drilling exploration programme managed by Coffey in 2007. Trenching was undertaken and utilised for geological understanding and geological modelling. Drilling for metallurgical sampling purposes was also undertaken but the associated assay data was not included in this modelling.

### **7.3 Trenching and Pit Excavations**

Various trenches were historically excavated on both the UG1 and the MG Chromitite Layers. During the 2007 exploration programme additional trenching was undertaken on the MG Chromitite Layers. The MG Chromitite Layers were previously exploited from three known pits, excavated by previous tenement holders and which remain unrehabilitated. An additional two pits, one on portion 96 (Farm 342JQ) and another on portions 361/362 (Farm 342JQ), were excavated and exposed the lower half of the MG Chromitite Layer package and were subsequently rehabilitated (backfilled). A sixth pit was opened and backfilled during 2007 on portion 286 of Farm 342JQ. The details of these excavations are presented in Figure 7.3\_1. A photograph taken in 2006 of the pit on portion 286 (Farm 342JQ) is presented in Figure 7.3\_2. The MG1 Chromitite Layer was mined out underground by Samancor on the eastern side of the Farm 342JQ property.



**Figure 7.3\_2**  
**Photograph of Pit Sidewall showing the relationship of the various MG Chromitite Layers**  
**(Pit on Portion 286)**

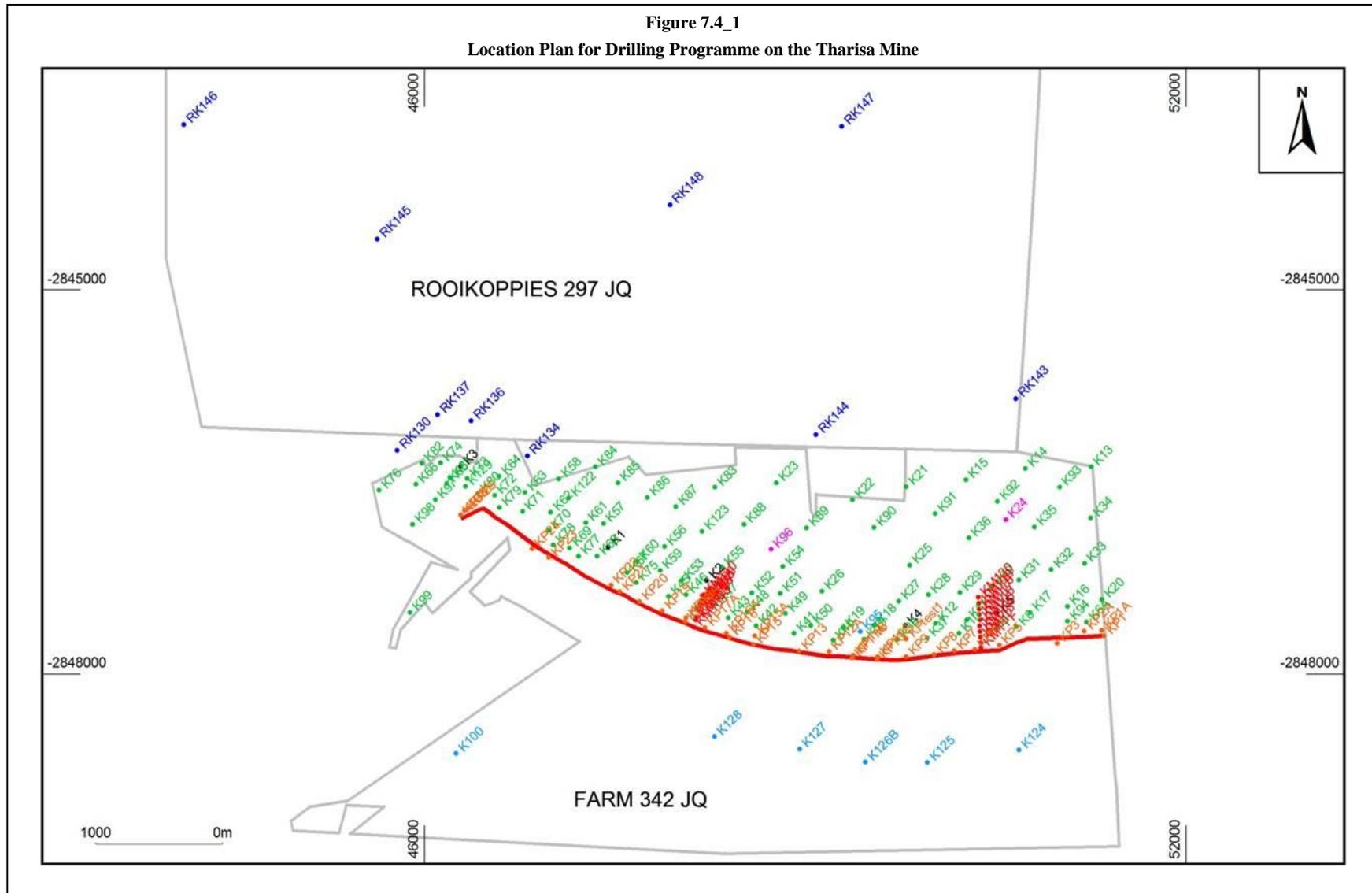


#### 7.4 Drilling

Six diamond boreholes were drilled during January 1997 by a local entrepreneur, Mr Hennie Botha, in the northwest part of Farm 342JQ property (K01, K02 and K03) and on the adjacent property, Spruitfontein 341JQ (BSB01, BSB02 and BSB03). A report was subsequently compiled by LW Schurmann. The only data available from this exploration programme are five of the logs included in the report. The core was not made available to Coffey. The original logs provide insufficient and inaccurate detail compared to geology of diamond boreholes drilled nearby during the 2007 Thari drilling programme. The collar positions could also not be verified. The data is therefore considered unreliable and was not included in the mineral resource estimate.

Five NQ diameter, vertical diamond boreholes totalling 654m were drilled along strike on Farm 342JQ during 2006 by Thari under the supervision of Coffey. One TNW diameter diamond borehole (K4M1) was drilled 5m away from K4 for metallurgical testwork. The collar positions of these boreholes were surveyed by Clive Macintosh Surveys.

Figure 7.4\_1  
Location Plan for Drilling Programme on the Tharisa Mine



A total of 121 vertical boreholes and 23 deflections, representing 22,500m of drilling were completed in the period from March 2007 to October 2007 (Figure 7.4\_1). Drilling was mainly of NQ (47.50mm) diameter except for 18 boreholes of TNW (60.4mm) diameter completed for metallurgical testwork. Four deep boreholes drilled on Rooikoppies were drilled BQ (36.27mm) diameter. A total of 13 NQ diameter deflections were drilled off some mother boreholes for lithological comparison. Ten TNW diameter deflections were drilled to contribute bulk material for the metallurgical testwork. Shallow percussion boreholes were drilled along the full strike extent on the MG1 Chromitite Layer, on the Farm 342JQ property, to accurately demarcate it. A total of 31 boreholes were drilled (see orange coloured collars in Figure 7.4\_1); the boreholes averaged 15m in depth. All borehole locations were clearly marked with cement beacons and a PVC rod. However, where the land has since been cultivated or illegally occupied, the beacons have been either displaced or destroyed.

The drilling programme was designed so that boreholes would intersect the base of the MG1 Chromitite Layer at approximately 30m, 60m, 120m, 180m, 300m, 500m and 1000m below surface. A line of boreholes that intersected at 220m below surface later added for greater coverage of the deposit. The drilling programme was designed to drill the deposit closest to the outcrop at higher density than further downdip so that the subsequent mineral resource estimate close to the outcrop could confidently be declared as an indicated and/or measured mineral resource in preparation for a feasibility study and the consideration of open pit mining. The programme for the deeper boreholes on the Rooikoppies property where Lonmin was then mining the Merensky Reef and UG2 Chromitite Layer, was revised due to various difficulties relating to siting the boreholes to avoid holing into existing underground infrastructure. Fewer, more widely spaced boreholes were therefore drilled.

Two fence lines (oriented in the down dip direction) were drilled with TNW diameter core for metallurgical test purposes, intersecting the chromitite layers at 10m depth increments down to 60m below surface on the MG4 Chromitite Layer. These boreholes are shown in red on Figure 7.4\_1 as KM101 to KM120.

Two NQ boreholes, K96 and K24, were drilled at the request of Coffey for geotechnical logging, sampling and to conduct rock strength tests.

Six sterilisation boreholes (K100 and K124 to K128 indicated in cyan, Figure 7.4\_1) were drilled around the proposed civil engineering sites which coincide with the LG6 Chromitite Layer outcrop. One borehole, K95, was drilled to intersect both the MG Chromitite Layer package and the LG Chromitite Layer package.

A total of 10 boreholes (in dark blue Figure 7.4\_1) were drilled on the Rooikoppies property to test the extension of the MG Chromitite Layer package down dip.

The X, Y and Z coordinates of all drill collars have been accurately determined by a qualified surveyor of Trevor Cufflin Surveys cc. Downhole surveys were undertaken on all the boreholes drilled deeper than 120m by Reflex Africa.

The surface topography data was generated from an airborne survey.

All diamond drilling was undertaken by reputable drilling contractors to industry standard. Core recoveries were estimated to average >95%. Intersections of mineralisation with lower than 95% core recovery were redrilled. Core recovery over the MG1 Chromitite Layer averaged 80% due to the presence of a fault gouge commonly present or adjacent to the MG1 Chromitite Layer. The fault gouge within the more competent rock rendered core loss inevitable.

## **7.5 Logging of Boreholes**

A detailed geological log of each borehole was undertaken. A geotechnician marked 1m intervals on the core with a black paint marker prior to logging by a geologist. Core was logged in detail, coding the various lithologies, dip angles, grain size, rock texture, alteration, weathering, mineralisation and structures. Chromitite layers were assigned friability (friable, semi-friable or hard) and were coded in a separate stratigraphic column on the logsheets.

Data from these hardcopy logsheets were captured into a SABLE database and validated.

For all chromitite layer intersections below 60m depth a rock quality designation (RQD) was calculated starting 20m above the reef top contact. A RQD for each drill run length was calculated. Intersections within the run length with joints/fractures less than 10cm apart were measured with a clinorule and all these lengths were added together and the total then subtracted from the total drill run length. A percentage of intact core (>10cm pieces) was then recorded as the RQD for that run length.

## **7.6 Sampling and Data Verification**

After logging, representative samples over various chromitite layer intersections were marked out on the core with a paint marker. Unique sample numbers were assigned and information for each sample recorded in a sample ticket book. Core with samples marked out was photographed with a digital camera both dry and wet. Subsequently the core was cut in half vertically along its length and across to obtain the marked out samples. Only half core was submitted for analyses. The other half was retained in the core tray for future reference.

The focus during sampling was to choose sample intervals according to lithologies in order to separate the chromitite from the host rock. Each designated unit (MG1, MG2, MG3, MG4(0) and MG4 Chromitite Layer) was sampled such that the geochemistry of the unit could be investigated.

The units were sampled as indicated below:

- The MG4 Chromitite Layer was sampled continuously from the top of MG4A Chromitite Layer to the base of MG4(0) Chromitite Layer separating the chromitite within into different samples.
- The MG3 Chromitite Layer was sampled continuously from the bottom to the top contact.
- The MG2 Chromitite Layer was sampled continuously from the base of the MG2A Chromitite Layer to the top of the MG2C Chromitite Layer. The sampling was also undertaken so as to obtain the geochemical signatures of the chromitite layers separately from the partings.
- The MG1 Chromitite Layer and MG0 Chromitite Layer were sampled continuously from the bottom contact to the top contact.
- Two non-mineralised footwall and hangingwall samples were taken.

Sample intervals varied from an absolute minimum of 15cm for NQ core (20cm for BQ) to a maximum of 50cm. Chromitite samples included a 0.5 to 2cm host rock margin to avoid PGM and chrome loss during the core cutting process. This is the recognised standard for sampling of PGM deposits in the industry

Quality control monitoring protocols involved submission of sample blanks, duplicates and certified standards with the core sample batches. AMIS0010 and SARM8 were originally alternated as standards but AMIS0010 was later replaced with AMIS0006 due to lack of availability of AMIS0010.

Each sample was bagged separately with a numbered ticket inside the bag and the sample number also written on the outside of the sample bag. A dispatch form was submitted along with samples to ensure the total number of samples and correct sample numbers were recorded.

The sampling methodology is appropriate and supports the mineral resource estimate and classification made.

#### **7.6.1 Analytical Procedures**

Analyses were undertaken by Genalysis, a certified laboratory. Genalysis is an accredited Laboratory with the South African National Analytical Standards (SANAS) with reference number T0464-11-2013.

Sample preparation was undertaken in the Genalysis facility in Johannesburg prior to a pulp being air freighted to Genalysis Perth for analysis. The sample preparation was undertaken using a jaw crusher to crush samples to minus 10mm in size. Pulverising of the samples was undertaken to achieve 85% minus 75µm in size. All samples were assayed for PGM by 7E NiS/MS and for base metals by ICP Fusion D/OES.

Detection limits are presented in Table 7.6.1\_1.

Table 7.6.1_1 Detection Limits Applicable to Tharisa Mine Data			
Element	Detection Limit (ppb)	Element	Detection Limit (ppm)
Pt	2	Cu	20
Pd	2	Ni	20
Rh	1	Cr	50
Ru	2		
Os	2		
Ir	2		
Au	5		

The assay techniques used are considered appropriate for the PGM and base metal analyses and the mineral resource estimate.

### 7.6.2 Analytical Quality Control Data

A comprehensive QA/QC programme was undertaken. The QA/QC programme identifies various aspects of the results that could have negatively influenced the subsequent resource estimate. It was possible to identify samples that had been swapped, missing samples, incorrect labelling amongst other aspects. Further, the QA/QC aims to confirm both the precision and accuracy of the laboratory and thereby confirm that the data used in the mineral resource estimate is of sufficient quality.

The control samples used comprised of two different certified standards, a blank and a duplicate for every 20 samples submitted. The intended aim was 5% coverage for each of the control sample types. Further control on data integrity was achieved through re-submittal of not less than 5% of the total samples to a referee laboratory (SGS Lakefield, Johannesburg). The quality control data was analysed on an on-going basis and generated numerous queries with the laboratory. All queries were satisfactorily resolved.

SGS Lakefield is an accredited Laboratory with the South African National Analytical Standards (SANAS) with reference number T0107-10-2013.

Definition of terms related to the QA/QC protocols applied and subsequent evaluations are provided below:

A **standard** is a reference sample with a known (statistically) element abundance and standard deviation. Reference standards are used to gauge the accuracy of analytical reporting by comparing the pre-determined values to those reported by the laboratory used during an exploration project.

A **blank** is a standard with abundance of the element of interest below the level of detection of the analytical technique.

A **duplicate** is the split of a sample taken at a particular stage of the sampling process; e.g. Field Duplicate.

The precision and accuracy will be discussed in terms of the following statistical measures routinely applied by Coffey:-

Thompson and Howarth Plot showing the mean relative percentage error of grouped assay pairs across the entire grade range, used to visualise precision levels by comparing against given control lines.

Rank HARD Plot, which ranks all assay pairs in terms of precision levels measured as half of the absolute relative difference from the mean of the assay pairs (HARD), used to visualise relative precision levels and to determine the percentage of the assay pairs population occurring at a certain precision level.

Mean vs HARD Plot, used as another way of illustrating relative precision levels by showing the range of HARD over the grade range.

Mean vs HRD Plot is similar to the above, but the sign is retained, thus allowing negative or positive differences to be computed. This plot gives an overall impression of precision and also shows whether or not there is significant bias between the assay pairs by illustrating the mean percent half relative difference between the assay pairs (mean HRD).

Correlation Plot is a simple plot of the value of assay 1 against assay 2. This plot allows an overall visualisation of precision and bias over selected grade ranges. Correlation coefficients are also used.

Quantile-Quantile (Q-Q) Plot is a means where the marginal distributions of two datasets can be compared. Similar distributions should be noted if the data is unbiased.

### 7.6.3 Assay Quality Control Data Assessment

The quality control protocol required the use of two different certified standards, a blank and a coarse reject duplicate for every 20 samples. The intended aim was 5% coverage of each control. In addition some 5% of the samples were analysed by a referee laboratory (SGS Lakefield) (Table 7.6.3\_1)

<b>Table 7.6.3_1</b>			
<b>Summary of the Number of Control Samples</b>			

	<b>Submitted</b>	<b>Samples</b>	<b>Proportion</b>
Standard SARM8	567	11,344	4.9%
Standard AMIS0006	240	11,344	2.1%
Standard AMIS0010	324	11,344	2.9%
Coarse Reject Duplicates	563	11,344	4.9%
Blanks	571	11,344	5.0%
Referee samples (pulps)	483	9,079 (actual samples)	5.3%
Referee control samples (pulps)	119	2,265 (control samples)	5.3%

#### Blanks

Blanks (washed silica sand) were introduced with each batch submitted to the laboratory to monitor contamination in the crushing process and pulverisation stages. Some 100g of blank material was supplied for each blank sample included in the sample batch.

The blanks were introduced at a frequency of **1 in 20 (5%)**.

#### Standards

The precision of laboratory results during the drilling/sampling programme were monitored with the use of two commercial standards supplied by Mintek in Johannesburg (SARM 8) and African Mineral Standards in Johannesburg (AMIS0006 and AMIS0010). Some 50g of standard material was supplied for each standard sample included in the sample batch. The standards were not crushed or milled as they were sufficiently fine grained (pulps). In addition the laboratory introduced their own standards for internal quality control purposes.

The standards were selected for the anticipated average PGM grade and a suitable matrix. Both selected standards are derived from UG2 Chromitite Layer in the Bushveld Complex.

Standards were introduced at a frequency of **1 in 20 (5%)** or greater.

#### Duplicates

Duplicates were generated from the coarse rejects by the sample preparation laboratory. A designated sample was crushed and riffle split to provide a duplicate rather than resubmitting duplicates from previous sample batches. This was deemed to be the most practical method of providing duplicates due to the volume of samples being submitted and the remote location of the mine area.

Duplicates were introduced at a frequency of **1 in 20 (5%)** or greater.

#### Inter-Laboratory Analyses (Referee checks)

Pulps were submitted to an independent laboratory (SGS Lakefield) for comparative analysis.

#### **7.6.4 Chain of custody – Responsibility and accountability**

The full chain of custody was implemented for the sample submission by the geologists to the analytical laboratory.

The details of the samples to be submitted were recorded on standard documentation on site. The samples were checked by sampling personnel and the geologists prior to shipment. All details were provided on the despatch notes.

The assay certificates were e-mailed to the Project Geologist as csv files. Cross checking of the assay certificates with the results was possible as these included details of each batch including the shipment codes.

#### **7.6.5 Relative Density Determinations**

Bulk density data determinations were derived via the Archimedean 'weight in air/weight in water' technique, using an appropriate procedure and an accurate balance. The core is essentially impermeable and contains no vugs or voids. These density determinations are therefore considered appropriate for bulk density. In total, 8,814 bulk density measurements were taken, representing samples submitted for chemical analysis and representing the various lithologies of the MG Chromitite Layers. The data was collected from all diamond drill boreholes in the latest drilling campaign.

#### **7.7 UG1 Chromitite Layer**

The UG1 Chromitite Layer was not logged in detail in the previous drilling campaigns as it was not deemed economic. In 2012, the core was relogged and sampled to determine the nature of the UG1 Chromitite Layer and allow the estimation of a mineral resource. An outcrop position of the UG1 Chromitite Layer was projected based on the present mining of the UG1 Chromitite Layer and the borehole intersections.

The layers have a north-south dip direction. All drilled boreholes on the northern side of the outcrop intersected the Layer at the anticipated depths; an indication of continuity of mineralization and consistency in dip angle. All boreholes that intersected the UG1 Chromitite Layer were logged and sampled. The logging was done 1m above and below the UG1 Chromitite Layer.

#### **7.7.1 Sampling Methodology**

Representative samples over various UG1 Chromitite Layer intersections were marked out on the core with a paint marker. Unique sample numbers were assigned and information for each sample recorded in a sample ticket book. Core with samples marked out was

photographed with a digital camera both dry and wet. Subsequently the core was cut in half vertically along its length and across to obtain the marked out samples. Only half core was submitted for analyses. The other half remained in the core tray for future reference.

The focus during sampling was to choose sample intervals according to lithologies in order to separate the mineralized layer from the host rock.

Sample intervals varied from an absolute minimum of 15cm for NQ core (20cm for BQ) to a maximum of 35cm. Chromitite samples included a 0.5 to 2cm host rock margin to avoid PGM and chrome loss during the core cutting process. This is the recognised standard for sampling of chromitite and PGM deposits in the industry

Quality control monitoring protocols involved submission of sample blanks, duplicates and certified standards with the core sample batches.

Each sample was bagged separately with the ticket number inside and the sample number also written on the outside of the sample bag. A dispatch form was submitted along with samples to ensure the total number of samples and correct sample numbers were recorded.

The sampling methodology is appropriate and supports the mineral resource estimate and classification made.

### **7.7.2 Analytical Procedures**

Sample preparation was undertaken in the SGS Lakefield laboratory in Johannesburg. The sample preparation was undertaken using a jaw crusher to crush samples to minus 10mm in size. Pulverising of the samples is undertaken to achieve 85% minus 75µm in size.

Analyses were undertaken by SGS Lakefield, a certified laboratory. All samples were assayed for major oxides by XRF fusion and PGM by 6E NiS/MS. Selected samples were analysed for base metals by ICP Fusion D/OES.

The assay techniques used are considered appropriate for the major elements, PGM and base metal analyses and suitable for use in a mineral resource estimate.

### **7.7.3 Chain of Custody – Responsibility and accountability**

The full chain of custody was implemented for the sample submission by the geologists to the analytical laboratory. The details of the samples to be submitted were recorded on standard documentation on site. The samples were checked by sampling personnel and the geologists prior to shipment. All details were provided on the despatch notes. The assay certificates were e-mailed to the Geologist as csv and pdf files. Cross checking of the assay certificates with the results was possible as these included details of each batch.

#### **7.7.4 Bulk Density Measurements**

Bulk density data determinations were derived via the Archimedean 'weight in air/weight in water' technique, using an appropriate procedure and an accurate balance. The core is essentially impermeable and contains no vugs or voids. These density determinations are therefore considered appropriate for bulk density. In total, 534 bulk density measurements were taken representing samples submitted for chemical analysis and representing the various lithologies of the UG1 Chromitite Layers. The density measurements were not taken from sheared and fractured cores as they are permeable.

#### **7.8 Summary**

The geological, collar and downhole survey data is considered to conform to international standards and to be suitable for use in a mineral resource estimation. The assay data are considered acceptable in terms of both assay precision and accuracy.

Coffey is not aware of any sample technique and data audits and reviews other than reported above.

## 8 Mineral Resource Estimation

### 8.1 Database

#### 8.1.1 Borehole Database Development

Coffey was commissioned to manage the drill programme in 2007. The following key digital data relevant to the resource estimation study was compiled by Coffey:

- A borehole database that included collar location, downhole survey, assay, and geology data was compiled.
- Bulk density data and documentation.
- Assay quality control data.

In November 2013, Coffey updated the borehole database utilising the knowledge gained during the exploration phase in 2008 and the subsequent knowledge gained during the open pit mining operation. The update consisted of the coding and re-coding of the various stratigraphic layers that constitute the MG Chromitite Layer packages and adding additional codes for units for which a better understanding had been gained. The following are new units that were not present in the initial database.

- The MG4AD Layer which consists of disseminated mineralisation identified above the MG4A Chromitite Layer.
- The MG3D Layer which consists of disseminated mineralisation has been defined. It is located directly above the primary MG3 Chromitite Layer.
- The MG3 Zebra Layer has been defined. It consists of an accumulation of thinly laminated chromitite layers located directly below the MG3 Chromitite Layer.
- Sub units within the parting between the MG2C and MG2B Chromitite Layers have been identified. These are as follows:
  - A layer named the PGEM Layer has been identified as within the parting.
  - Between this layer and the MG2C Chromitite Layer above is the PGEM+ Layer.
  - Between the PGEM Layer and the MG2B Chromitite Layer below is the PGEM- Layer.

#### 8.1.2 Borehole Database Validation

The drilling data was reviewed and validated prior to the resource evaluation studies.

The following general activities were undertaken during database validation:-

- Ensuring compatibility of total borehole depth data in each of the collar, survey, assay and geology database files.
- During the drilling programme the geological model was continuously updated and the boreholes validated on an individual basis.
- Inspections of the borehole core and consideration of the assay data to ensure understanding of the mineralisation and eliminate problems with the correlation of assay results and geology.
- Checking of borehole survey data for unusual or suspect downhole deviations.

- Ensuring sequential downhole depth and interval data in the survey, assay and geology files.
- Replacements of “less than detection limit” character entries with nominal low-grade values (half detection limit).
- Coding and re-coding of the various stratigraphic layers of the borehole database utilising the knowledge gained during the exploration phase in 2008 and the subsequent knowledge gained during the open pit mining operation.

### **8.1.3 Assay Quality Control Data Assessment**

The quality control protocol implemented during the exploration drilling required the use of two different certified standards, a blank and a coarse reject duplicate for every 20 samples. The intended aim was 5% coverage of each control. In addition some 5% of the samples were analysed by a referee laboratory (SGS Lakefield) (Table 7.6.3\_1)

### **8.1.4 Conclusion**

The conclusion drawn is that the precision and accuracy of the assay data is acceptable for use in a mineral resource estimate.

## **8.2 Bulk Density Database**

Bulk density data was collected routinely. In total, 8,814 bulk density measurements were taken, representing samples submitted for chemical analysis and representing the various lithologies of the MG Chromitite Layer. The data was collected from all diamond drill boreholes in the latest drilling campaign. Examination of the data confirmed internal constancy with the ranges and averages typical of the lithologies represented.

## **8.3 Geological Modelling**

The Tharisa Mine deposit was modelled using the 3D software packages Datamine™Studio Version 3.21.6774.0 and Micromine™ Version 11. The geological modelling consisted of defining and then modelling the most appropriate contact in each Chromitite Layer across the property (Table 8.3\_1).

Table 8.3_1 Summary of Stratigraphic Unit modeled			
	Unit	Contact Modeled	
	MG4A Chromitite Layer	Base	
	MG4 Chromitite Layer	Top	
	MG3D MG3 MG3ZEB	MG3 Chromitite Layer	Base
	MG2C MG2B MG2A	MG2 Chromitite Layer	Top MG2C Chromitite Layer
	MG1	MG1 Chromitite Layer	Top
	MG0	MG0 Chromitite Layer	Base

Wireframe surfaces for each of the five Chromitite Layer were modelled based on the borehole intersections. The models were validated to ensure that they did not cross and that the stratigraphic sequence was maintained. It was noted that the dip flattens with depth and the deepest borehole provided unusual data.

For the open pit area, more detail was required. Wireframe surfaces for each of the eighteen units were modelled based on the borehole intersections. The thickness of some of the units i.e. the vertical distance between some of the surfaces was small. The models were validated to ensure that they represented the geometry of the units and that the stratigraphic sequence was maintained. The resulting surfaces are stacked on top of each other demonstrating the tabular nature of the deposit. The modelling utilised the other structural information gained from the aeromagnetic survey, in pit observations, surface mapping, trenching etc.

An examination of the geology revealed that it changes from east to west. In the east the stratigraphy was typically well defined with all the layers being recognisable. Towards the west, the geology becomes more complex. The identification and delineation of all stratigraphic units become more difficult as the separation of the units became narrower with some units overlying other units directly. Based on these observations a cut off was defined separating the eastern side of the property which is more constant geologically from the western part where the

geology is significantly more complicated. This boundary also represents the extent where the mineral resource can be declared due to the uncertainties in the geology to the west.

#### 8.4 Statistics

The data was coded for the different units within the MG Chromitite Layer package. Statistical analysis was then completed on both the raw and composite data grouped by unit type after examination of the data indicated that the units defined different geologically distinct populations and are well defined statistically (Table 8.4\_1). Summary descriptive statistical analysis was completed based on the various geological units of the MG Chromitite Layer package

DESCRIPTION	LAYER	STATIGRAPHY
4A Disseminated Hangingwall	4AD	MG4
MG4A	4A	
Parting MG4A-MG4	4A4	
MG4	4CR	
Parting MG4-MG0	44Z	
MG4(0)	4Z	
Parting MG4-MG3	4Z3	
3CR Disseminated Hangingwall	3D	MG3
MG3	3CR	
Zebra 3CR Footwall	3ZEB	
Parting MG3-MG2	2CHW	
MG2C	2C	MG2
PGEM Hangingwall	PGEM+	
PGEM Layer	PGEM	
PGEM Footwall	PGEM-	
MG2B	2B	
Parting MG2B-MG2A	BA	
MG2A	2A	
Parting MG2-MG1	2A1	
MG1	1CR	MG1
MG0	MG0	MG0

#### 8.5 Compositing

Each intersection was composited across the full thickness of each unit as defined in the coding in Table 8.4\_1. The Pt, Pd, Rh, Au, Ru, Ir, Os, Cu, Ni, Al, Ca, Cr, Cr<sub>2</sub>O<sub>3</sub>, Fe, Mg and Si concentrations were composited utilising the weighting by density and thickness. This is considered necessary as the lithologies have significantly different densities. An analysis of the unit thickness showed that there is little correlation between the concentration and thickness confirming that the use of concentration was appropriate for use in grade estimation.

## 8.6 Data Cutting

An assessment of the high-grade composites was completed to determine whether high-grade cutting was required. The approach taken to the assessment of the high-grade composites and outliers is summarised as:-

- Detailed review of histograms and probability plots with significant breaks in populations interpreted as possible outliers.
- Investigation of clustering of the higher grade data. High-grade data which clustered were considered to be real while high grade composites not clustered with other high grade data were considered to be a possible outlier and requiring further consideration either through cutting and/or search restriction.
- The ranking of the composite data and the investigation of the influence of individual composites on the mean and standard deviation plots.

Where possible outliers were identified, an examination of the data was undertaken to confirm whether this was indeed an outlier. The potential influence on the mineral resource estimate was also considered. After this examination and assessment, no high grade cutting or capping was undertaken.

## 8.7 Variography

Variography is used to describe the spatial variability or correlation of an attribute (Pt, Pd, Rh, Au, Cu, Ni etc). The spatial variability is traditionally measured by means of a variogram, which is generated by determining the averaged squared difference of data points at a nominated distance (h), or lag (Srivastava and Isaacs, 1989). The averaged squared difference (variogram or  $\gamma(h)$ ) for each lag distance is plotted on a bivariate plot, where the X-axis is the lag distance and the Y-axis represents the average squared differences ( $\gamma(h)$ ) for the nominated lag distance.

The variography was calculated and modelled in the geostatistical software, Datamine. As only weak anisotropy was determined, all experimental variograms were generated as an omnidirectional isotropic variogram. The nugget effects were considered after examination of the closely spaced boreholes and deflections as well as consideration for other chromitite layers in the Bushveld Complex. The nugget effects are generally moderate to high, typical of the platiniferous horizons of the Bushveld Complex. Where appropriate, variograms were developed for the estimations (Table 8.7\_1).

	MG4AD Chromitite Layer	MG4A Chromitite Layer	PARTING MG4 – MG4()	MG3D Chromitite Layer	MG3 Chromitite Layer	MG4ZEB Chromitite Layer	MG2C Chromitite Layer	MG2 PGEM+	MG2 PGEM	MG2 PGEM-	MG2B Chromitite Layer	MG2A Chromitite Layer	MG1 Chromitite Layer	MG1 Chromitite Layer
Thickness	*	m	*	m	m	*	m	m	*	m	m	m	m	m
3PGE+Au	g/t	g/t	*	g/t	g/t	*	*	g/t	*	g/t	g/t	g/t	g/t	g/t
Cr <sub>2</sub> O <sub>3</sub>	%	%	*	%	%	*	%	%	*	%	%	%	*	%
Density	*	t/m <sup>3</sup>	*	t/m <sup>3</sup>	t/m <sup>3</sup>	*	t/m <sup>3</sup>	t/m <sup>3</sup>	t/m <sup>3</sup>	t/m <sup>3</sup>	t/m <sup>3</sup>	t/m <sup>3</sup>	*	t/m <sup>3</sup>
Cu	*	ppm	*			*	*	ppm	*	ppm	*	*	*	ppm
Ni	ppm	ppm	*	ppm	ppm	*	ppm	Ppm	ppm	ppm	ppm	ppm	ppm	ppm
Cr	%	%	*	%	%	*	*	%	*	%	%	%	*	%
Pt	*	*	*	g/t	g/t	*	*	g/t	g/t	g/t	g/t	g/t	g/t	g/t
Pd	g/t	*	*	*	*	*	*	g/t	g/t	g/t	g/t	g/t	g/t	g/t
Au	*	g/t	*	g/t	*	*	*	*	g/t	*	*	*	*	g/t
Rh	g/t	*	*	g/t	g/t	*	g/t	g/t	g/t	g/t		g/t	g/t	g/t
Ru	g/t	*	*	g/t	g/t	*	g/t	g/t	g/t	g/t	g/t	g/t	g/t	g/t
Os	g/t	*	*	g/t	g/t	*	g/t	g/t	g/t	g/t	g/t	g/t	g/t	g/t
Ir	g/t	g/t	*	g/t	g/t	g/t	g/t	g/t	*	g/t	*	g/t	g/t	g/t
Al	*	%	%		%	*	%	%	%	%	*	*	%	%
Ca	*	*	%	%	%	%	%	%	%	%	%	%	%	%
Si	%	%	*		%	%	%	%	%	%	%	%	*	%
Fe	*	%	*	%		%	%	%	%	%	%	%	*	%
Mg	*	%	*	%	%	%	%	%	%	%	%	%	*	%

\*- no variogram modeled and estimate undertaken using inverse distance squared

## 8.8 Block Model Development

A series of two-dimensional seam model-type estimates based on geologically and geochemically defined units within the MG Chromitite Layer cycle, was undertaken (Table 8.4\_1). Based on the average spacing of surface boreholes and the requirements of the mine design, a parent block size of 100m x 100 was used. No rotation of the model was undertaken.

In to this model, for each unit, grade variables and layer thicknesses were interpolated.

- The MG0 Chromitite Layer was estimated as a single unit.
- The MG1 Chromitite Layer was estimated as a single unit.
- The MG2 Chromitite Layer was estimated as five units – three chromitite layers (MG2A Chromitite Layer, MG2B Chromitite Layer and MG2C Chromitite Layer) with the two partings being estimated independently due to the different geological and geochemical characteristics. The upper parting is further subdivided by a platiniferous layer (PEGM) into a lower parting (PEGM-) and an upper parting (PEGM+). Seven units – MG2C, PGEM+, PGEM-, MG2B, MG2B-MG2A parting and MG2A Chromitite Layer.
- The MG3 Chromitite Layer was estimated three separate units - MG3D, MG3 Chromitite Layer and MG3 Zebra.
- The MG4 and MG4A Chromitite Layers were estimated as five units – three chromitite layers (MG4(0) Chromitite Layer, MG4 Chromitite Layer and MG4A Chromitite Layer) with the two partings being estimated independently due to the different geological and geochemical characteristics.

The data supplied included the 'collar' coordinates and survey data for both the mother holes and deflections. The data from the deflections thus formed part of the database as if it were an independent borehole. Each deflection within the borehole database was retained as separate data. These deflections have been offset from the surveyed chromitite layer intersection location of the mother hole by a nominal 1° at the top of wedge position. Where multiple deflections are developed, the deflections have been distributed around the borehole. The choice of displacement is arbitrary, given the scale of the borehole spacing. Maintaining the individual deflections as separate data rather than compositing the deflections to a single intersection composite is preferred.

In addition to the mineral resource estimate, the block model was utilised for subsequent mining studies. The precision of a block estimate is a function of the block size, related to the distribution of local data and the variogram structure. Although the MG Chromitite Layers have lateral variations, based on the distribution of data it is not considered possible to identify and hence it is considered impractical to selectively mine the higher grade blocks. Most of the selectivity is based on geological and geochemical characteristics of the different chromitite layers within the MG Chromitite Layer package i.e. selectivity dependent on the vertical stratigraphy.

## 8.9 Grade Estimation

The mineral resource estimation for the Tharisa Mine was completed using Ordinary Kriging and inverse distance weighting of borehole data. The intersected width, the density and the concentration of Pt (g/t), Pd (g/t), Rh (g/t), Au (g/t), Ru (g/t), Ir (g/t), Os (g/t), Cu (ppm), Ni (ppm), Al (%), Ca (%), Cr (%), Cr<sub>2</sub>O<sub>3</sub> (%), Fe (%), Mg (%) and Si (%) of each of the units identified

within the MG Chromitite Layers where the concentration or grade is for the composite over the thickness of that unit. The mineral resource estimate was completed for the area of the mining right of Tharisa Minerals.

The relationship between grade and thickness was examined for the most economically important elements namely 3PGE+Au (g/t) and Cr<sub>2</sub>O<sub>3</sub> (%). Based on this analysis, the concentration of each element was estimated independently from the thickness (LENGTH) of the units. The grade estimation was carried out using the Datamine software.

#### **8.9.1 Search Criteria**

Based on the understanding of spatial variation of the data and of the geology, a spherical search was adopted. A number of search radii were tested for the different elements. The final selection of the search criteria was made after the various options were tested on the various units. The selection was based on an examination of the global grades as well as consideration for the geological variability and the observed east – west grade trends. The grade estimation utilised the search parameters presented in Table 8.9.1\_1.

#### **8.9.2 Model Validation**

A visual and statistical review was completed on the estimates prior to accepting the model. Acceptable levels of mean reproduction are noted between the block model and input composite data.

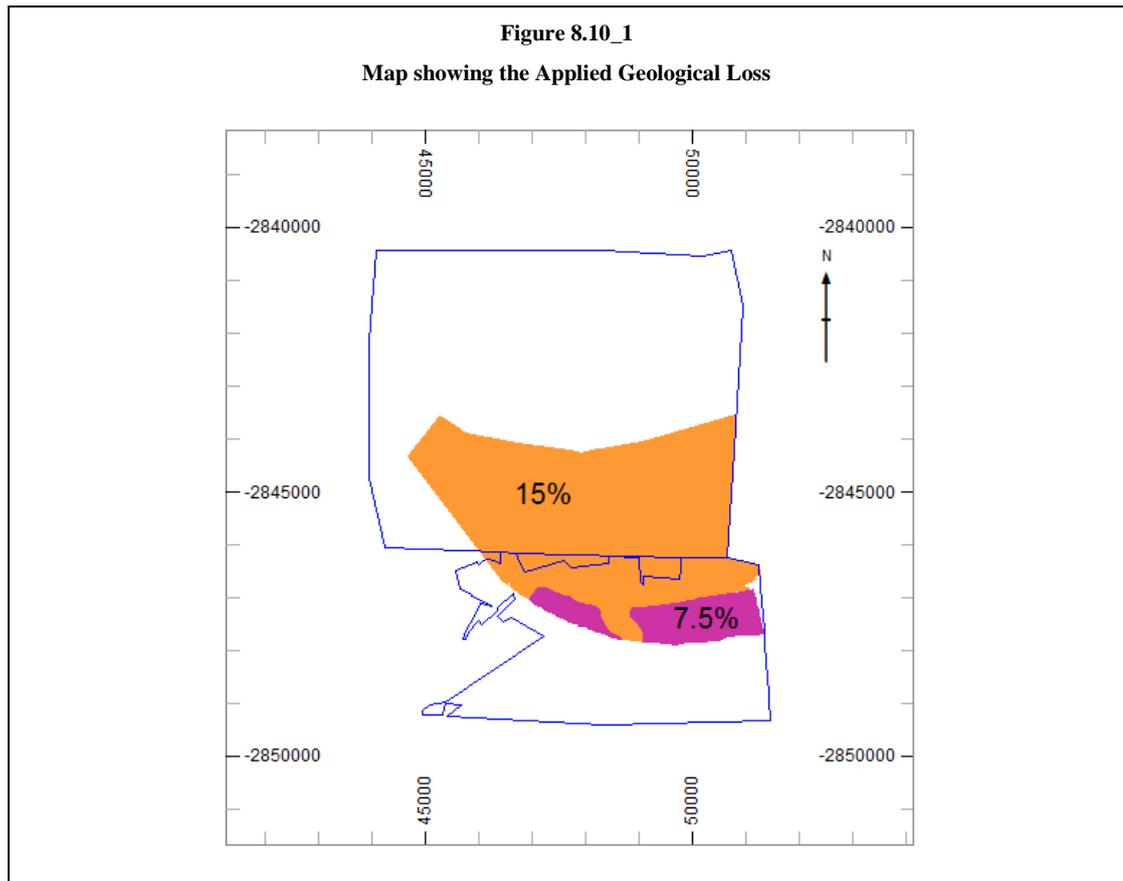
**Table 8.9.1\_1**  
**Sample Search Parameters**

	First Search Volume			Second Search Volume			Third Search Volume		
	Search radius (m)	Min. No of Samples	Max. No of Samples	Search radius (m)	Min. No of Samples	Max. No of Samples	Search radius (m)	Min. No of Samples	Max. No of Samples
MG4AD	500	3	20	1000	3	20	8000	3	20
MG4A	500	3	20	1000	3	20	8000	3	20
MG4A-MG4 Parting	500	3	20	1000	3	20	8000	3	20
MG4	500	3	20	1000	3	20	8000	3	20
Parting MG4 – MG4(0)	500	3	20	1000	3	20	8000	3	20
MG4(0)	500	3	20	1000	3	20	8000	3	20
MG3D	500	3	20	1000	3	20	8000	3	20
MG3CR	500	3	20	1000	3	20	8000	3	20
MG3-Zebra	500	3	20	1000	3	20	8000	3	20
MG2C	500	3	20	1000	3	20	8000	3	20
PGEM+	500	3	20	1000	3	20	8000	3	20
PGEM	500	3	20	1000	3	20	8000	3	20
PGEM-	500	3	20	1000	4	20	8000	3	20
MG2B	500	3	20	1000	3	20	8000	3	20
Parting MG2B – MG2A	500	3	20	1000	3	20	8000	3	20
MG2A	500	3	20	1000	3	20	8000	3	20
MG1	500	3	20	1000	3	20	8000	3	20
MG0	500	3	20	1000	3	20	8000	3	20

## 8.10 Geological Loss

The major geological features that affect the Middle Group Chromitite Layer are faults, dykes, potholes and mafic/ultramafic pegmatites. The geological model developed presents a tabular deposit with some dykes and large displacement faults crossing the property. In addition larger potholes have been delineated. However the smaller scale faulting (<10m throw) and the presence of smaller potholes must be considered. The application of a geological loss is made based on a prior knowledge of the deposit and is intended to represent these areas where the Middle Group Chromitite Layer is replaced by mafic pegmatites, intersected by faults or dykes or disrupted by potholes.

The information gained from the current mining activities has served to inform the declaration of the geological loss in the areas that are anticipated to be mined by open pit. As a result the geological loss for the East Mine and the eastern side of the West Mine has been set at 7.5%. The geological loss for the remaining pit area has been set at 15% as has the area beyond the anticipated highwall where underground mining is planned to be undertaken. The details are depicted in Figure 8.10\_1.



### 8.11 MG Chromitite Layers Mineral Resource Reporting

The classification of the mineral resources was undertaken in accordance with the guidelines of the SAMREC Code. The Competent Persons responsible for the mineral resource estimation and classification are Mr. Ken Lomborg Pr.Sci.Nat. and Mr Alan Goldschmidt Pr.Sci.Nat..

The classification of the mineral resource was based on the robustness of the various data sources available, confidence in the geological interpretation, variability and various estimation service variables (e.g.: distance to data, number of data, maximum search radii etc).

### 8.11.1 Criteria for Mineral Resource Categorisation

The resource estimate was classified as a combination of Measured, Indicated and Inferred Resource based on the criteria set out in Table 8.11.1\_1.

Table 8.11.1_1 Confidence Levels of Key Criteria for Classification of MG Chromitite Layers of the Tharisa Mine						
Items	Discussion	Confidence				
		MG0	MG1	MG2	MG3	MG4/MG4A
Drilling Techniques	Diamond drilling to International Standard.	High	High	High	High	High
Logging	Standard nomenclature and procedures to international standards.	High	High	High	High	High
Drill Sample Recovery	The core recovery is estimated as >95% and is considered acceptable for mineral resource estimation.	High	High/Moderate (Core very friable with generally <90% recovery)	High	High	High
Sub-sampling Techniques and Sample Preparation	International standard for Diamond Drilling.	High	High	High	High	High
Quality of Assay Data	Available data is of international quality.	High	High	High	High	High
Verification of Sampling and Assaying	Complete QA/QC programme employed.	High	High	High	High	High
Location of Sampling Points	Survey of all collars with downhole survey.	High	High	High	High	High
Data Density and Distribution	Drilled with a spacing of 250m to 2000m.	Classification based on borehole density and understanding of the underlying geology and geochemistry				
Audits or Reviews		None	None	None	None	None
Database Integrity	Errors identified and rectified.	High	High	High	High	High
Geological Interpretation	Geological interpretation of each chromitite layer. Continuity of geology adequately demonstrated. Major structures identified.	High	High	High	High	High
Mineralisation Type	Able to correlate Chromitite Layers across the project.	High	High	High	High	High
Estimation and Modelling Techniques	Ordinary Kriging.	High	High	High	High	High
Cut-off Grades	Geological interpretation of the mineralised horizon for grade compositing	High	High	High	High	High
Mining Factors or Assumptions	None.	High	High	High	High	High

It should be noted that the core recovery on the MG1 Chromitite Layer was considerably more difficult due to the very friable nature of the chromitite layer. This resulted in a lower confidence in the assays and hence the lower classification of the mineral resource.

### 8.11.2 Mineral Resource Classification

The resource classification considers the above assessment and confidence in exploration data, geological understanding and grade estimation. The classification is presented in Figure 8.11.2\_1 for MG1 Chromitite Layer and Figure 8.11.2\_2 for the other Chromitite Layers.

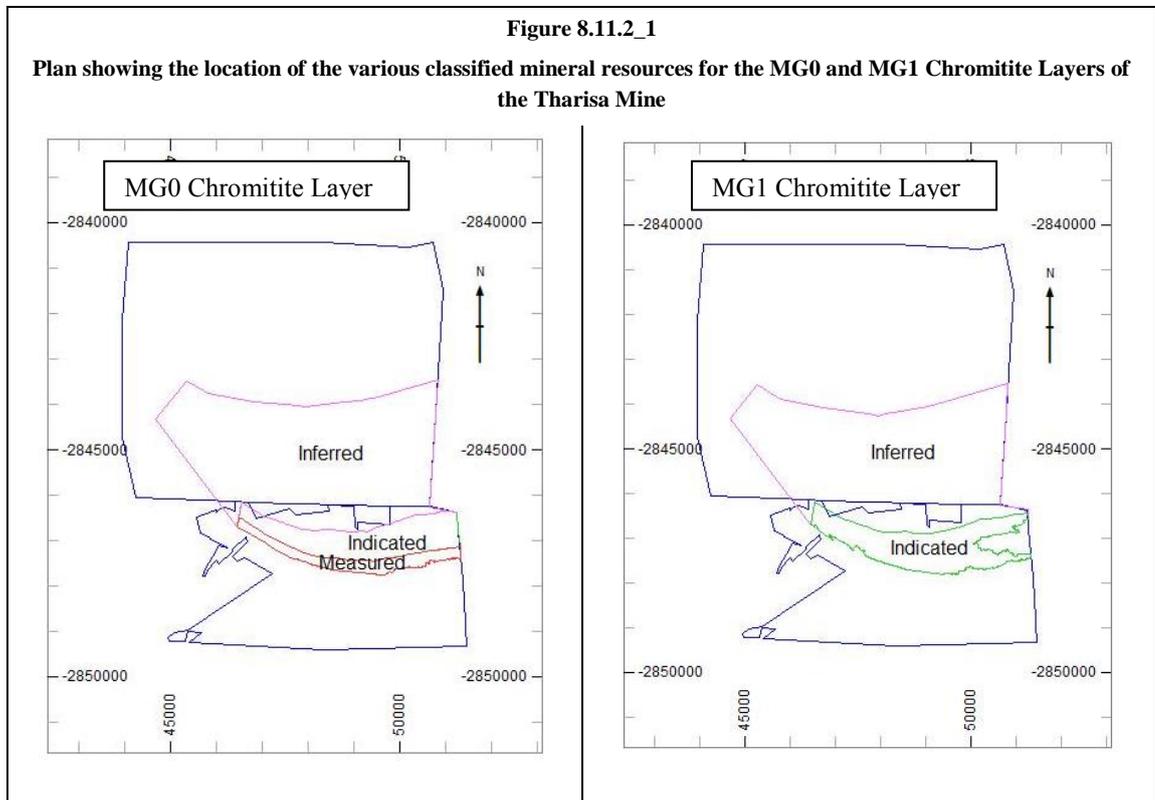
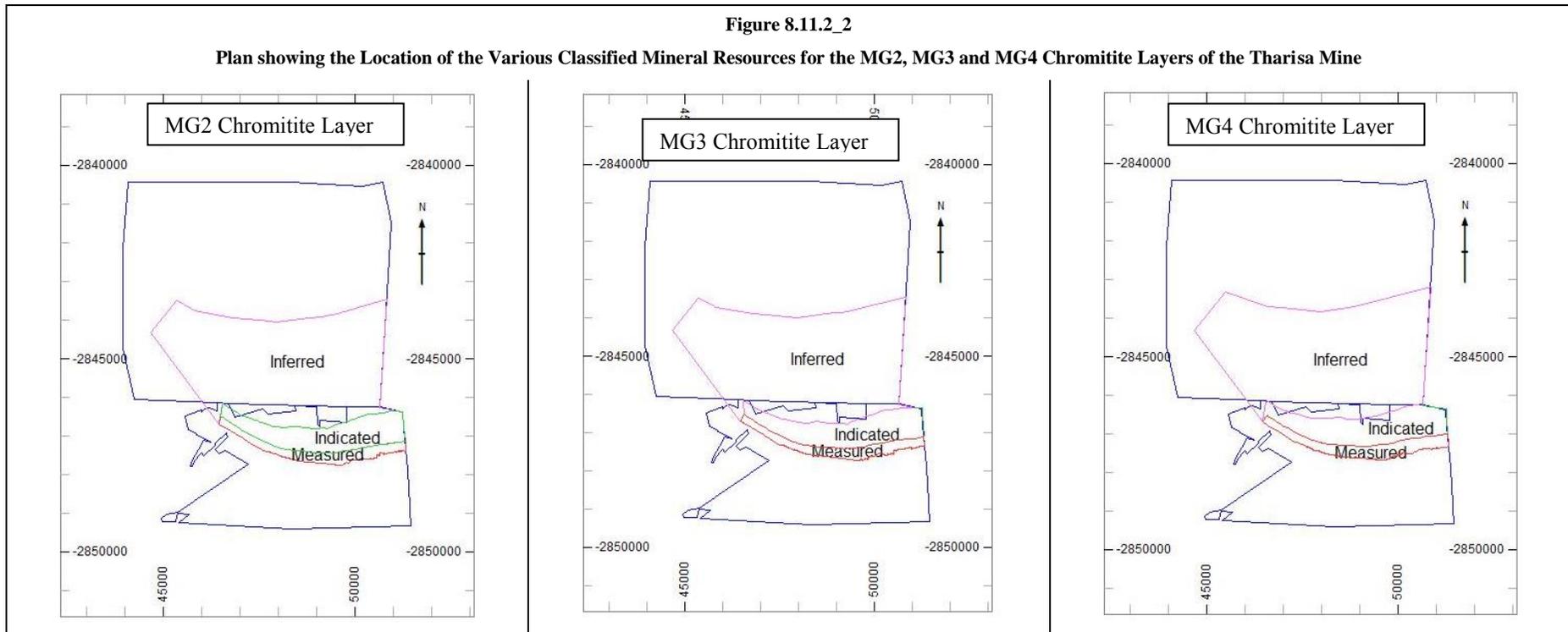


Figure 8.11.2\_2

Plan showing the Location of the Various Classified Mineral Resources for the MG2, MG3 and MG4 Chromitite Layers of the Tharisa Mine



## **8.12 Estimate of the Mineral Resources – 31 December 2015**

The September 2013 mineral resource statement was based on the interpretation of the structure and assay values available at that time. The mineral resource statement dated September 2014 was derived by depleting this estimate based on production figures of both tonnage and grade.

The Datamine block model that formed the basis for the September 2013 estimate has formed the basis of the present estimate of the mineral resources. No further exploration drilling has been completed thus primarily the structure and grade values interpolated into the 2013 block model remain valid.

Previously the location of the outcrop of each unit was projected to surface using the data from the borehole database. The present outcrop positions have now been surveyed and this new information has made it possible for the 2013 model to be updated. No new estimate of grade values has been completed.

### **8.12.1 Update of Geology Block Model**

Mining is generally advancing down dip from south to north. The geological block models have been updated by removing those parts of the models south of the newly surveyed outcrop positions.

### **8.12.2 Geological Loss**

No further information is available that makes it necessary to update the geological loss areas. As the outcrop positions move further north the volume of material within the 7.5% geological loss area close to the current mining operations has decreased more than the 15% geological loss area.

### **8.12.3 Classification of Mineral Resources**

As with the geological loss areas, there is no further information is available that makes it necessary to modify these perimeters. The Measured Resources have proportionally been 'depleted' more than the Indicated and Inferred Resources.

### **8.12.4 Mineral Resource Statement**

The Mineral Resource Statement for the Tharisa Mine with an effective date of 31 December 2015 is presented in Table 8.12.4\_1.

**Table 18.12.4 1**  
**Mineral Resource Statement for the Tharisa Mine (31 December 2015)**

<b>MG4A CHROMITITE LAYER</b>																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+ Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	6.234	1.43	3.69	24.82	0.40	0.15	0.12	0.003	0.26	0.04	0.05	0.67	59:22:18:0	1.02	39:15:12:0:25:4:5	1.12	204	760
<b>Indicated</b>	15.885	1.59	3.70	24.29	0.40	0.15	0.13	0.003	0.25	0.04	0.05	0.68	59:23:18:1	1.03	39:15:12:0:25:4:5	1.10	525	762
<b>Inferred</b>	68.476	1.43	3.70	25.18	0.39	0.14	0.13	0.004	0.26	0.05	0.05	0.67	59:21:19:1	1.03	38:14:12:0:26:4:5	1.11	2,263	763
<b>MG4 and MG4(0) CHROMITITE LAYER Package</b>																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+ Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	17.920	4.09	3.74	26.39	0.69	0.19	0.17	0.003	0.32	0.06	0.08	1.06	66:18:16:0	1.51	46:13:11:0:21:4:5	1.17	872	781
<b>Indicated</b>	29.790	2.99	3.65	24.75	1.08	0.22	0.21	0.003	0.36	0.08	0.11	1.51	71:15:14:0	2.06	52:11:10:0:18:4:6	1.20	1,972	730
<b>Inferred</b>	170.678	3.70	3.62	22.60	0.99	0.19	0.19	0.003	0.34	0.07	0.10	1.36	72:14:14:0	1.88	53:10:10:0:18:4:6	1.15	10,313	697
<b>MG3 CHROMITITE LAYER</b>																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+ Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	10.417	3.73	3.26	13.22	0.60	0.35	0.15	0.005	0.22	0.04	0.06	1.11	54:32:14:0	1.43	42:25:11:0:15:3:4	0.99	479	482
<b>Indicated</b>	23.412	4.28	3.22	17.99	0.75	0.44	0.19	0.005	0.27	0.05	0.08	1.39	54:32:14:0	1.79	42:25:11:0:15:3:4	1.08	1,347	603
<b>Inferred</b>	67.415	3.21	3.20	25.65	1.01	0.58	0.26	0.005	0.38	0.08	0.10	1.86	54:31:14:0	2.42	42:24:11:0:16:3:4	1.13	5,245	785
<b>MG2 CHROMITITE LAYER</b>																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+ Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	13.092	3.96	3.62	19.33	1.07	0.28	0.15	0.004	0.26	0.05	0.08	1.50	71:18:10:0	1.89	56:15:8:0:14:3:4	0.97	796	730
<b>Indicated</b>	42.716	4.37	3.67	17.80	0.98	0.28	0.15	0.004	0.24	0.05	0.07	1.42	69:20:10:0	1.78	55:16:8:0:14:3:4	0.92	2,388	733
<b>Inferred</b>	286.164	6.68	3.62	13.26	0.70	0.21	0.11	0.004	0.19	0.04	0.05	1.02	69:20:11:0	1.30	54:16:8:0:15:3:4	0.75	11,975	674

MG1 CHROMITITE LAYER																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>												0.00	#DIV/0!	0.00	#DIV/0!		-	
<b>Indicated</b>	14.322	1.23	3.89	33.38	0.34	0.22	0.11	0.004	0.48	0.08	0.08	0.67	50:32:17:1	1.30	26:17:9:0:37:6:6	1.34	599	810
<b>Inferred</b>	57.245	1.23	3.89	32.26	0.33	0.20	0.11	0.003	0.45	0.08	0.07	0.64	51:31:17:1	1.24	26:16:9:0:36:6:6	1.29	2,277	803
MG0 CHROMITITE LAYER																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	1.801	0.50	3.74	26.07	0.57	0.18	0.16	0.004	0.30	0.05	0.07	0.92	62:19:18:0	1.33	43:13:12:0:22:4:5	1.09	77	747
<b>Indicated</b>	3.188	0.72	3.75	27.08	0.61	0.19	0.17	0.004	0.32	0.06	0.07	0.98	62:20:17:0	1.44	43:14:12:0:22:4:5	1.10	147	752
<b>Inferred</b>	0.011	0.17	3.73	23.76	0.45	0.17	0.15	0.006	0.24	0.04	0.05	0.77	58:22:19:1	1.11	41:15:13:1:22:4:5	1.00	0.40	711
UG1 CHROMITITE LAYER																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>																		
<b>Indicated</b>	1.500	2.17	3.75	23.68	0.36	0.28	0.14	0.030	0.21			0.82	44:35:17:4			1.12	39	
<b>Inferred</b>																		
TOTAL MINERAL RESOURCE																		
	Tonnage (Mt)	True Thick (m)	Bulk Density (t/m <sup>3</sup> )	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ru (g/t)	Os (g/t)	Ir (g/t)	3PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	6PGE+Au (g/t)	Pt:Pd:Rh:Ru:Os:Ir	Cr:Fe	6PGE+Au (koz)	Ni (ppm)
<b>Measured</b>	49.464	2.68	3.73	21.51	0.73	0.24	0.16	0.004	0.28	0.05	0.07	1.14	64:21:14:0	1.53	48:16:10:0:18:3:5	1.07	2,428	699
<b>Indicated</b>	128.033	2.45	3.67	22.22	0.80	0.27	0.16	0.004	0.31	0.06	0.08	1.24	65:22:13:0	1.68	48:16:10:0:18:3:5	1.09	7,007	713
<b>Inferred</b>	651.488	3.11	3.74	19.88	0.74	0.23	0.15	0.004	0.28	0.05	0.07	1.13	66:21:13:0	1.54	49:15:10:0:18:4:5	0.98	32,072	712
<b>Total</b>	<b>828.984</b>	<b>2.95</b>	<b>3.73</b>	<b>20.38</b>	<b>0.75</b>	<b>0.24</b>	<b>0.15</b>	<b>0.004</b>	<b>0.28</b>	<b>0.05</b>	<b>0.07</b>	<b>1.15</b>	<b>66:21:13:0</b>	<b>1.56</b>	<b>48:15:10:0:18:4:5</b>	<b>1.00</b>	<b>41,507</b>	<b>712</b>
<p>Note: The mineral resource is declared to a depth of 750m below surface.  The consideration of realistic eventual extraction necessitates that the mineral resource considers the MG Chromitite Layer to be a geological unit and that all platinumiferous and chromiumiferous horizons will be mined and all PGM, Cu, Ni and Cr<sub>2</sub>O<sub>3</sub> recovered.  The UG1 Chromitite Layer is declared for the part that falls within the current proposed open pit  The mineral resource is reported inclusive of the mineral reserve</p>																		

## 8.13 UG1 Chromitite Layer

### 8.13.1 Methodology

The UG1 Chromitite Layer was modelled using the 3D software package Datamine™. The UG1 Chromitite Layer comprises the top chromitite layer, middling (pyroxenite/anorthosite) and bottom chromitite layers. It was necessary to further model individual layers because of the independent geochemical characteristics. Therefore three layers were modelled independently.

A plan showing the UG1 Chromitite Layer is presented in Figure 8.13.1\_1. East and West Mines were modelled independently as it was noted that they are of different populations. The boundary between east and west mines was put at the river. East Mine was further divided into two domains due to geology and grade considerations in the far eastern side.

In total seven databases were distinguished and modeled independently i.e West (top, middling, and bottom), East (top, middling and bottom) and Far East (one model).

As a result of the confidence in the geological model, each of the stratigraphic units was estimated independently as a layer and hard boundary was used. Each of the (Al<sub>2</sub>O<sub>3</sub>(%), CaO(%), MgO(%), Fe<sub>2</sub>O<sub>3</sub>(%), K<sub>2</sub>O(%), MnO(%), Na<sub>2</sub>O(%), P<sub>2</sub>O<sub>5</sub>(%), Cr<sub>2</sub>O<sub>3</sub>(%), (Pt (g/t), Pd(g/t), Rh(g/t), Ru(g/t), Ir(g/t), Au(g/t), width(m) and density) values were estimated independently using inverse power of distance (power of 2).

Mean densities for each domain were used in tonnage calculations as the variability was low.

### 8.13.2 Compositing

The data was composited by stratigraphic unit (UG1 Chromitite Layer) to produce a “reef only” grade as well as composited to sub-stratigraphic zones (i.e Top, Middling and Bottom Chromitite Layers) and domains within UG1 Chromitite Layer (i.e West and East’s Top, Middling and Bottom Chromitite Layers and Far East).

### 8.13.3 Statistical Analysis

A detailed statistical analysis was undertaken according to the geological model developed for each mineralised domain and for each metal element per composite. The composited data shows more or less normal distributions.

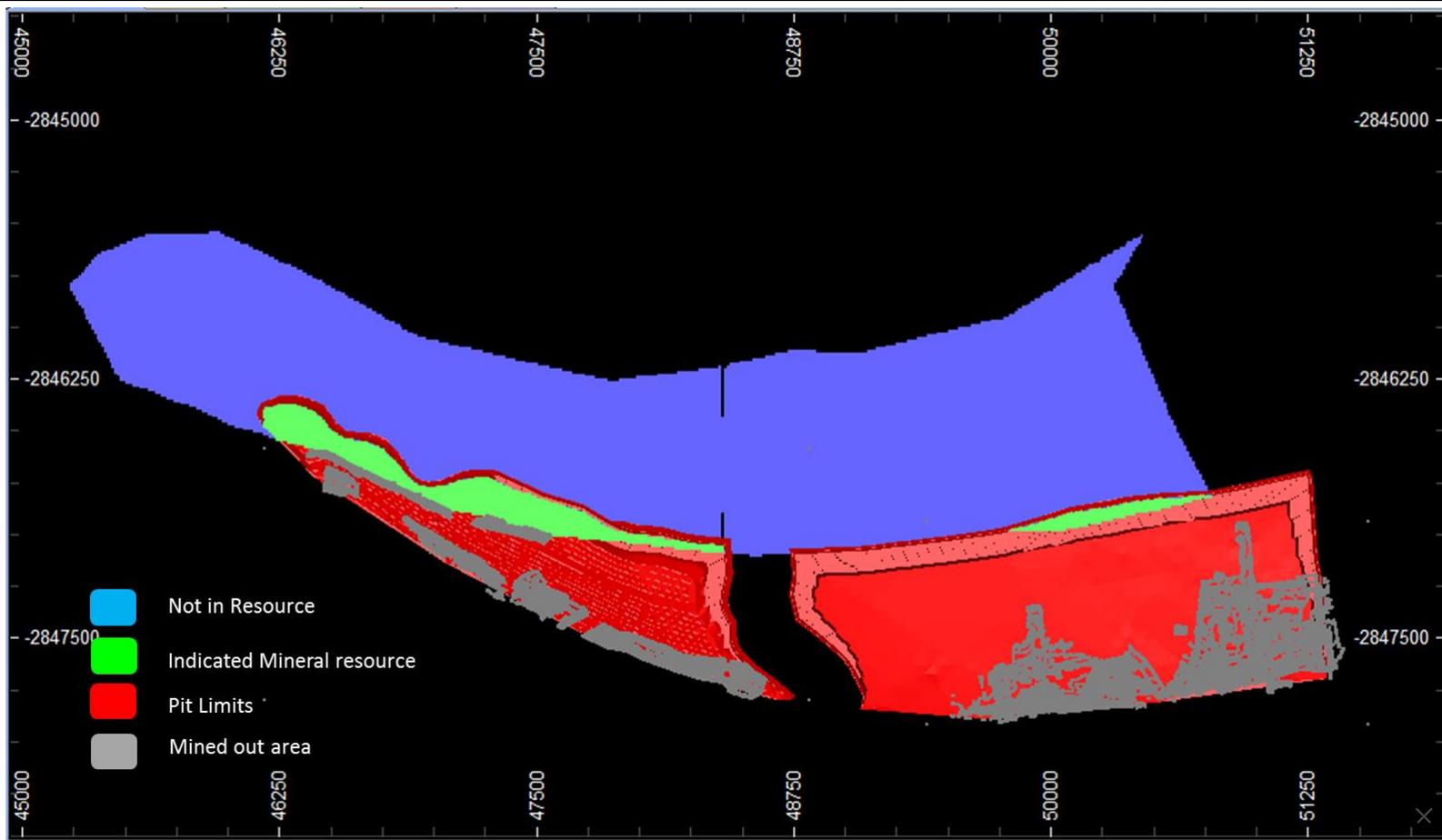
### 8.13.4 Geological Losses

The deposit is known to be intersected by few faults, barren mafic and ultramafic dykes as well as potholes and replacement pegmatites which both have an effect on stratigraphic and grade continuity. A geological loss of 15% was applied.

Figure 8.13.1\_1

Plan view of the UG1 Chromitite Layer's Mineral Resource.

With grey colour showing the position of final pit limits, green indicates present mining status on the Middle Group in the east and to the west both Middle Group (MG) and Upper Group (UG1) chromitites are being mined.



#### 8.14 UG1 Chromitite Layer Mineral Resource Reporting

The mineral resource in respect of the UG1 Chromitite Layer is reported in Table 8.14\_1. The classification of the mineral resources was undertaken in accordance with the guidelines of the SAMREC Code. The Competent Person responsible for the mineral resource estimation and classification is Mr. Ken Lomborg Pr.Sci.Nat.

The classification of the mineral resource was based on the robustness of the various data sources available, confidence in the geological interpretation, variography and various estimation service variables (e.g.: distance to data, number of data, maximum search radii etc).

Additional consideration has been given to the stand alone potential based on reasonable expectation of eventual economic extraction. It is therefore assumed that the UG1 Chromitite Layer is mined together with the Middle Group (MG) Chromitite Layers in the same open pit.

<b>Table 8.14_1</b> <b>Tharisa Minerals</b> <b>UG1 Chromitite Mineral Resource Estimation</b> <b>30 August 2012</b>									
	Layer	Thickness (m)	Tonnage (Mt)	Cr <sub>2</sub> O <sub>3</sub> (%)	Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	3PGE+Au (g/t)
<b>INDICATED MINERAL RESOURCE</b>									
<b>West Mine</b>	Top Layer	1.34	0.8	24.05	0.27	0.28	0.12	0.04	0.71
	Bottom Layer	0.92	0.6	23.13	0.48	0.29	0.17	0.03	0.97
<b>TOTAL</b>		2.26	1.4	23.70	0.36	0.29	0.14	0.03	0.82
<b>INFERRED MINERAL RESOURCE</b>									
<b>East Mine</b>	Top Layer	1.07	0.03	24.02	0.24	0.20	0.12	0.04	0.60
	Bottom Layer	1.00	0.02	19.10	0.28	0.10	0.12	0.04	0.55
<b>TOTAL</b>		2.07	0.05	23.01	0.26	0.17	0.13	0.04	0.60
<b>TOTAL RESOURCE</b>		<b>2.17</b>	<b>1.50</b>	<b>23.68</b>	<b>0.36</b>	<b>0.28</b>	<b>0.14</b>	<b>0.03</b>	<b>0.82</b>
*Assuming UG1 Chromitite Layer is mined together with the Middle Group (MG) Chromitite Layers									

## **9 Mining Engineering**

### **9.1 Background**

A feasibility study was concluded in October 2008. Various revisions to the mine plan were undertaken to match the requirements of the processing facilities, including both open pit and underground mine design and scheduling. The last revision was undertaken using the 2013 Mineral Resource update.

The selected exploitation strategy is the combined mining of MG1, MG2, MG3, MG4, MG4(0) and MG4A which extend from the surface to a depth of 750mbs at dips varying from 13° in the east to 16° in the west.

### **9.2 Geotechnical Assessment**

The mine is being excavated following the slope designs undertaken by Celtis Geotechnical and Open House Management Services. The current slopes are much shallower than the designed slope angles of 53° for sound rock and 45° for weathered rock and soil. This is due to the low stripping ratio, pursued for economic reasons. This will lead to a reduction in the final pit depth unless stripping is undertaken more rapidly.

The slope assessment was based on the on fracture logging and rockmass classification of 10 boreholes (eight geological boreholes and two additional boreholes to collect samples for rock strength testing) (James, 2008) and geotechnical data collected by Open House Management Solutions (Pty) Ltd (OHMS) in the current east and central pits of Tharisa Mine to determine stable slope angles (Cilliers and Bosman, 2013).

Further data collection and reassessment of the slope design will be undertaken as mining continues. However as the pit is still very shallow this has not yet begun.

#### **9.2.1 Geotechnical Environment**

During the visit to the mine for this review the following observations were made:

- There are no slopes which have been cut to the maximum design slope of 53° so all slopes which stable.
- The benches and berms are being mined to design standards.
- In the Far West Pit the initial vertical benches in highly weathered pyroxenite and soil are being cut over 10 m high. The rock engineering consultant has recommended that these benches be pushed back with 3 m benches.
- The stripping ratio is low and will have to be increased to achieve the planned final depth.
- The deepest part of the pits is about 50 m below surface.

No critical risks were observed.

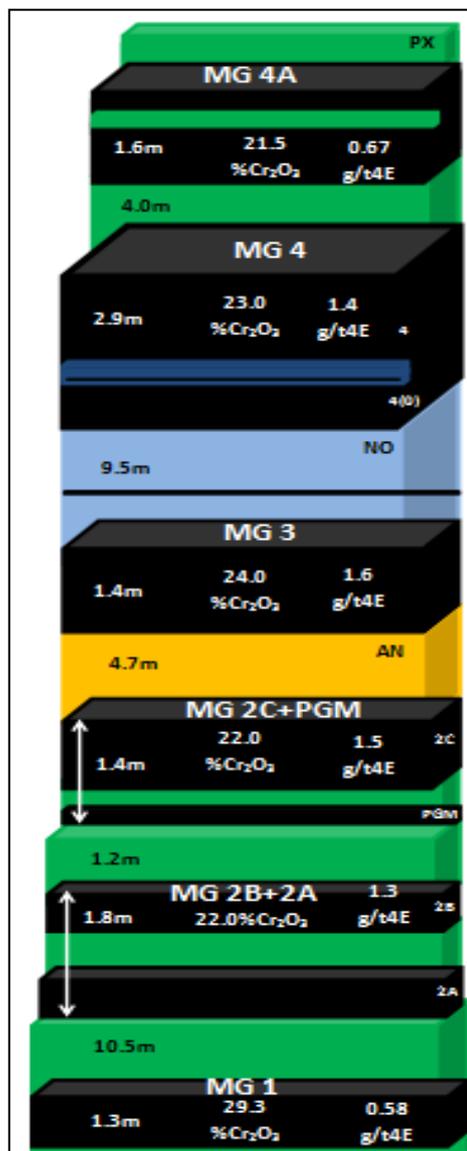
In 2013 a detailed geotechnical study was undertaken by OHMS at the mine consisting of face mapping in the existing east and central pits. Samples were collected from existing exploration boreholes for rock strength testing. The major lithological units in the ore body were tested for Uniaxial Compressive Strength (UCS), Density, Elastic Modulus and Poisson's Ratio.

These boreholes were selected to be at the location of the final pit walls.

There was also a previous geotechnical investigation in 2008 which included fracture logging and rock mass ratings of eight geological boreholes before splitting. The boreholes were selected to sample the area of the ore body and two additional geotechnical boreholes were drilled for sampling and strength testing.

It is planned to mine all the MG Chromitite Layers from the MG0 to the MG4A Chromitite Layers in the open pit (Figure 9.2.1\_1). The MG Chromitite Layers sub outcrop beneath black turf soil and are separated by middlings of pyroxenite, anorthosite and norite. The footwall of the MG0 Chromitite Layer consists of pyroxenite.

Figure 9.2.1\_1  
Generalised Stratigraphy of the MG Chromitite Layers



### Structure and rock fabric

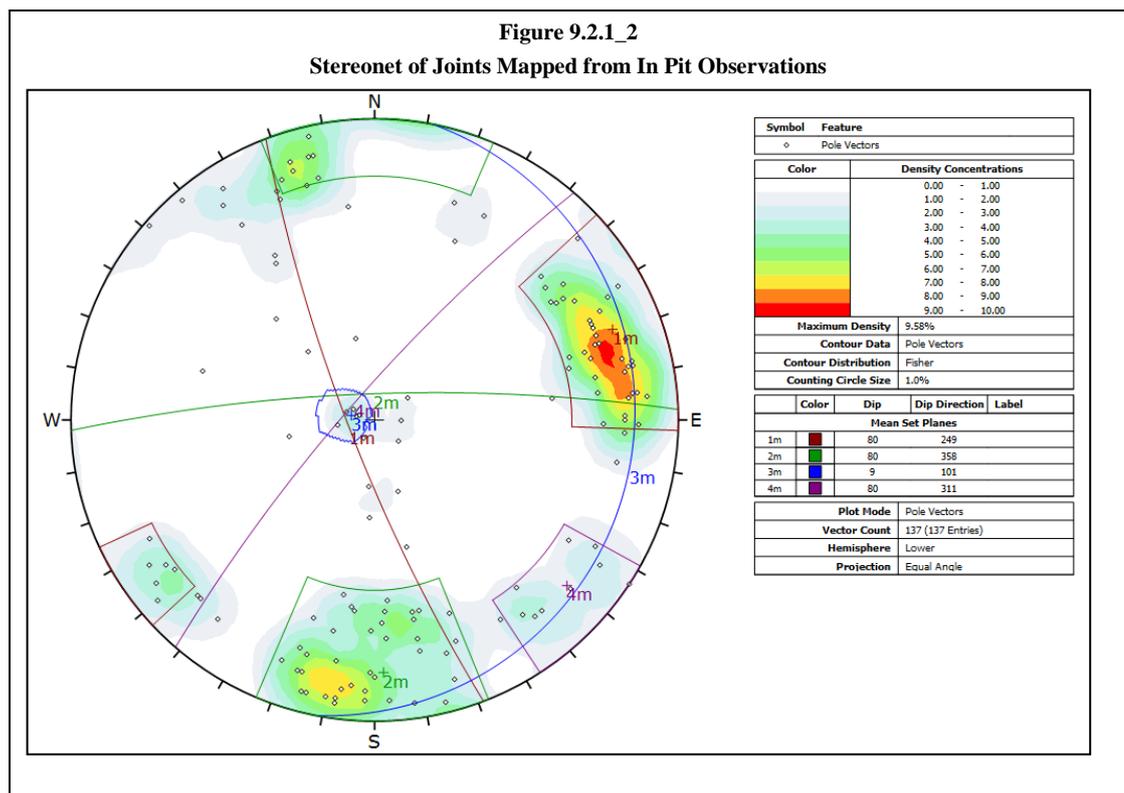
In order to quantify the predominant orientation of geological structures in the various rock types, OHMS took measurements of exposed discontinuity surfaces in the east and central pits.

The measurements were analysed using lower hemispherical stereonet projections (Figure 9.2.1\_2). Distinct joint sets were defined from Fischer concentration contours of poles. A total of 137 observations were mapped at various locations in the current pits. Four distinct clusters were identified and grouped in sets (Table 9.2.1\_1). A number of randomly orientated joints, not conforming to the identified sets, were identified. Only two of these joint

sets were identified as prominent, the flat dipping joints were identified as related to the igneous layering.

Joint set	Dip (degree)	Dip Direction
J1	8000000	249
J2	80	358
J3	9	101
J4	80	311

The exposed rock surfaces in the open pits were also limited as most of the areas were affected by blasting damage. Unfortunately the mapping could therefore not be performed in each lithology. No regional structures were mapped or logged.



**Structure and rock fabric**

The only geological structures of note are a major fault which strikes approximately east west and is near vertical. It should have no major effect on the open pit mining. Although faulting is limited in the area, the majority of minor faults are anticipated to be of the high angle-normal or reverse faults.

A thin shear zone which is often altered is located below or in the MG1 Chromitite Layer. Due to its position it should have no effect on the design of the open pit. However in localised areas it may mean additional support or larger pillars needed in the underground mine.

From the site visits the following observations were made:

The drill core from the geological drilling campaign is in a good state and is stored in the core shed on the property.

Some of the RoM production has been affected by poor fragmentation. An accurate geotechnical model would provide information to optimise the blasting and reduce fragmentation issues.

#### Rock mass quality

The rock mass quality was quantified by OHMS using the RMR methodology proposed by Bieniawski and for the purpose of comparison the Bartons Q rating was also determined. The rock mass classification was done from exposures in the current east and central pit. Figure 9.2.1\_3 illustrates the methodology for rating. The results are presented in Table 9.2.1\_2.

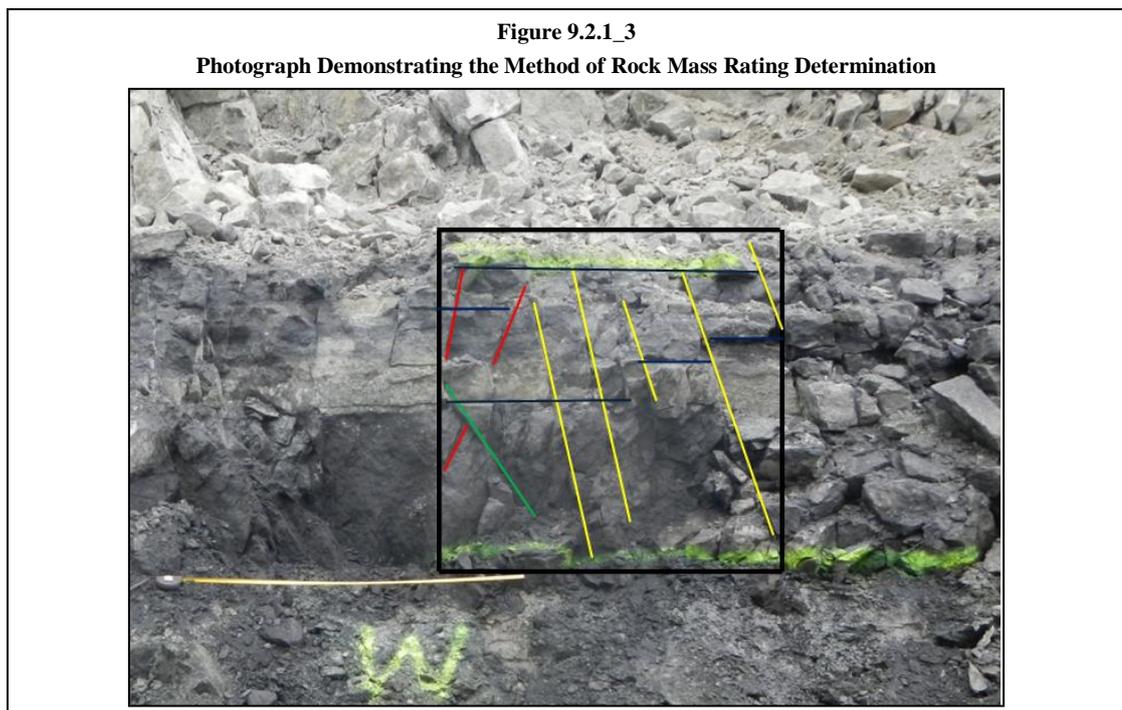


Table 9.2.1_2 Tharisa Minerals Summary of Rock Mass Ratings						
Area	MG1 Chromitite Layer	MG2 Chromitite Layer	MG3 Chromitite Layer	MG4 Chromitite Layer	MG1- MG2 Chromitite Layers Parting	MG2- MG3 Chromitite Layers Parting
RMR	68	69	65	71	74	73
Q Rating	6.01	13.4	10.05	13.4	13.99	13.4

An adjusted MRMR value is used to take into account weathering. The rock mass ratings used for design purposes also allowed for existing blast damage. An MRMR average value of 53 was derived for the rock mass.

#### Rock strength testing

Samples were selected for a series of uniaxial and triaxial strength tests. All tests were conducted strictly according to the prescribed ISRM procedures.

The uniaxial compressive strength tests, of core samples collected from fresh rock, were performed to also quantify the Young's modulus and Poisson's ratio of the rocktypes. The UCS values obtained from the laboratory tests were evaluated using the Modulus ratio method: In addition Brazilian indirect tensile strength (UTB) testing was carried out which also confirmed the accuracy of the UCS values obtained as it is generally assumed that the UTB value approximates 10% of the UCS.

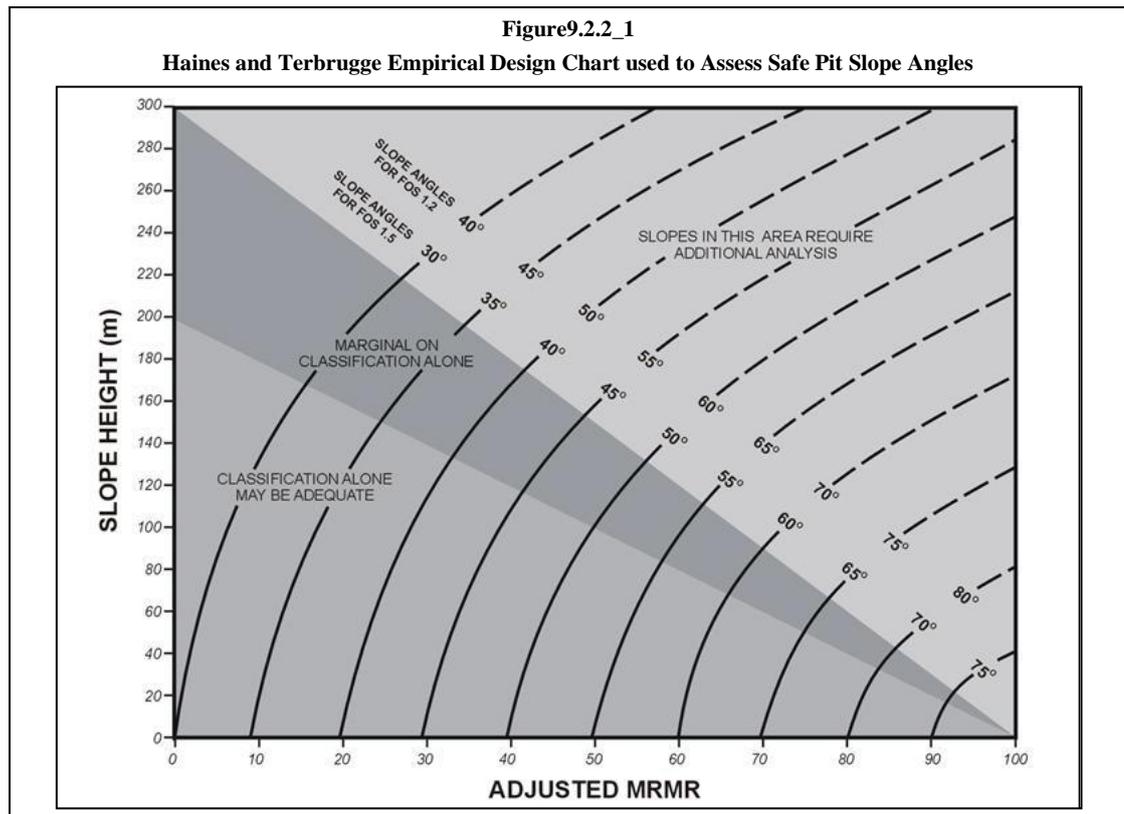
Table 9.2.1_3 Tharisa Minerals Summary of Rock Strengths		
Lithology	UTB method	Modulus Ratio method
Anorthosite	270.5MPa	229.08MPa
Pyroxenite	197.0MPa	186MPa

#### Hydrogeology

During the visits there was evidence of groundwater seepage from the exposed highwalls. Pit dewatering is conducted from toe drains at the advancing highwall. The hydrogeology is being monitored for environmental reasons as the mine deepens, this data should be incorporated in the geotechnical data base. The OHMS slope design is based on a dry slope as the pit will be dewatered.

### 9.2.2 Open Pit Slope Design

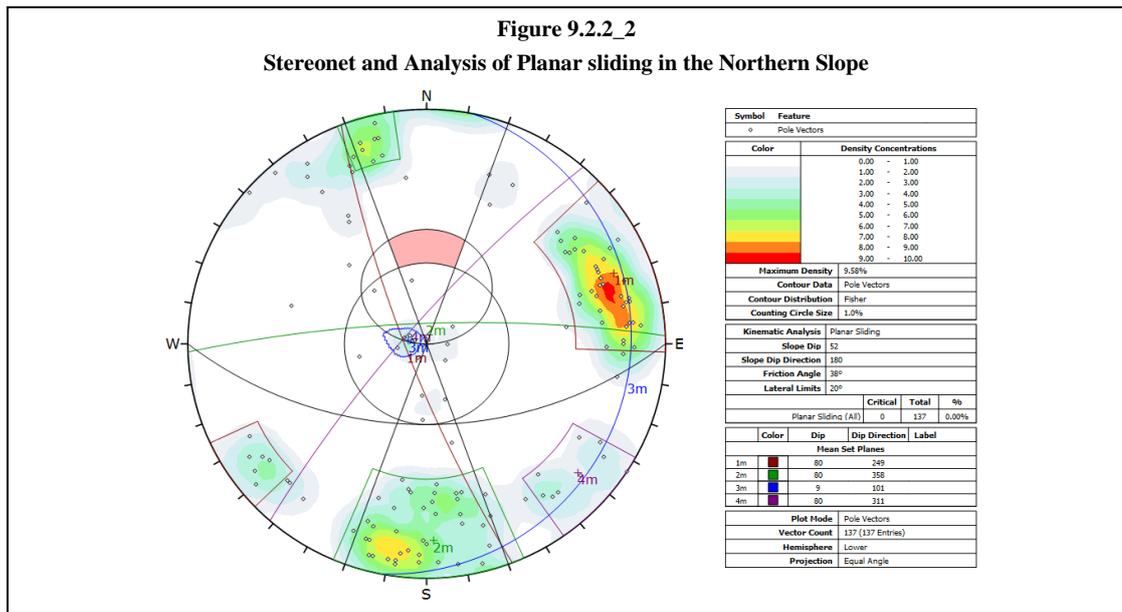
For indicative purposes the Haines and Terbrugge empirical design chart was used to assess the probable safe slope angles (Figure 9.2.2\_1). The adjusted MRMR value of 51 for fresh rock was used in the assessment.



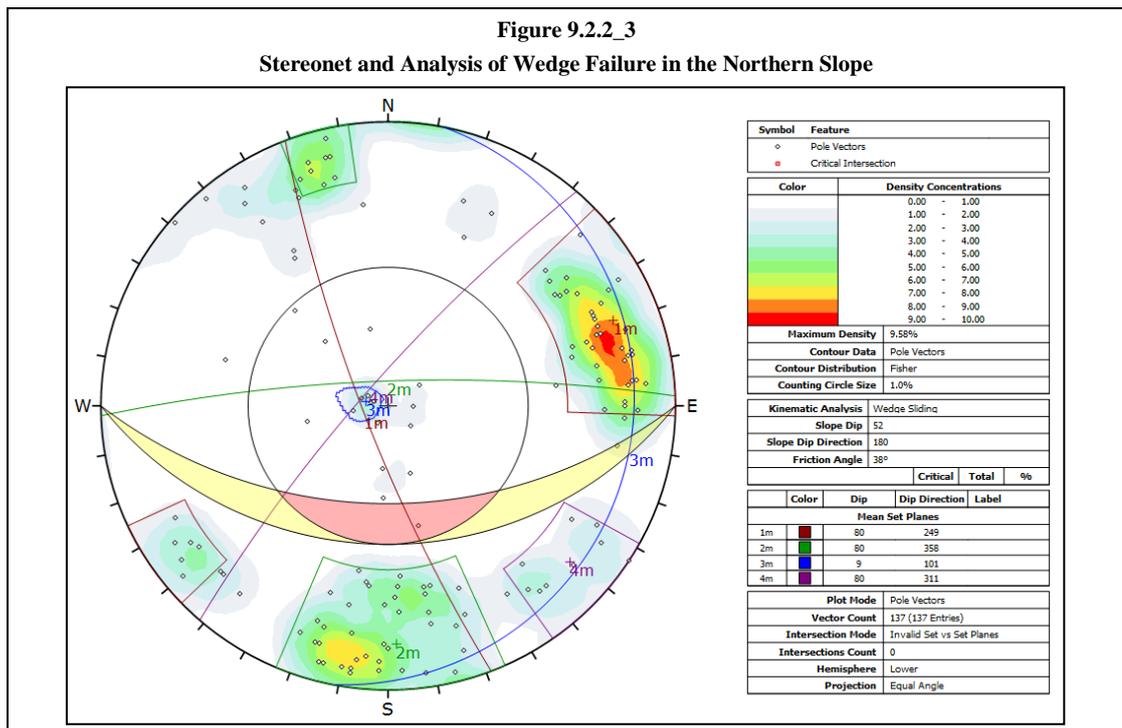
The Haines and Terbrugge design chart suggests that an overall slope angle of 52° in fresh rock will have a factor of safety of 1.2. This was taken as a guideline for further investigation using numerical modelling and kinematic analysis.

#### Kinematic analysis

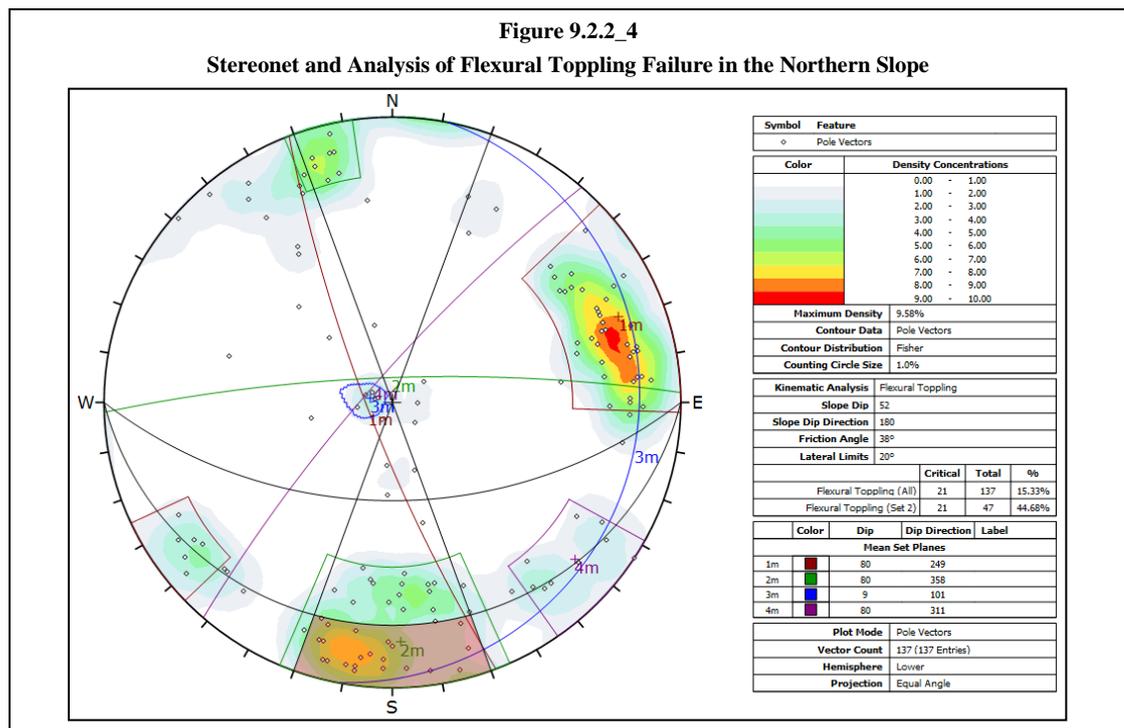
The potential for structurally controlled failure modes of the northern highwall was investigated. The discontinuities measured on the outcrops were used for a kinematic analysis. A slope angle of 52° was assessed. For planar sliding to occur, a discontinuity must daylight in the slope and the dip of the discontinuity must be lower than the friction angle. The analysis is presented in Figure 9.2.2\_2.



The wedge sliding kinematic analysis is based on the analysis of intersections of joint sets (Figure 9.2.2\_3).



The critical zone for flexural toppling is the highlighted region between the slip limit plane, stereonet perimeter and the 20° lateral limits. Any poles plotting in this region represent a potential risk of flexural toppling (Figure 9.2.2\_4).

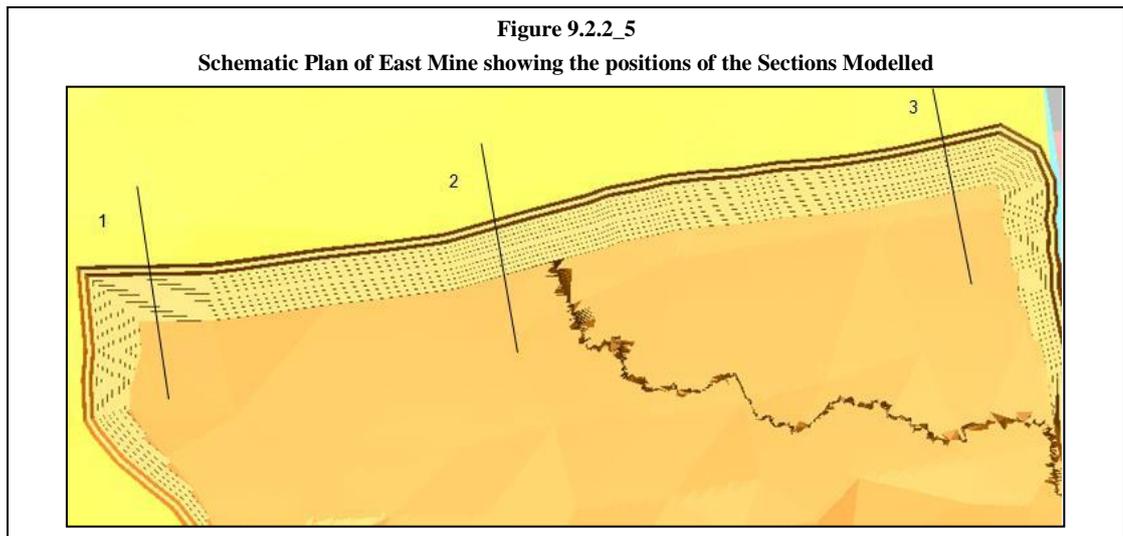


From the stereonets it was concluded that no planar or wedge type failures are anticipated in the final highwall slope. The orientation of Joint Set 2 indicates that toppling failure is possible. The scale of this was not assessed and the potential would depend on joint continuity and cohesion.

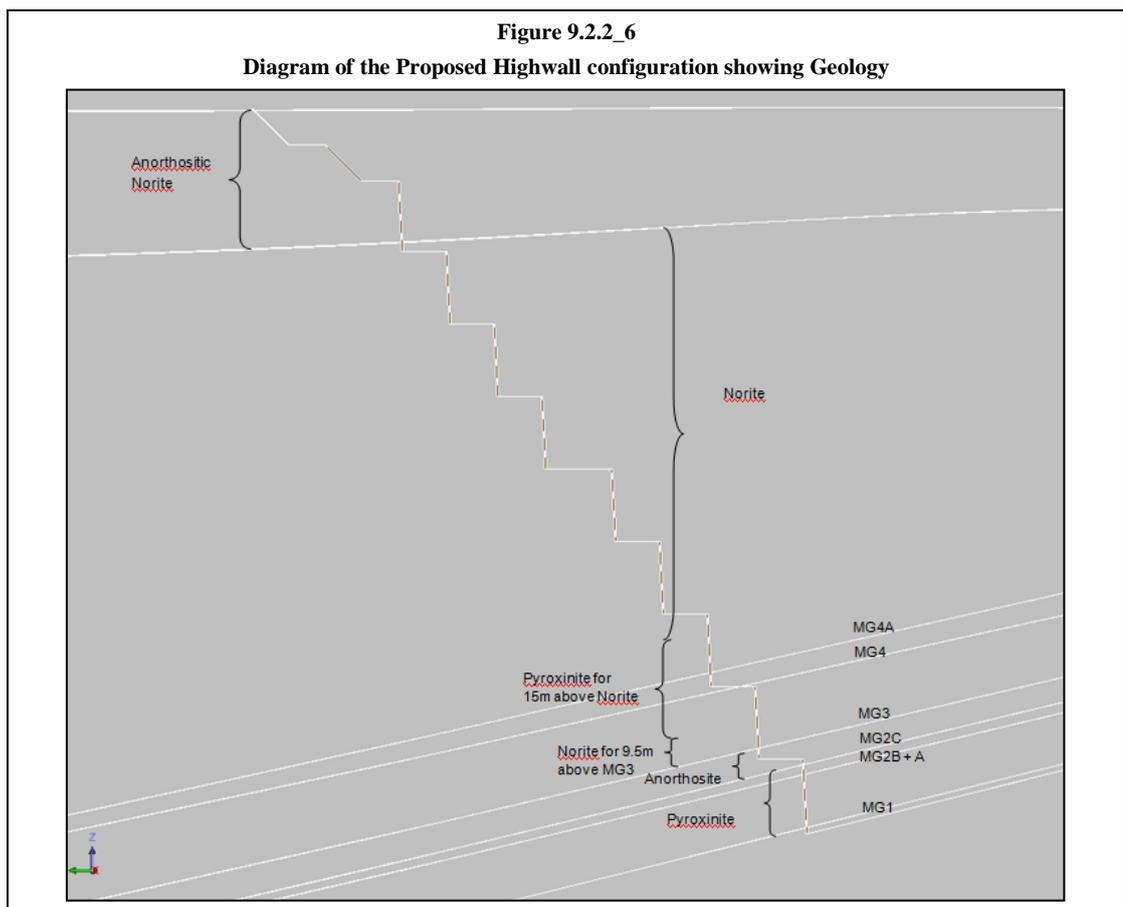
It was concluded that in the fresh rock, overall slope angles of 52° should be stable with catch berms of 9.4m wide.

### Numerical Modelling

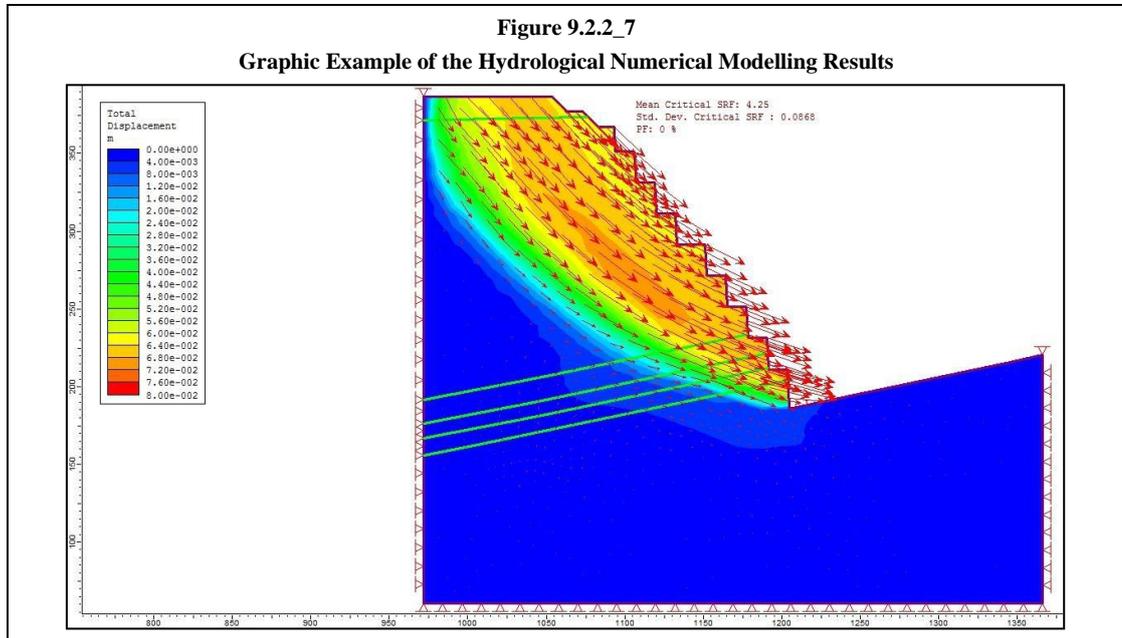
The slope stability was assessed using the Phase 2D, two dimensional, finite element software. The sections modelled for East Mine are shown in Figure 9.2.2\_5. Models of 3 sections through the pit were constructed using the material properties as defined from laboratory tests and rock mass properties quantified using the RocData software program.



Only saprolitic and fresh rock material properties were used for the Highwall slope (Figure 9.2.2\_6). An overall angle of 53° was used to investigate the stability of the slope. The angle modelled for saprolitic rock was 45°.



The models simulated completely dry slopes, as it was assumed that an effective dewatering program will be implemented. An example of the numerical modelling is presented in Figure 9.2.2\_7.



The Finite Element models calculated contours of displacement for the highwall. The Factor of Safety (FoS) and the Probability of Failure (PoF) were determined from these models and presented in Table 9.2.2\_1. The likelihood of failure occurring was shown to be remote given the high Factor of Safety and low Probability of Failure.

Northern slope	Slope angle (fresh rock)	Slope angle (saprolitic rock)	FoS	PoF
Section 1	53°	45°	4.27	0
Section 2	53°	45°	4.25	0
Section 3	53°	45°	4.6	0

Rock fall hazard analysis

OHMS used The Trajec3D rigid body dynamics software to simulate the trajectory of probable fall bodies. This software simulated the fall paths for three dimensional bodies, over a three dimensional surface, representing a pit geometry. The aim is to determine fall body velocity and kinetic energy at impact with road ways or catch berms. Three fall body geometries were selected for comparison, with two masses. The fall body geometries were selected to effectively simulate the most likely rock fall shape.

None of the falling bodies roll down the pit slopes and therefore it was concluded that the width of the catch berms will be sufficient to catch possible falls.

### Seismic Hazard

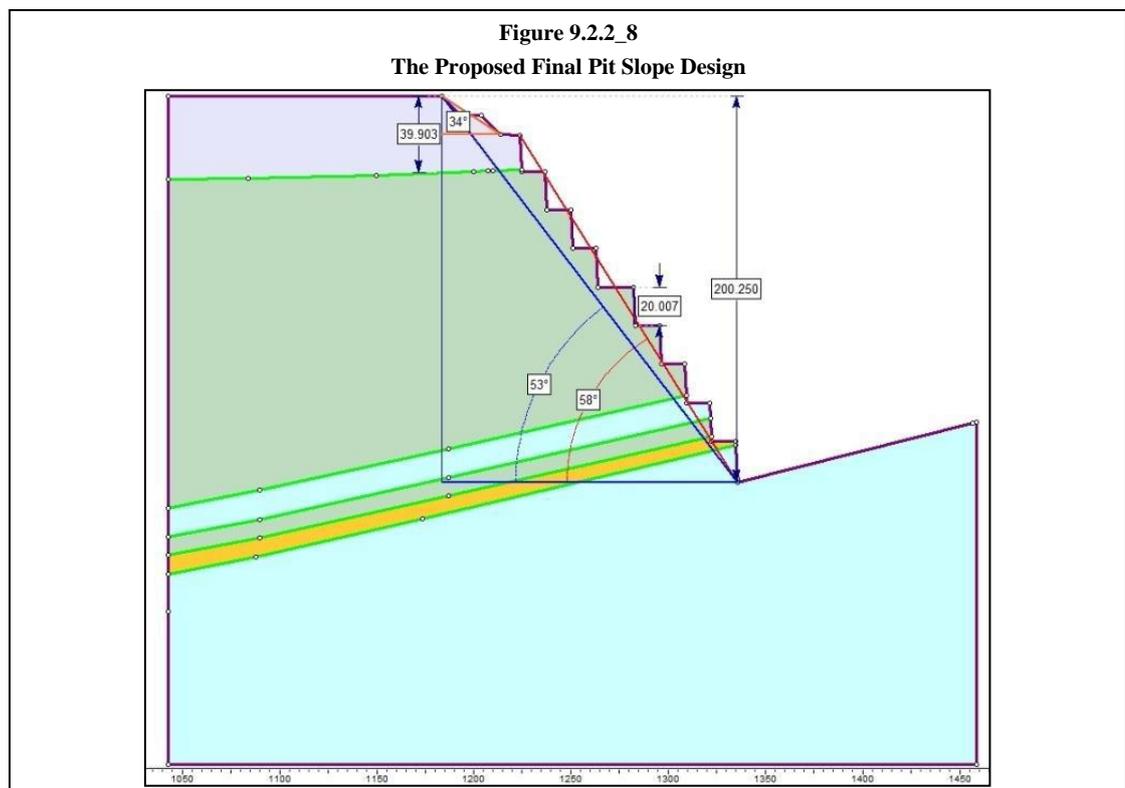
Using the seismic hazard map for South Africa produced by the South African Council for Geoscience it was concluded that Tharisa Mine does not fall within any of the zones of known seismic activity, whether natural or mining induced. The historic peak ground acceleration values are of the lowest in the subcontinent and therefore it was concluded that the potential influence of seismic activity on the stability of the mine is negligible and was not a consideration in the design of the slopes.

### Conclusions

During the OHMS investigation, analyses and design, the following was carried out:

The geotechnical conditions have been comprehensively assessed and the results found to be similar those of the previous investigation.

Slope angles were determined from the Haines and Terbrugge design chart suggest overall slope angles of approximately  $52^\circ$  with a Factor of Safety of 1.2 in fresh rock. The proposed final design is presented in Figure 9.2.2\_8.



Transitional surfaces between residual soil and saprolite, and between saprolite and fresh rock, were constructed from borehole information.

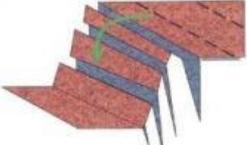
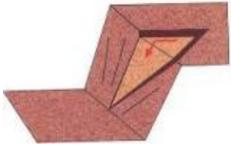
Slope stability was assessed using Phase2D Finite Element Model. Factor of Safety and Probability of Failure suggested that overall slope angles of 45° in saprolitic rock and 53° in fresh rock, will yield very stable slopes.

Kinematic failure was investigated and it was found that the Highwall may have some probability of toppling type failure related to Joint Set 2. Adequate catch berms are required.

Rock fall hazard analysis was performed and it was concluded that catch berms with 9.4m widths were determined to be sufficient.

No seismic activity is anticipated during the mining process.

The quantification of critical input parameters and level of detail considered in the design is sufficient for Life of Mine design. Various modes of failure were considered. These are illustrated in Figure 9.2.2\_9.

<b>Figure 9.2.2_9</b>			
<b>Illustration of the Types of Slope Failure Considered</b>			
<b>Modes of failure</b>	<b>Parameter</b>	<b>Modes of failure</b>	<b>Parameter</b>
<b>Circular</b>		<b>Circular</b>	
			
Very unlikely, as shown by the Numerical Modelling	Most likely shown by Kinetic Analysis. However depends on the continuity of the jointing and will be halted by catch berms	Very unlikely as shown by Kinetic Analysis	Very unlikely as shown by Kinetic Analysis

The overall slope angle derived in the OHMS study may be conservative as the kinetic analysis indicated that toppling failure was a potential problem but all the other assessments indicated high factors of safety.

The toppling may be limited to small failures depending on joint continuity, and can be controlled with catch berms. Toppling failure is sensitive to bench slope and not to the overall slope. Further studies could steepen the overall slope of the final highwalls with attendant economic advantages.

No major geotechnical risks are anticipated.

### 9.2.3 Underground Mining

With regard to the future underground mining operation, the middlings between the various chromitite layers are a factor to consider in geotechnical design as with middlings of less than 12m it is usually necessary to superimpose the pillars. However the middlings between the MG1 and MG2A Chromitite Layers in most of the proposed underground mining areas are typically 12m to 15m or greater. The MG2C to MG4(0) Chromitite Layer middling is mainly 12m to 20m or greater. Thus interaction between the chromitite layers is not considered to be a concern. However this must be reassessed in localised areas once underground mining commences.

The mechanised trackless bord and pillar was deemed to be the best mining method for the mining resource under consideration.

The MG2 and MG4 Chromitite Layers were selected for underground mining. The combined thickness of the MG2A Chromitite Layer, parting and MG2B Chromitite Layer, in the greater part of the underground area, will be in excess of 1.8m. The MG4 Chromitite Layer is on average 3.0m thick and is wide enough for trackless Bord and Pillar mining and selected as the second mining horizon. Minimum and maximum mining cuts were set at 1.8m and 4.5m respectively.

The Potvin stability graph method was used to design stable panel spans for each chromitite layer. This method is widely used in South African platinum mines and incorporates the relevant geotechnical information based on a modification of Q, the Modified Stability Number N'. The maximum spans were calculated for used in a hybrid mining system. However recent findings indicate that in the MG1 Chromitite Layer, spans in conventional mining with mine poles and a middling to the MG2 Chromitite Layer of less than 15m, should be restricted to 15m.

Celtis Geotechnical investigated the maximum stable spans and pillar sizes for the underground mining as shown in Table 9.2.3\_1.

<b>Table 9.2.3_1</b>					
<b>Tharisa Minerals</b>					
<b>Summary of the Relevant Geotechnical Data for Underground Mine Design</b>					
<b>Lithological Unit</b>	<b>Average N'</b>	<b>Average N''</b>	<b>Minimum N'</b>	<b>Minimum N''</b>	<b>Hydraulic Radius Minimum N' Unsupported</b>
MG4 hangingwall	38.86	15.55	7.30	2.92	4.75
MG4A hangingwall	55.61	22.25	5.72	2.29	4.00
MG4- 4A middling	53.59	21.43	6.57	2.63	4.50
MG2 hangingwall	56.09	22.43	4.65	1.86	4.25
MG2 footwall MG1 hangingwall	39.45	15.78	5.92	2.37	4.50

However, for the planned trackless bord and pillar mining, a bord width of 6m will be used throughout.

The DRMS or rock mass strength for each chromitite layer to be mined was calculated taking into account the effects of weathering, joint orientation and method of excavation. This was used to calculate the size of the in-panel pillars. A range of pillar sizes for the various depths and mining widths were calculated. Rigid pillars will be left to prevent plug failure and back-break problems. Down to a depth of 600m, the pillars were designed as non-yielding pillars which can support the whole over burden load from surface. The stress was calculated using tributary areas theory, and the pillar strengths were calculated by the Hedley and Grant (H&G) formula. As the mining will all be below 200m below surface where tributary areas theory over-estimates the pillar loading, Factors of Safety in excess of 1.3 were considered stable. Below 350 m, crush pillars can be considered, sized to suit the mining width of each chromitite layer.

The primary support in Bord and Pillar mining is the in situ pillars. A pattern of 2.4m grouted roofbolts, or equivalent splitsets, spaced at 2m apart in the hanging wall should be sufficient under normal conditions. Long anchor tendon support will be installed if faulted areas are encountered.

Access to the underground workings will be through a triple decline shaft system on reef from portals in the highwall of the opencast mining to the MG2 Chromitite Layer. This decline set will also be used as the main intake airways for the mine. Initial access will be on apparent dip. The decline support will depend on local geotechnical conditions and excavation dimensions. Below 350m it is anticipated that the geological losses in the area may provide sufficient regional support. In some areas, specific regional pillars may need to be designed on the stoping horizon.

In order to proceed with the study for the future underground expansion of the mine, additional work will be required to verify the geotechnical conditions at the selected portal positions.

#### **9.2.4 Rock Engineering**

The mine has appointed a competent rock engineering consultant to undertake regular visits and inspections to the mine including the collection of geotechnical data required to ratify the slope designs. The mine is visited monthly and reports are made on the visits and any salient issues.

Mines in South Africa are required to have a Code of Practice (CoP) to combat rockfalls drawn up according to the guidelines of the Department of Mineral Resources. There is a CoP in place in the mine, which complies with the guidelines. The CoP was revised in September 2015.

### 9.2.5 Conclusions

The current mining has reached a depth of about 50 m. Current slopes are shallower than the design slopes. Designed bench geometry is being followed. The stripping ratio is low and will have to be increased to achieve the planned final pit depths.

The planned surface mining method has been devised with consideration of the geotechnical conditions anticipated in the ore body. The slope design is based on the study undertaken by OHMS. This is based on structural and geotechnical information obtained from in-pit joint mapping and the establishment of a geotechnical database.

The study ratified the design of the highwalls by dynamic analysis and numerical modelling.

Regular monitoring of the pit wall conditions and rock conditions is being carried out and reports on conditions and stability are being produced.

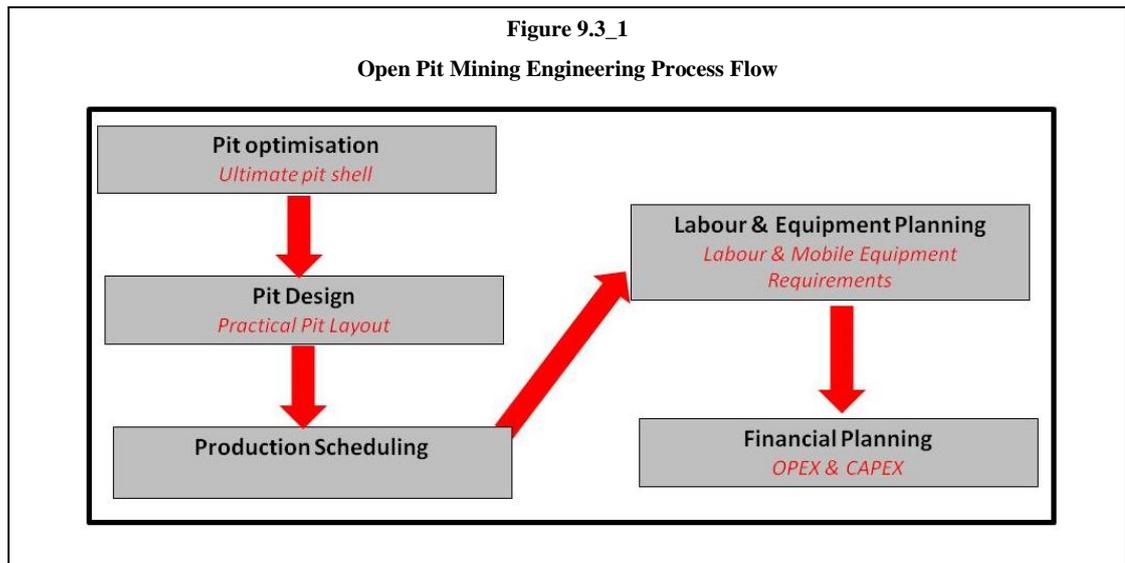
Groundwater level measurement and monitoring is being conducted for environmental management purposes. This data should be included in the geotechnical database.

The underground mining design has been conducted using modified stability number studies for stope spans and the Hedley and Grant methodology to calculate stable pillar sizes.

No major geotechnical risks are anticipated.

### 9.3 Open Pit Mine Design Study

A LoM planning process was followed to declare a Mineral Reserve for the open pits and the transition into underground mining. Practical limitations were considered to balance pit life and economic value. The final pit dimensions were selected to maximise value, considering factors such as modifying factors, scheduling constraints, unit costs and potential revenue. Mining contractor costs, transport costs, overhead costs, product selling price, and infrastructure costs were the major drivers in the cost model. The mining engineering process followed during the 2013 open pit mine design study is depicted in Figure 9.3\_1. No pit optimisation or pit re-design was conducted for the 2015 Mineral Reserve estimation process.



### 9.3.1 Design Criteria

The design criteria were applied throughout the planning process to ensure that the work was undertaken in line with the guidelines of the SAMREC Code with a transparent reporting process and an executable plan.

#### Safety berm

The dimensions of the safety berm were calculated using global standards of good mining practice.

- Berm height = 1.7m
- Width of berm = 4.9m.

#### Haul roads

All mining equipment operate within the mining industry standard gradient of 1:10 (10% or 6°). The width of the haul road was based on the design criteria of a 3.5 multiple of the equipment width, plus the width of the safety berm with provision for a drainage channel to a minimum haul road width of 30m.

#### Haul road width: Two way traffic

- Width of equipment = 7m
- Width of haul road surface for two way traffic =23m
- Safety berm = 5m
- Drainage channel = 0.8m
- Design width = 30m.

#### Minimum operating width

The minimum operating width for the pit is limited by the equipment selection. For a 360t class hydraulic shovel, a minimum width of 40m is required for double sided loading. The 150t class haul trucks have a minimum turning diameter of 27.5m. A minimum mining operating width of 50m is sufficient for the bulk waste mining operations for a double side loading configuration.

#### Bench height

A bench height of 20m for bulk waste was selected to accommodate the large sized equipment. The first bench in the weathered zone must be battered at an overall slope angle of 35°. The ore is loaded in flitches depending on the MG Chromitite Layer thickness, using 65t excavators.

#### Waste Backfill

Waste backfill into the final void was considered during the haul road placement to optimise the available floor area available for dumping. Approximately 35% of all waste mined is dumped in-pit on the exposed pit floor. This has a material cost advantage relative to dozing or loading and hauling of the waste material from out-of-pit waste rock dumps (WRDs) during making safe process of the final void.

Initial waste material from the bulk waste above MG4A and the internal waste partings between the chromitite layers is used for the construction of tailings storage facility (TSF) walls. Further waste material is dumped on the permanent WRDs that are constructed to a maximum height of 60m, in 15m lifts, with an overall slope angle of 16°. A WRD is constructed at a safe distance north of the east pit high wall (WRD 1). Waste from the west pit is hauled to the south of the outcrop (WRD 2). Existing dwellings to the south of the west pit were relocated to the north of the west pit. An additional WRD is required for the east pit to accommodate the balance of the waste material.

#### Other Considerations

Various infrastructure constraints were considered during the detailed and operational planning processes. One road, an overhead power line and a water canal must be diverted for pit development and infrastructure placement.

### **9.3.2 Equipment Selection**

MCC is required to supply the required mining equipment. MCC has similar contracts at adjacent mines with similar equipment and has extensive experience in hard-rock open pit mining.

Excavators (65t to 90t class) are used to load 40t to 80t class articulated dump trucks in the chromitite layer and waste parting zones. RoM ore is hauled directly from the pit to the RoM

pad or placed on a designated stockpile or fed directly through the mobile primary crusher and sized to 200mm. Mining operations in the west pit is restricted to day-light hours compared to 24 hour operation in the east pit. The east pit is equipped with appropriate lighting plants on each production face with quality control enforced by grade control technicians.

Bulk waste above MG4A is loaded with 360t excavators and hauled with 150t dump trucks. Haul roads were designed at a maximum inclination of 10% and with a width of 30m, taking into consideration the 150t truck dimensions for safe two-way traffic.

### 9.3.3 Pit Optimisation and sensitivity analysis

The pit optimisation process was undertaken in 2013 using GEMCOM Whittle® pit optimisation software. No further optimisation work was completed as described in the 2013 CPR. A comprehensive sensitivity analysis was completed taking into consideration the previously completed pit optimisation with updated mining, cost, revenue and financial parameters.

#### Input parameters

The variances in the input parameters as used in 2015 sensitivity analysis relative to the 2013 pit optimisation are shown in Table 9.3.3\_1.

The 30% increase in ore mining cost was as a result of revised contractual mining rates currently used on site. The time cost increased by 68% due to the increase in processing fixed cost, contractor fixed cost and overhead costs.

PGM recovery for fresh material decreased by an average of 7% due to the recovery curve employed. Chrome recoveries decreased on average by 6% for fresh material. The majority of the current production is from the fresh ore zone.

The 6E basket price increased by 10% measured on a rand basis. The dollar to rand exchange rate increased by 27%.

A sensitivity analysis carried out on the base case scenario established the sensitivity in the selected pit towards:

- Revenue
- Cost.

Table 9.3.3_1		
Open pit: Sensitivity Analysis Input Parameters		
Description		Variance relative to 2013 Pit optimisation (%)
Revenue	Platinum	+4
	Palladium	+49
	Rhodium	+31
	Gold	+26
	Iridium	-35
	Ruthenium	-34
	Cr <sub>2</sub> O <sub>3</sub> @ 42%	+1
	Nickel	-2
	Copper	+30
	6E	+10
Cost	Waste mining cost	+3
	Ore mining cost	+30
	Processing cost	+20
	Time cost	+68
	Chrome transport cost	+15
Recoveries	PGM oxide	-21
	PGM Fresh	-7
	Chrome oxide	-9
	Chrome fresh	-6
	Nickel	0
	Copper	0

### Revenue

A sensitivity analysis was conducted on a revenue basis to determine the impact on the current selected pit shell. This entailed adjustment of the revenue (basket and chrome prices) by  $\pm 15\%$  in 5% increments.

The value stated in the optimisation/ sensitivity analysis process is a relative value based on the Whittle® schedule including fixed and variable operational cost. A 15% reduction in revenue impacts on the relative value of the project with a value reduction, excluding capital, of 62% while a 15% increase in revenue with a relative value gain of 49%. It is evident that the relative value from the optimisation process is sensitive to revenue. Although a lower basket revenue has a material impact on the value of the project, it does not have a material

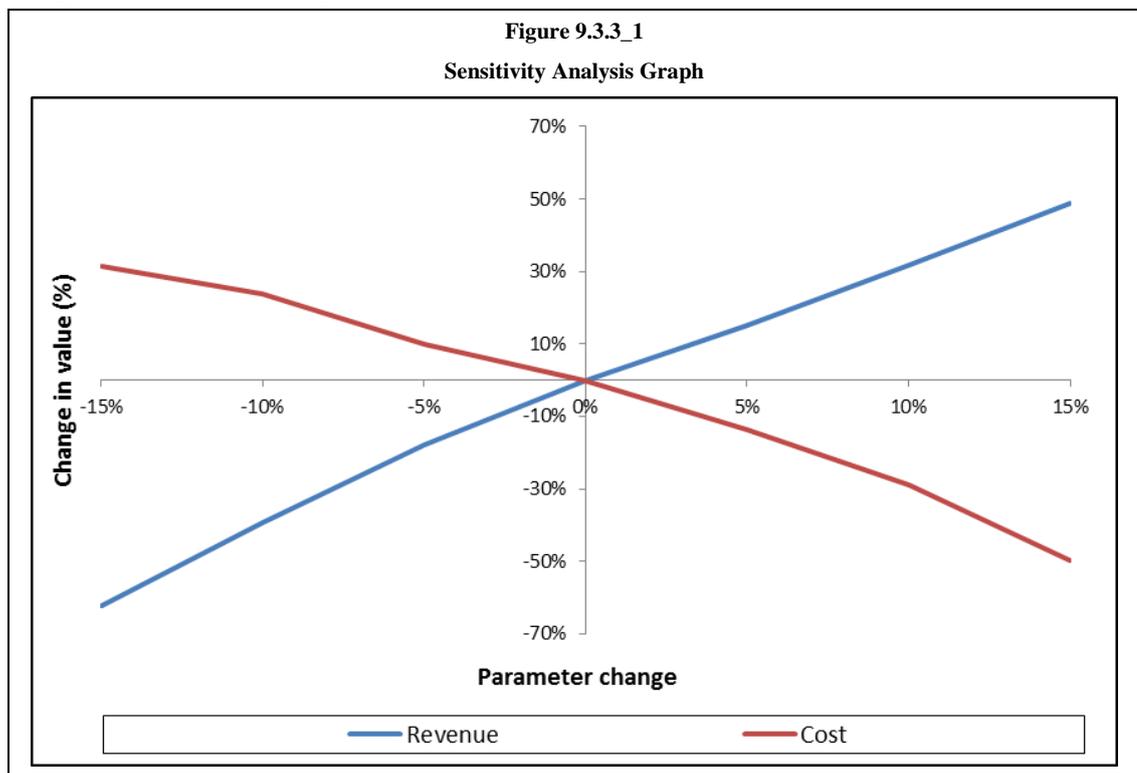
impact on the pit selection strategy up to  $\pm 15\%$  in basket and chrome prices. The revenue sensitivity is represented on the sensitivity analysis graph as shown in Figure 9.3.3\_2

### Cost

The cost was adjusted by  $\pm 15\%$  in 5% increments. The cost component consists of:

- Mining cost
- Processing cost
- Time cost
- Selling cost.

A relative value index from the selected pit is sensitive to both reduction and increase in cost. A 15% reduction on cost has a 32% increase in relative value while a 15% increase shows 50% reduction in relative value on the selected pit. Figure 9.3.3\_1 shows a graphical representation of the sensitivity analyses conducted for the selected pit. The sensitivity analysis indicates that the pit is sensitive to both revenue and cost.

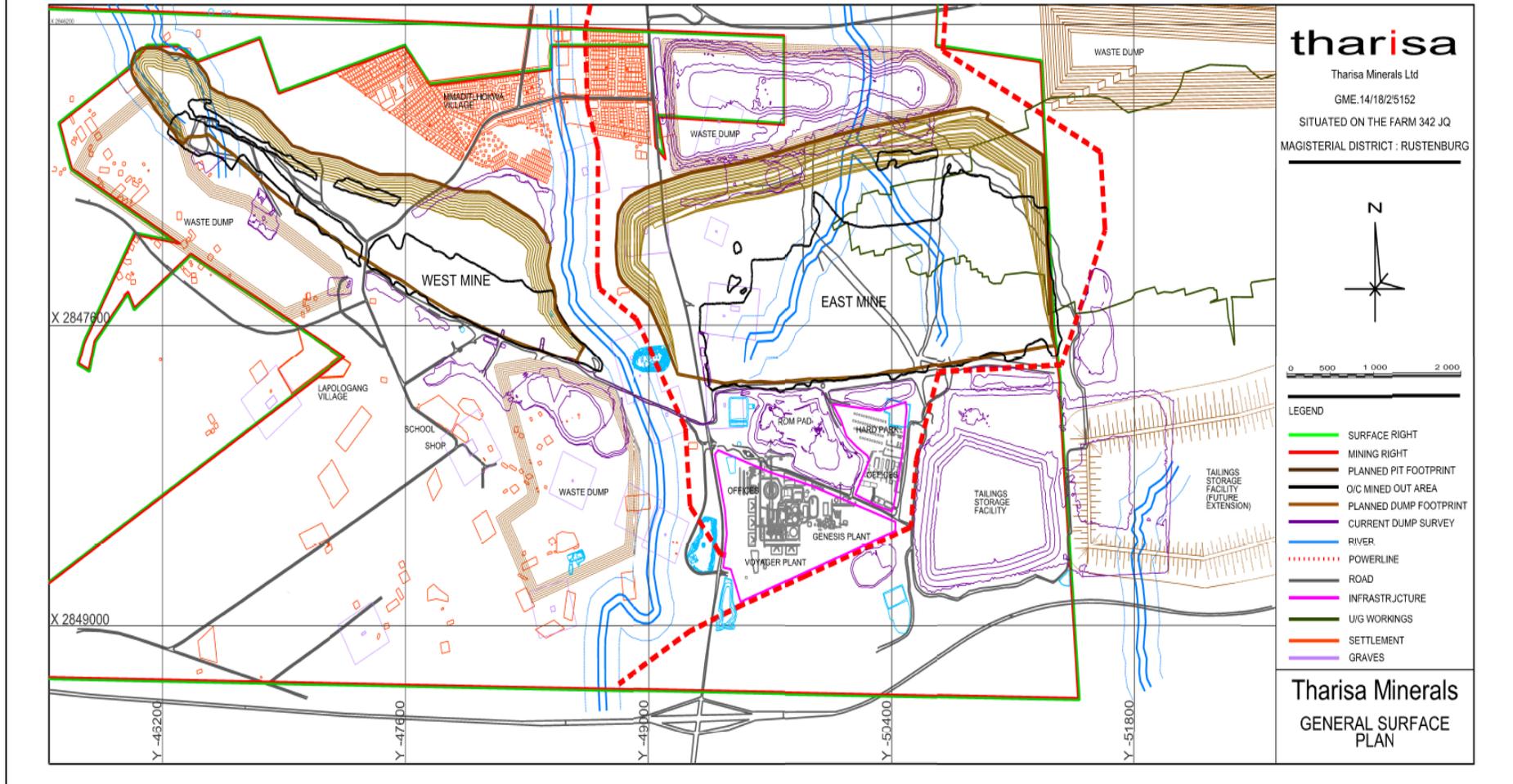


### 9.3.4 Pit Design

Permanent ramps were designed on the high-wall of the east pit, thus reducing the overall high-wall slope angle from the previously accepted  $53^\circ$  to  $50^\circ$  on the latest east pit design. For the purposes of the strategic plan and Mineral Reserve estimate, the pit shell was modified in areas along faults where impractical 'waste islands' were placed and in areas where slumps in the pit floor were planned. The position of low wall access ramps were considered and are critical to the sustainability of RoM production. The surface layout is presented in Figure 9.3.4\_1.

Figure 9.3.4\_1

Open Pit Surface Layout



### **9.3.5 Mining Methodology**

Waste is blasted in 20m benches. Depending on the dump location, waste is hauled to the dump located on the outcrop side or hauled through temporary ramps on the interim high wall to a dump located on the high wall side of the pit. Once the pit reaches a depth of approximately 100m, backfill commences. An estimated 35% of the waste is backfilled over the life of the operation. The backfill percentage is a reasonable due to the low wall ramps, envisaged underground infrastructure and a minimum 100m down dip lag between the backfill and the working faces. The underground portals are established from the highwall.

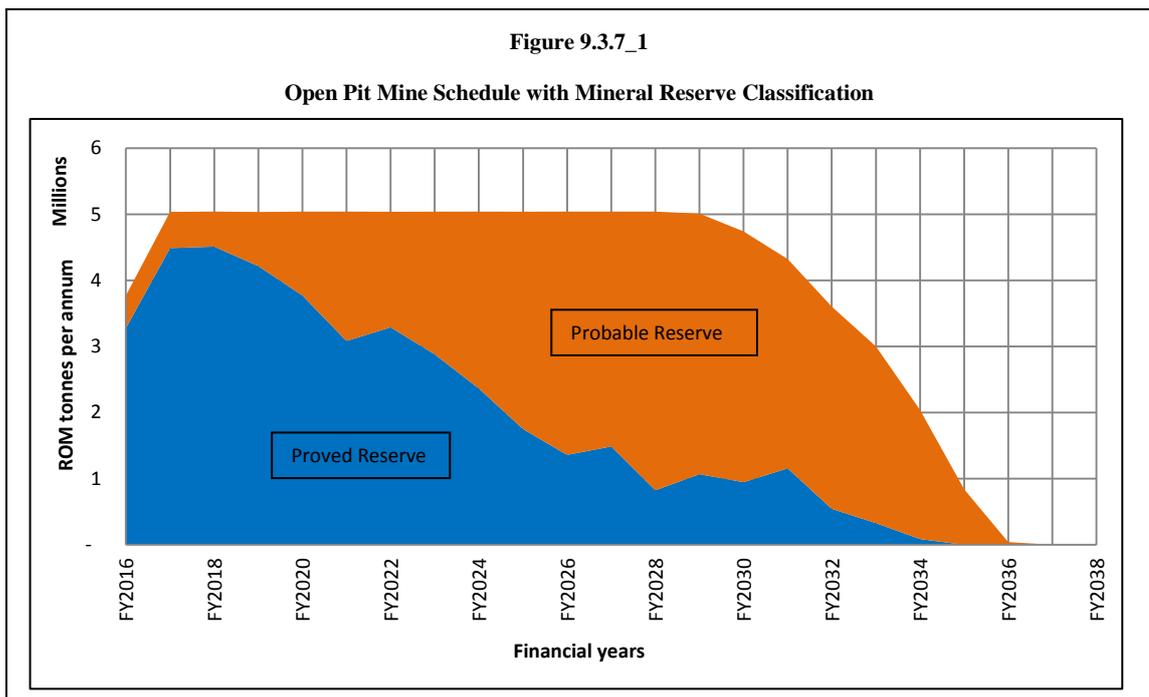
The current reef mining methodology requires that MG1 and MG3 are blasted selectively with MG2, MG4 and MG4a blasted with their respective surrounding waste. All the materials are loaded in 5m flitches with 65t to 90t class hydraulic excavators. In-pit grade control 'spotters' do all ore and waste classifications to control losses and dilutions based on the selected mining cuts.

### **9.3.6 Destination Scheduling**

Hauling distances per period are calculated from the schedule based on the specific blast block mined, the dump destination and the haul route. Distances from the mined block to the closest ramp on each level are determined and added to the ramp and surface hauling distances. An appropriate cost model based on the contractual hauling rates and scheduled hauling distances were compiled.

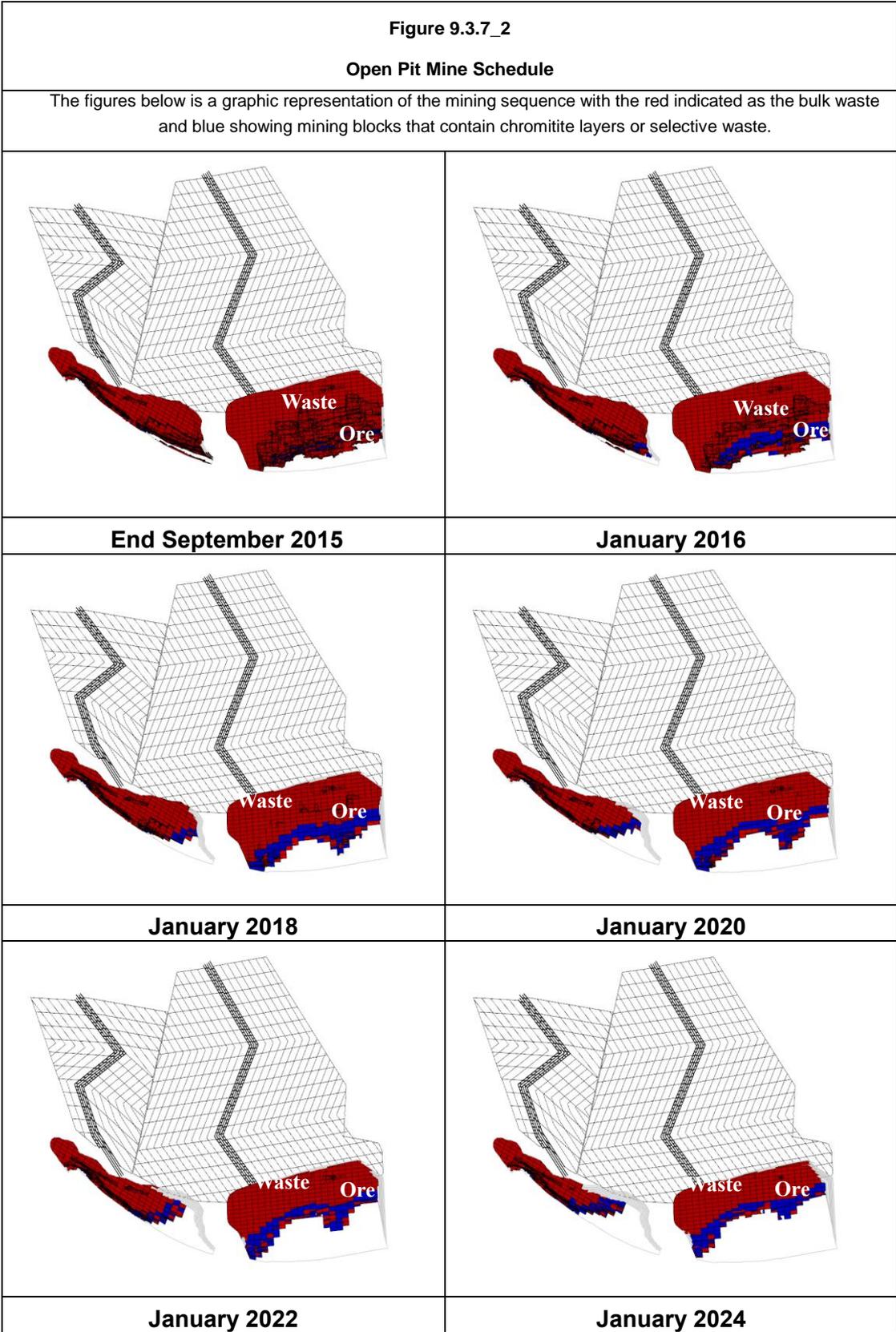
### **9.3.7 Life of Mine Plan**

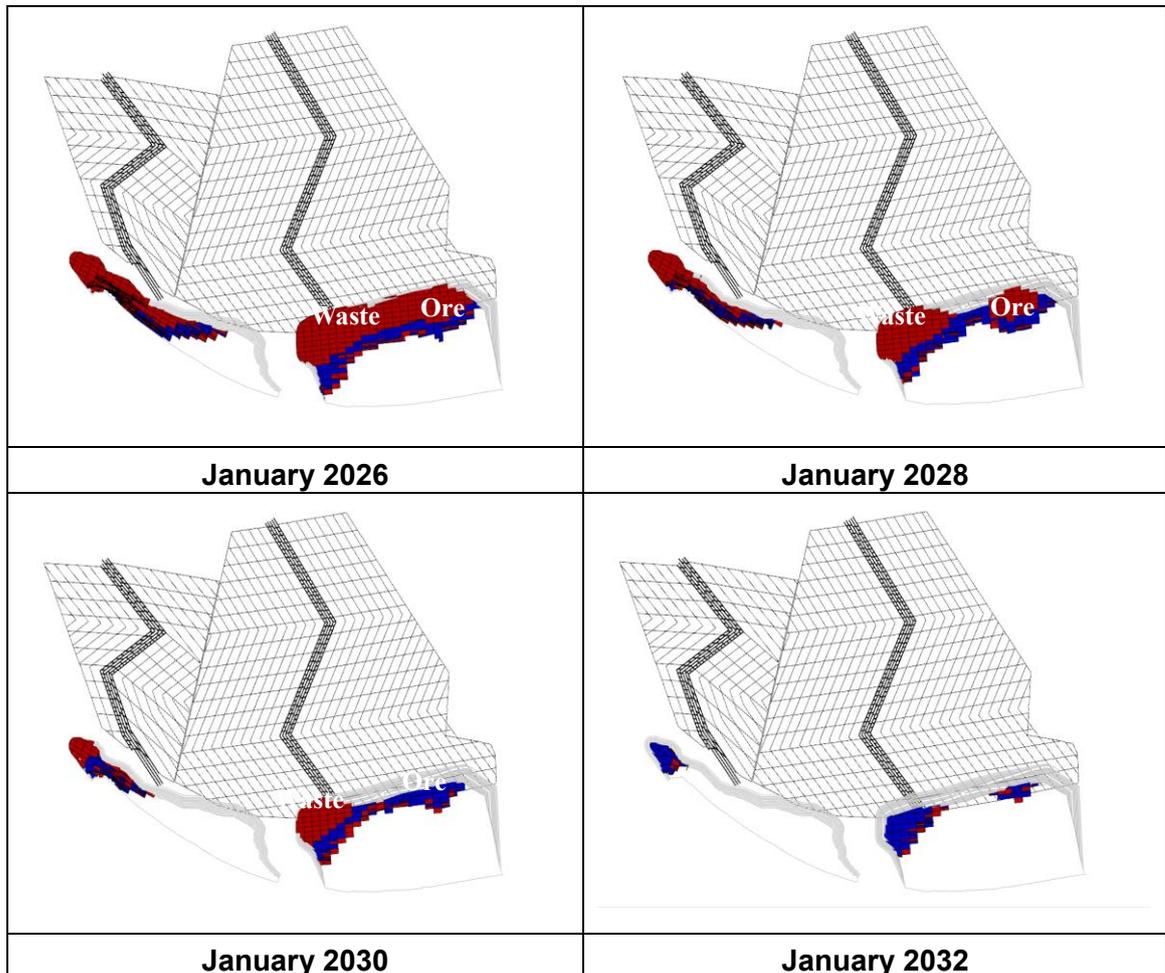
Most of the material mined from the first ten years of the schedule is from the Measured Mineral Resource category which was converted into Proved Reserves (Figure 9.3.7\_1). Indicated Mineral Resources were converted to Probable Reserves.



A depiction of the mining schedule is provided in Figure 9.3.7\_2.

The schedule delivers an average 3PGE+Au grade of 1.12g/t over the life of the operation and 1.45g/t on a 5PGE+Au basis and RoM Chromite grade delivered at an average of 18.6% Cr<sub>2</sub>O<sub>3</sub>. During the previous financial year (October 2014 to September 2015) the combined plant feed grades excluding tailings treated in the Genesis plant averaged 18.8% for chrome with a lower than expected feed quantity of high chrome grade MG1 material, the PGM feed grade for the same period averaged 1.03g/t (4E). The production schedule indicates medium term plant feed grades of 18.6% and 19.1% (chrome) for FY2016 and FY2017 respectively. The medium term 4E PGM plant feed grades for FY2016 and FY2017 is 1.10g/t and 1.11g/t (4E). The schedule is based on a steady state RoM production of 420k tpm from the two pits with the data for FY2016 displayed in Figure 9.3.7\_1 only representing nine production months. No physical mining or processing constraints was identified that would inhibit planned production rates. It must be noted that during the 2014 financial year the average reef tonnes achieved from the open pits was 348.6 ktpm. Steady state waste stripping requirements are set at 1.3 million BCM per month in total from the two pits. Steady state production from the open pit is maintained to 2030 when the underground production ramp up is planned.





## 9.4 Underground Mining

### 9.4.1 Introduction

The design requirements identified for the underground section included:

- An underground RoM production of 400ktpm as a continuation of the open pit production profile. Underground mining is planned to commence in 2030
- Health and safety aspects were considered to deliver a relatively low risk operation
- Maintain profitability.

### 9.4.2 Mining Method Selection

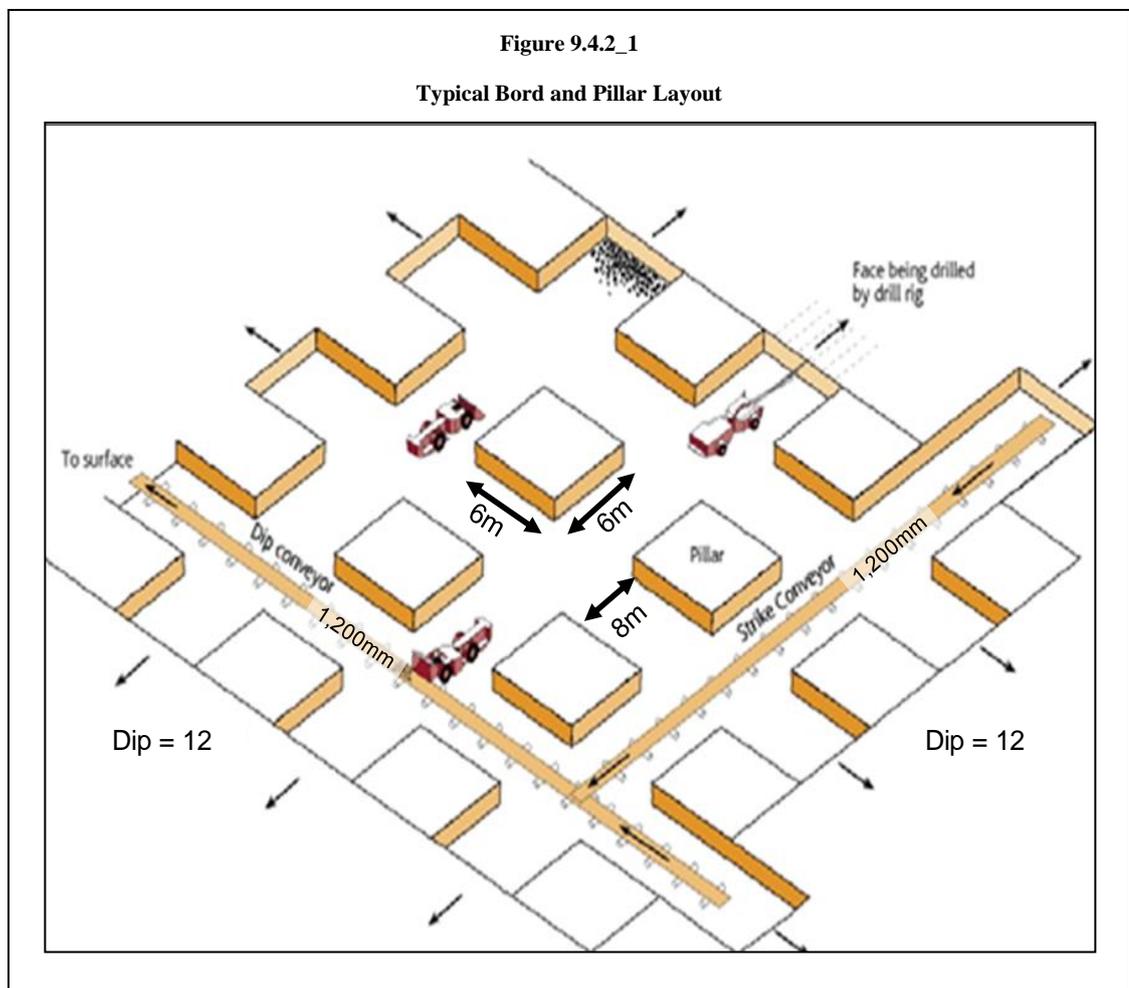
The critical aspects considered during the mining method selection included safety, the Chromitite Layer widths, dip, the required volume of RoM ore, minimised waste development and mining cost. Four mining methods were considered:

- Conventional breast stoping;
- Hybrid mining;
- Mechanised dip mining;
- Trackless Bord and Pillar.

Trackless Bord and Pillar mining was selected as the preferred mining method. Compared to the other systems, it offers the following advantages:

- Development rates are faster.
- Flexibility in dealing with geological structures.
- Safety is enhanced as people are removed from high energy contact sources. Supervision is improved through mobile access to the workings.
- Mining extraction is achieved by developing a series of bords on reef and connecting them via holings to form pillars that provide support for the overlying strata (Figure 9.4.2\_1).

Three active faces are allowed in each section for drilling, three for support, three for cleaning operations and a further three as production contingency.



Each section with a dip width of 168m is equipped with a 1 200mm advancing strike conveyor which is maintained not more than 80m from the active stowing faces to minimise LHD hauling distance. Each conveyor is equipped with a grizzly feeder to screen out boulders that is either

crushed or scalped as waste. The main conveyor capacity was set at 400t/h and tips directly onto the 1 200mm main surface stockpile feed conveyor.

#### **9.4.3 Chromitite Layer Selection**

MG2 and MG4 were selected for underground mining. The combined thickness of MG2A, parting and MG2B in the greater part of the underground area, will be in excess of 1.8m. This matches the minimum stoping width requirements for the selected trackless equipment.

MG1 has an average in situ thickness of 1.3m which is not ideally suitable for mechanised bord and pillar mining. Excessive dilution would result in the application of mining related modifying factors. This chromitite layer was mined using conventional mining methods on the adjacent property. The mined-out workings exist within the current open pit perimeter and within the planned underground footprint area. Due to the low, 10m average, inter burden parting between MG1 and MG2, only one reef was selected.

MG3 is relatively thin at an average in situ thickness of 1.4m and is midway between the MG2 and MG4 horizons. This layer was excluded from the underground investigation on the same principle as MG1 due to the low in situ thickness.

MG4 is on average 3.0m thick and is of sufficient thickness for trackless bord and pillar mining and was selected as the second mining horizon.

#### **9.4.4 Mining Cut**

##### MG4 Chromitite Layer

MG4 was selected as the second mining horizon with an average in situ thickness of 3.0m which is wide enough for trackless bord and pillar mining. The selected mining cut includes MG4, the pyroxenite parting and MG4(0) below. A maximum mining cut of 4m, with a minimum of 1.8m, was used as criteria for the mining cut selection. However where the thickness exceeded 4m, only MG4 was selected for the mining cut.

##### MG2 Chromitite Layer

The mining cut is taken as MG2A to MG2B. MG2C was not considered as part of the mining cut due to the width of the parting. The mining cut was optimised to allow for a minimum of 1.8m and a maximum 4.0m mining height. Where the chromitite layer exceeds 4.0m, MG2A Chromitite Layer was targeted.

#### **9.4.5 Underground Access Options**

Various options to access the targeted reef horizons were considered and after a systematic analysis the top three options were:

- Option I: A vertical shaft at the centre of gravity of the resource.
- Option II: A footwall decline 20m below the targeted chromitite layers.

- Option III: Declines on reef.

The on-reef declines, Option III, was considered to be the most suitable access system for the underground project. Plans showing the underground mining layout are presented in Figure 9.4.5\_1 (MG2 Chromitite Layer) and Figure 9.4.5\_2 (MG4 Chromitite Layer).

The advantages of this system are:

- All development is on reef.
- More information on the geology is obtained during development.
- No cross cut development in waste to reef horizons.

The main disadvantage of this option is the lack of surge capacity. A breakdown on the strike conveyor has a direct impact on production as operations can only proceed once the ore handling system is functional.

The triple on-reef decline system is used as the main ventilation intake airways for the mine and consists of:

- **Services Decline** for access by trackless mobile equipment.
- **Main Conveyor Decline** for ore handling. This decline accommodates other services such as pumping columns, potable water pipes, fuel lines, compressed air lines, power lines and a walkway. From investigations carried out, a 1 200mm size trough conveyor at a speed of 4m/s in this decline has the capacity to handle the planned tonnage including allowances for maintenance and unplanned disruptions.
- **Chairlift Decline** primarily for the transportation of men to and from the working faces.

The dimensions of the three declines have been set at 6.0m wide by 4.5m high. All the declines will be developed at an apparent dip of 9<sup>0</sup> to facilitate access with mobile machinery. A crown pillar of 50m on dip separating the surface and underground operations was allowed for in the design. The RoM production capacity for each set of declines is presented in Table 9.4.5\_1.

<b>Decline system</b>	<b>Capacity per month [RoM tpm]</b>
MG2 East Decline	150,000
MG4 East Decline	150,000
MG2 West Decline	50,000
MG4 West Decline	50,000

Figure 9.4.5\_1

Underground Layout for the MG2 Chromitite Layer

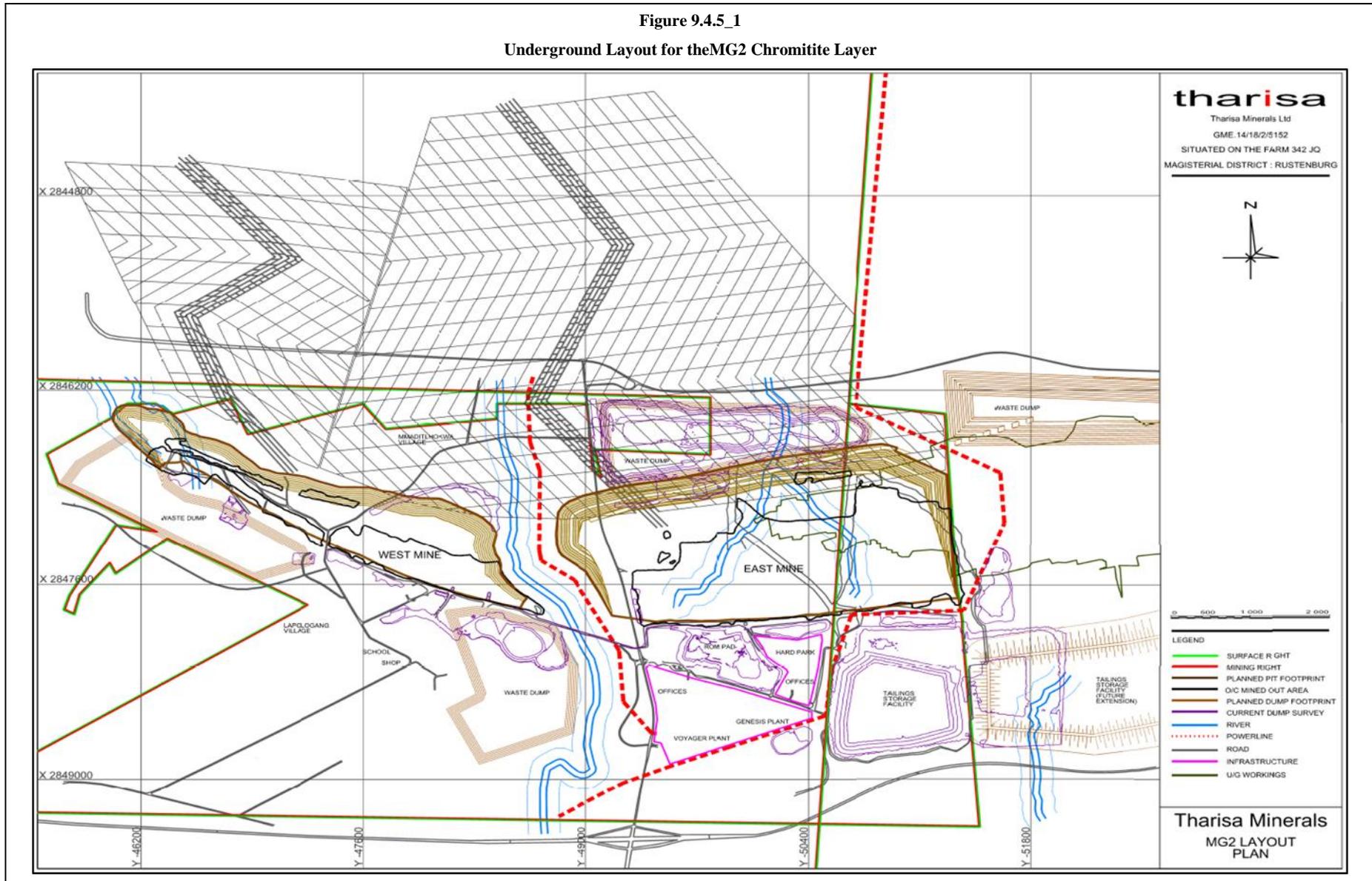
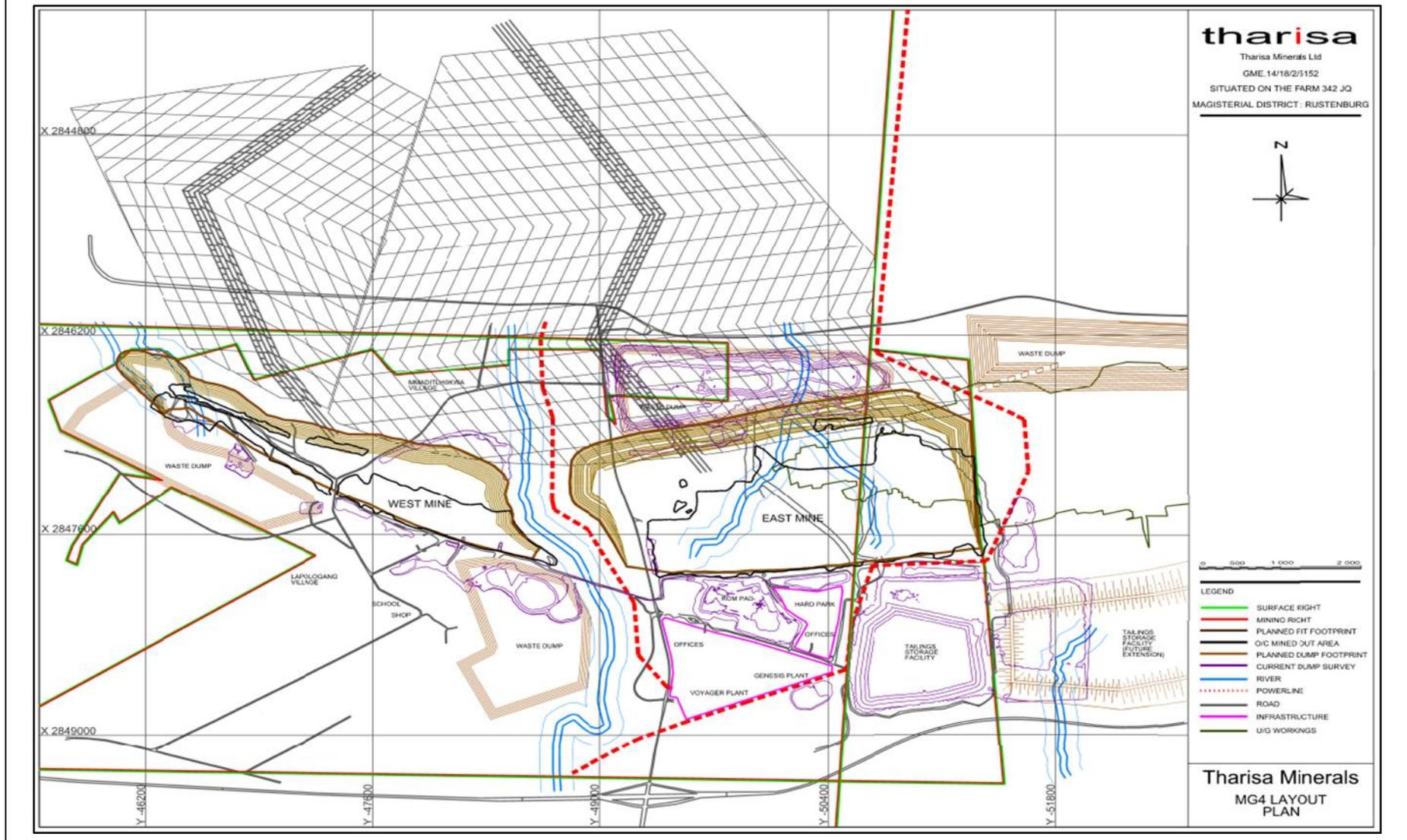


Figure 9.4.5\_2

Underground Layout for the MG4 Chromitite Layer



#### **9.4.6 Geotechnical/ Hydrological Considerations**

The geotechnical parameters and pillar designs were recommended by Dr J James, Geotechnical Engineer. The recommendation is for 6m x 6m pillars on 8m bord spans and 6m holings for the stoping designs. The pillars are designed to increase with depth from 6m x 6m in the upper levels to 8m x 8m in the lower areas.

MG2A, MG2B and MG4 hanging walls are competent. A support pattern of 2.4m grouted roof bolts, or equivalent split sets, spaced on a 2m x 2m grid in the hanging wall was considered sufficient under normal conditions. Additional spot bolts are required if faulted areas are encountered as mining progresses.

The general hydrological conditions for the area were described as wet and the shallow open pit being mined at the time of compiling this report is being pumped almost continuously to maintain workable underfoot conditions.

Excessive water is not expected to cause any material risk to the planned underground operations. An appropriate water reticulation system was provided for in the capital cost. To minimize the inflow of water into underground workings, diversion trenches or embankments are installed around all the decline portals. Surface ventilation holings are protected from surface run-off water.

#### **9.4.7 Equipment Selection**

Equipment units were selected based on the planned production rates, chromitite layer geometry, excavation sizes and available technology. The minimum height that is traversed safely and efficiently by low profile machines is currently 1.8m.

A LH209L or equivalent LHD is suitable based on the above criteria. This LHD is 1.69m high and has a bucket reach of almost 5m making it an appropriate match for the planned mining cuts.

The Sandvik DL230L or equivalent drill rig, with a tramming height of 1.4m is the best fit.

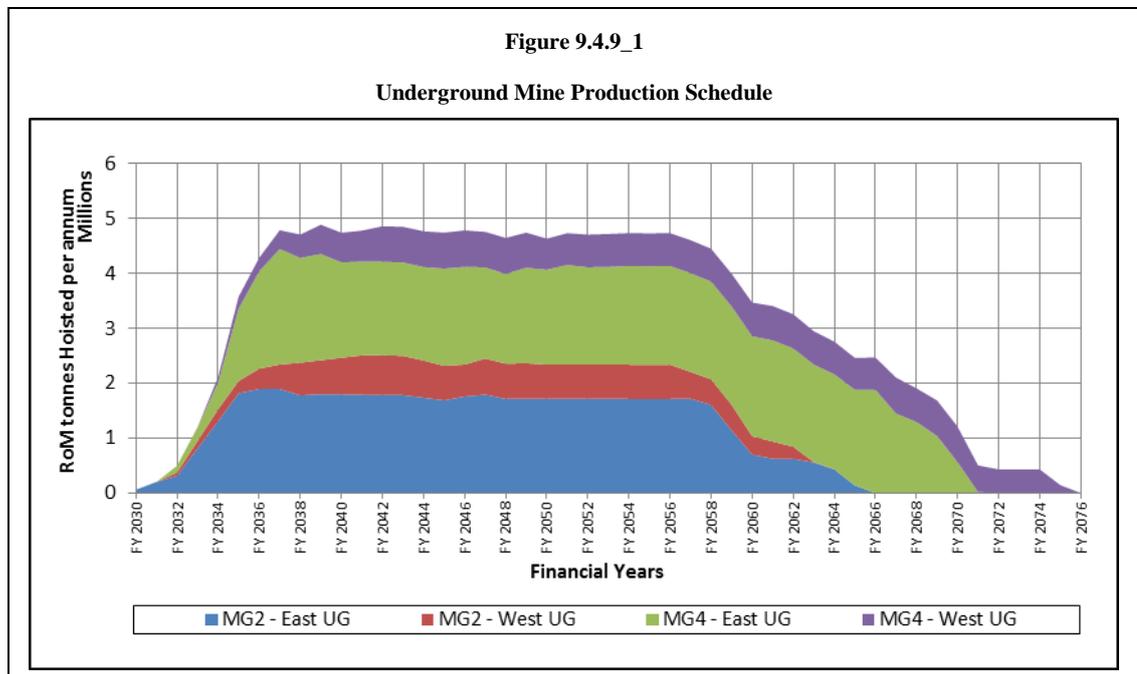
#### **9.4.8 Shift Cycle**

Mining production for the underground operations was planned for two by 10 hour shifts, five days per week. Drilling, blasting, lashing and supporting are the main activities on the morning shift while the back shift is mainly for lashing. Blasting is carried out once per day at the end of the morning shift while blasting during the sinking of the declines was set at twice per day during the first 18 months. A period of at least three hours was allowed for before re-entry after blasting.

#### **9.4.9 Production Scheduling**

Based on a production profile of 400ktpm, the scheduled underground production commences during financial year 2030 with initial development and continues to 2075 resulting in a mine

life of 24 years at steady state production (Figure 9.4.9\_1). The mine plans for MG2 and MG4 underground mining are presented in Figure 9.4.9\_2 and Figure 9.4.9\_3.



The scheduling strategy, which is a key driver to the overall project costs and economic value, was to establish the eastern decline system initially before moving to the western decline system. This strategy was chosen to minimise the project risk by starting off with areas of higher geological confidence and layer thicknesses. The sinking of the MG2 east triple declines system, starts five years before the projected winding down of open pit operations. At the planned advance rate, the mining of the triple MG2 declines and ledging to the Level 3, will be completed within 24 months with the ramp up to steady state within 48 months.

Figure 9.4.9\_2

Underground Period Progress Plots: MG2 Chromitite Layer

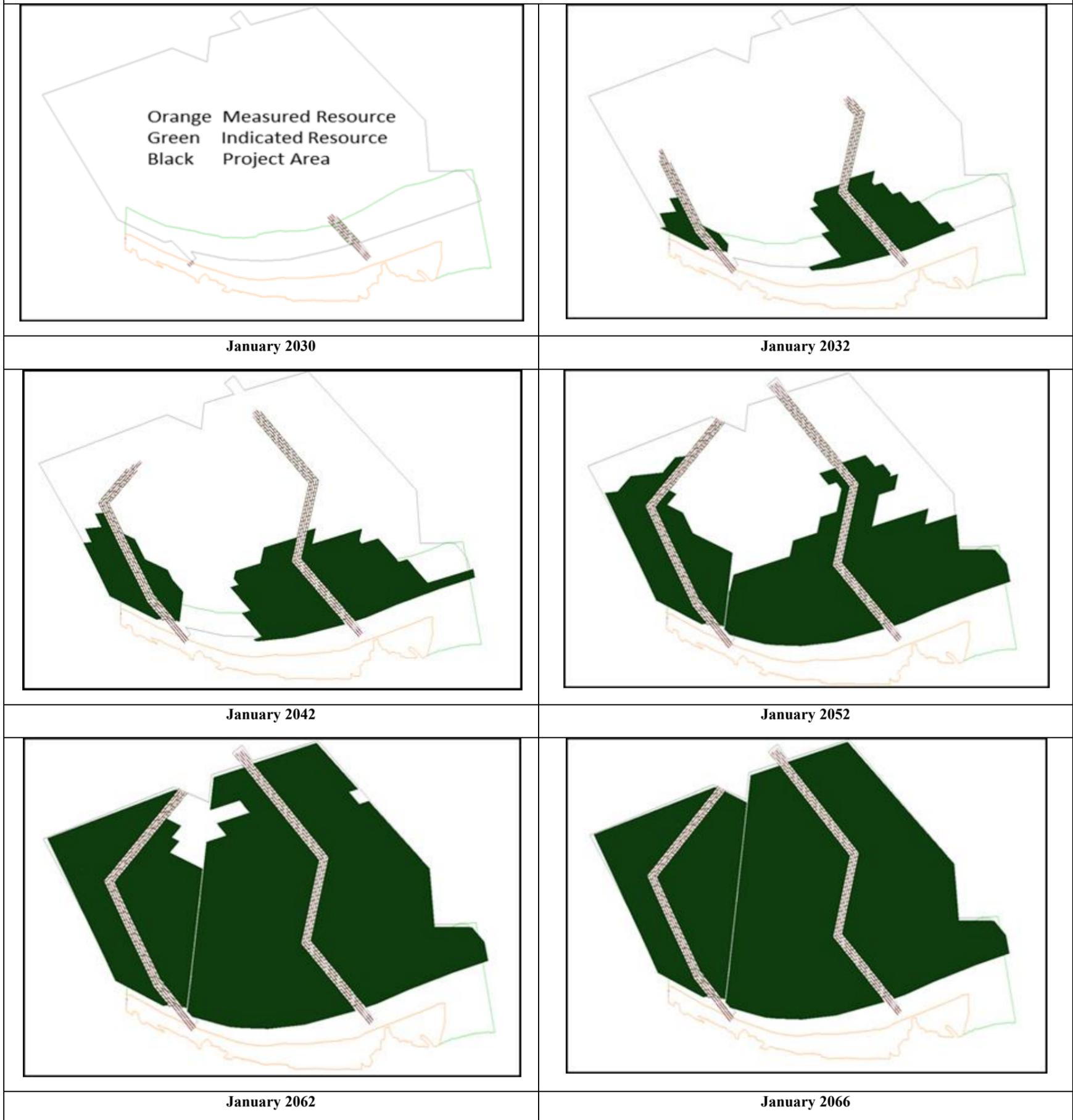
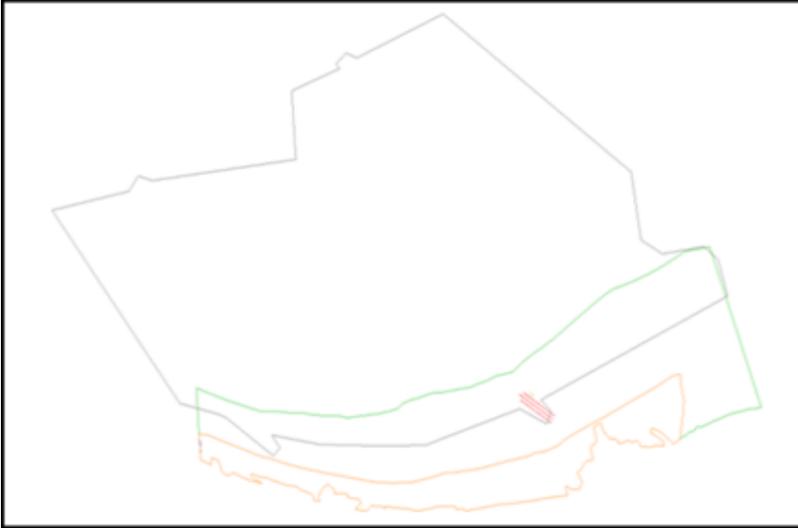
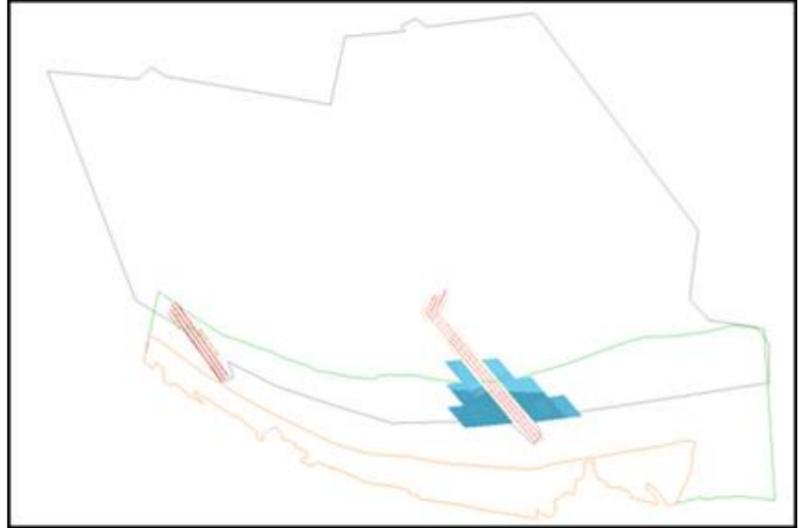


Figure 9.4.9\_3

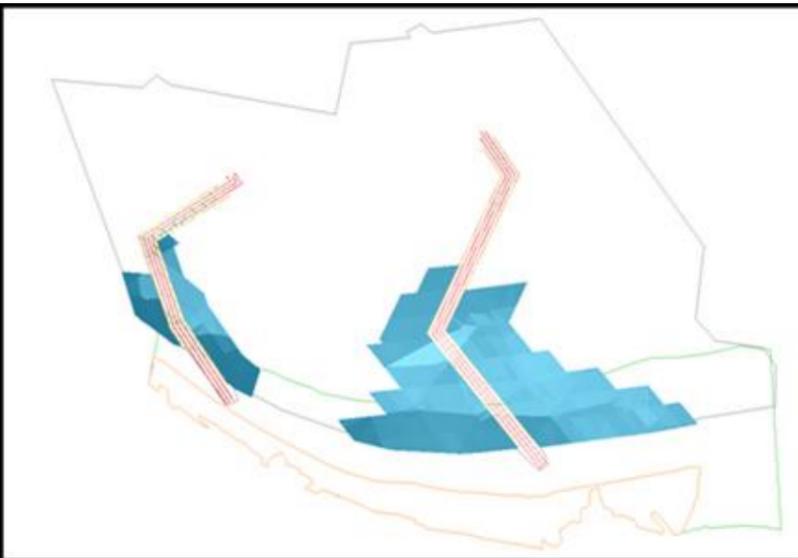
Underground Period Progress Plots: MG4 Chromitite Layer



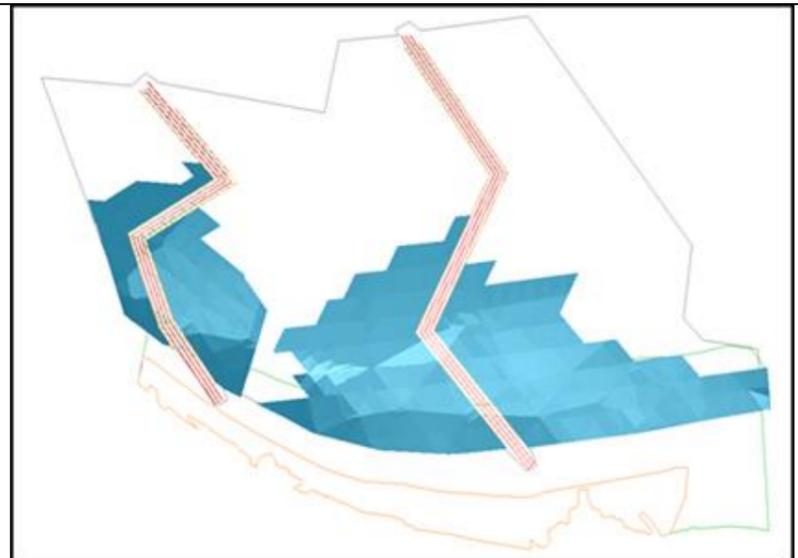
January 2032



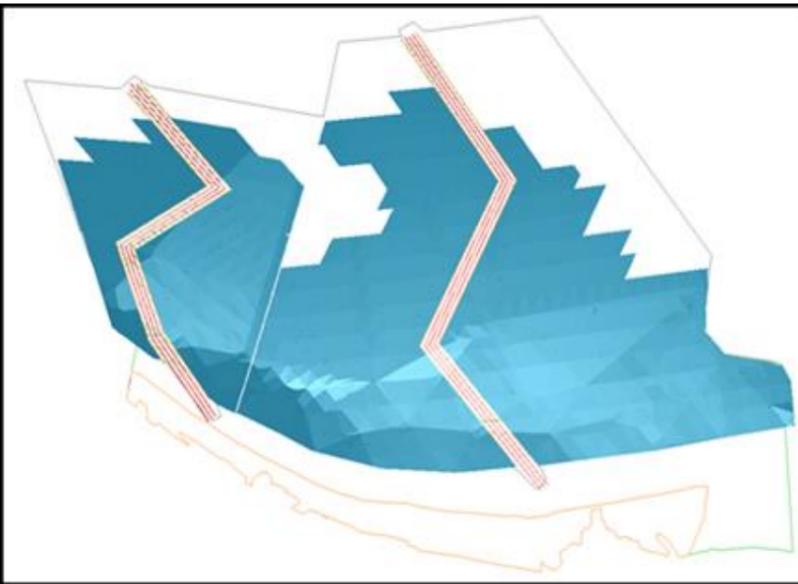
January 2034



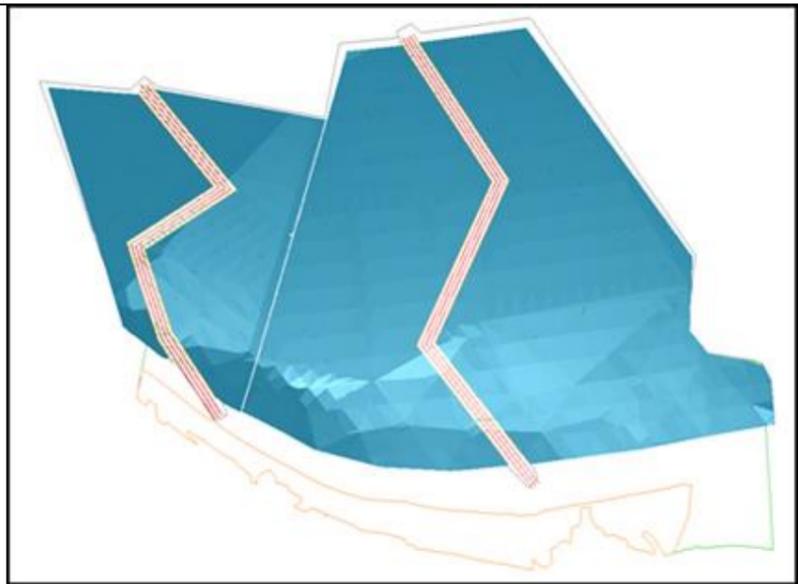
January 2044



January 2054



January 2064



January 2068

#### 9.4.10 Infrastructure Requirements

The underground operations will leverage off existing infrastructure for open pit operations such as electricity, water, the plant, houses, offices, transport and communications networks that are in place when the underground operations commence. Additional infrastructure provided for in the capital cost estimate includes:

- The ventilation network
- Underground workshops and fuelling facilities
- Pumping arrangements
- Washrooms and lamp room facilities
- Emergency Facilities.

#### 9.4.11 Labour

Except for a core owner's team, the majority of the labour force is contracted labour. Tharisa is located in a prime mining area with an experienced pool of labour to choose from. The owner's team, including the supervisory and management staff are retained from the open pit operations. Appropriate induction and training is required to ensure a smooth transition to underground operations.

#### 9.4.12 The Underground Cost Model

An underground cost model was compiled from first principles and based on a 2013 schedule of rates. A contract mining site establishment fee of R20m per decline was assumed.

##### Capital Costs

A capital cost outlay of R2.23 billion including a 10% contingency is required to move the project to steady state production at a rate of 400ktpm over a period of 5 years. A summary of the initial major capital costs include:-

- R1,516m for decline development, equipping and conveyor installations
- R140m for site establishment, Preliminary and general and electricity costs
- R175m for portal establishment and support
- A 10% contingency.

##### Mining Operating Costs

The mining operating costs were sourced from the Ukwazi database and from relevant service providers. The operating expenditure estimate of R508/t (including a 10% contingency) compares favourably with other similar operations in the country employing the same mining method.

## **10 Mineral Reserves**

### **10.1 Open Pit Mineral Reserve Estimation**

A LoM planning process was followed to declare a Mineral Reserve for the open pits and the transition into underground mining. Various technical aspects were considered in the mine design and schedule including the determination of the economic pit limits, geotechnical parameters, mining methodology and sequence, pit access, ramp placement, equipment capability, production rates and practical mining considerations. The mining related modifying factors applied included geological losses, mining loss and mining dilution.

#### **10.1.1 Geological Losses**

Geological losses were applied at 7.5% for the east pit and 15% for the west pit in accordance with the recommendation of the competent person.

#### **10.1.2 Mining Recovery (Mining Loss)**

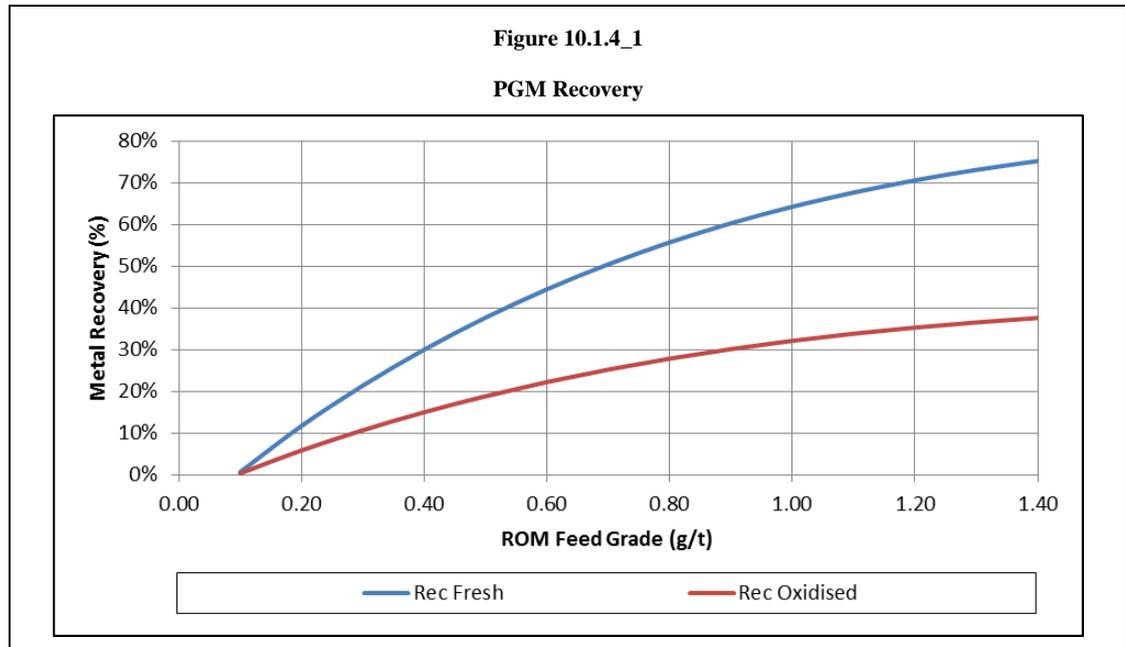
Mining losses was based on 6%, estimated on previous performance and determined by observation and measurement in the existing operation. The sources of mining losses included mining activities close to geological features, misalignment of reef excavator bucket size with the chromitite layer thickness, incorrect loading on the roof and floor of the chromitite layers and losses due to blasting activities.

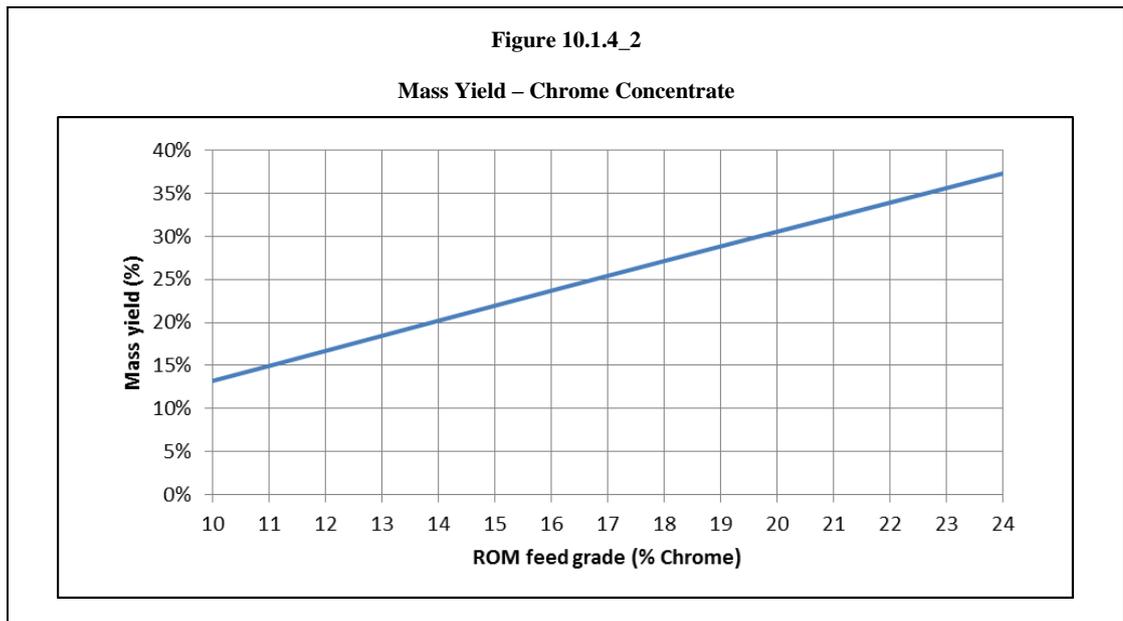
#### **10.1.3 Mining Dilution**

Appropriate dilution was applied in the LoM plan and Mineral Reserve estimate. A mining dilution of 9.1% (calculated on a tonnage basis) was applied based on a reconciliation conducted between actual grades achieved and modelled grades with calculated dilution for the corresponding periods. The reconciliation consisted of production data for the preceding nine months, based on actual plant feed grades achieved in both the Genesis and Voyager plants for the period excluding milled and residual tailings treated in the Genesis plant. Dilution was planned for every chromitite layer based on the mining methodology employed for that specific chromitite layer. The chromitite layers that were mined with the surrounding waste rock were classified as non-selective mining and thus attracted a higher percentage dilution. Non selective mining units included MG2, MG4 and MG4A layers. The chromitite layers mined as selective was allocated a lower relative percentage dilution. The only chromitite layers that were deemed to mine selectively were MG1 and MG3.

#### 10.1.4 Metallurgical Recoveries

Plant recoveries were based on actual performance while capacities were based on design capacity. The PGM recoveries are shown in Figure 10.1.4\_1. The mass yield applied for a metallurgical grade chromite product based on the supplied yield curves as indicated in Figure 10.1.4\_2.





### 10.1.5 Financial and Revenue Parameters

The revenue parameters used in the financial assessment to allow declaration of a Mineral Reserve are presented in Table 10.1.5\_1. The PGM prices were reduced as the metals are sold as a concentrate, and only attract a percentage of the metal value. No selling cost was assigned to the PGM's and a royalty of 4.7% was included. A Cost, Insurance and Freight (CIF) cost was allowed for transport and associated costs of the chrome concentrate to the ultimate destination in China.

Parameter	Unit	Value
<b>Revenue</b>		
Pt	US\$/oz.	1,184
Pd	US\$/oz.	753
Rh	US\$/oz.	1,401
Au	US\$/oz.	995
42% Cr <sub>2</sub> O <sub>3</sub>	R/t	2,132
<b>Financial</b>		
Discount rate	%	9.2
Royalty fee (% of revenue)	%	4.7
Chrome transport cost	R/t	750
Note: the economic parameters used to optimise the mining operation and determine the viability of the mining operation in order to declare a mineral reserve, may be different from those used in the valuation of the mine as a whole.		

The commodity prices and foreign exchange rates used in the model were supplied based on a range of broker forecasts.

#### **10.1.6 Capital and Operating Costs**

The mining cost was based on the approved contract rates of the current mining contractor. The rate included drilling, blasting, loading and hauling on a semi selective mining basis.

Minimal capital is required for the mining operation as MCC supplies all the mining equipment. The capital is in effect incorporated into the mining rate which is captured in the mine operating cost estimate.

#### **10.1.7 Mineral Reserve Tabulation**

With the applicable modifying factors identified and evaluated as being reasonable, and the financial model yielding positive economic returns, the Mineral Resource within the mining footprint was converted to a Mineral Reserve. The Mineral Reserve was declared exclusive of UG1 and MG(0).

The Mineral Reserve Estimate for the open pit section for Tharisa Mine is presented in Table 10.1.7\_1 in accordance with the SAMREC guidelines.

**Table 10.1.7\_1**  
**Tharisa Open Pit Mineral Reserve Estimation (31 December 2015)**

Proved Mineral Reserve													
Chromitite Layer	Tonnes (Mt)	Pt (g/t)	Pd(g/t)	Rh(g/t)	Au (g/t)	3PGE+Au (g/t)	Ru(g/t)	Ir(g/t)	5PGE+Au (g/t)	Cr <sub>2</sub> O <sub>3</sub> (%)	Cu (%)	Ni (%)	Cr (%)
MG0													
MG1													
MG2	13.2	0.85	0.27	0.13	0.004	1.27	0.23	0.07	1.57	15.9	0.003	0.060	10.8
MG3	11.1	0.55	0.32	0.14	0.005	1.01	0.20	0.05	1.26	11.9	0.003	0.045	8.1
MG4	11.0	1.00	0.22	0.20	0.003	1.43	0.34	0.10	1.87	24.2	0.002	0.071	16.6
MG4A	6.1	0.35	0.13	0.11	0.003	0.59	0.22	0.04	0.85	21.3	0.003	0.066	14.6
<b>Total</b>	<b>41.4</b>	<b>0.74</b>	<b>0.25</b>	<b>0.15</b>	<b>0.004</b>	<b>1.14</b>	<b>0.25</b>	<b>0.07</b>	<b>1.46</b>	<b>17.8</b>	<b>0.003</b>	<b>0.060</b>	<b>12.2</b>
Probable Mineral Reserve													
Chromitite Layer	Tonnes (Mt)	Pt(g/t)	Pd(g/t)	Rh(g/t)	Au (g/t)	3PGE+Au (g/t)	Ru(g/t)	Ir(g/t)	5PGE+Au (g/t)	Cr <sub>2</sub> O <sub>3</sub> (%)	Cu (%)	Ni (%)	Cr (%)
MG0													
MG1	6.8	0.32	0.20	0.11	0.004	0.63	0.45	0.07	1.15	32.1	0.002	0.077	22.0
MG2	14.6	0.85	0.30	0.14	0.004	1.29	0.23	0.06	1.58	15.9	0.002	0.061	10.9
MG3	13.2	0.58	0.33	0.15	0.004	1.05	0.21	0.06	1.32	12.8	0.003	0.047	8.7
MG4	6.8	1.04	0.24	0.20	0.003	1.48	0.35	0.11	1.94	24.0	0.002	0.070	16.4
MG4A	5.0	0.34	0.14	0.11	0.004	0.59	0.22	0.04	0.85	20.7	0.003	0.066	14.2
<b>Total</b>	<b>46.4</b>	<b>0.67</b>	<b>0.27</b>	<b>0.14</b>	<b>0.004</b>	<b>1.08</b>	<b>0.27</b>	<b>0.07</b>	<b>1.42</b>	<b>19.1</b>	<b>0.002</b>	<b>0.061</b>	<b>13.1</b>
Total Mineral Reserve													
Chromitite Layer	Tonnes (Mt)	Pt(g/t)	Pd(g/t)	Rh(g/t)	Au (g/t)	3PGE+Au (g/t)	Ru(g/t)	Ir(g/t)	5PGE+Au (g/t)	Cr <sub>2</sub> O <sub>3</sub> (%)	Cu (%)	Ni (%)	Cr (%)
MG0													
MG1	6.8	0.32	0.20	0.11	0.004	0.63	0.45	0.07	1.15	32.1	0.002	0.077	22.0
MG2	27.8	0.85	0.28	0.14	0.004	1.28	0.23	0.07	1.58	15.9	0.003	0.061	10.9
MG3	24.4	0.56	0.32	0.14	0.005	1.03	0.20	0.06	1.29	12.4	0.003	0.046	8.5
MG4	17.7	1.02	0.23	0.20	0.003	1.45	0.34	0.11	1.90	24.2	0.002	0.071	16.5
MG4A	11.1	0.34	0.13	0.11	0.003	0.59	0.22	0.04	0.85	21.0	0.003	0.066	14.4
<b>Total</b>	<b>87.8</b>	<b>0.70</b>	<b>0.26</b>	<b>0.14</b>	<b>0.004</b>	<b>1.11</b>	<b>0.26</b>	<b>0.07</b>	<b>1.44</b>	<b>18.5</b>	<b>0.002</b>	<b>0.061</b>	<b>12.7</b>

## **10.2 Underground Mineral Reserve Estimation**

Mining related modifying factors applicable to the underground design were applied to convert the Mineral Resources to Mineral Reserves.

### **10.2.1 Geological Losses**

A geological loss of 15% was applied based on the recommendations of the competent person.

### **10.2.2 Mining External Dilution**

The mining dilution factors were calculated from first principles with the following assumptions:

- A 10cm layer of waste from the hanging and footwall horizons of the mined chromitite layer will be mined and conveyed as RoM ore.
- Depending on dip of the chromitite layer, some waste is mined to maintain safe and horizontal underfoot conditions as per design.

The dilution factors decrease with depth from 16.1% to 13.2% for MG2 Chromitite Layer and from 15.0% to 11.7% for MG4 Chromitite Layer. This is in direct proportion to the pillars sizes that increase with depth.

### **10.2.3 Mining Recovery**

Mining recovery for both chromitite layers was set at the historical mining average for similar operations at 98%.

### **10.2.4 Mining Extraction before Geological Losses**

This is mainly a function of the pillar size and was estimated from first principles. A decreasing trend with depth is indicated from 78.6% in the upper levels to 71.4% in the lower levels for both Chromitite Layers.

### **10.2.5 Mineral Reserve Tabulation**

Indicated Resources included in the mine plan were converted to Probable Mineral Reserves.

This project includes Probable Mineral Reserves and material from Inferred Mineral Resources. The Mineral Reserve estimate for Tharisa is presented in Table 10.2.5\_1 in accordance with the SAMREC guidelines.

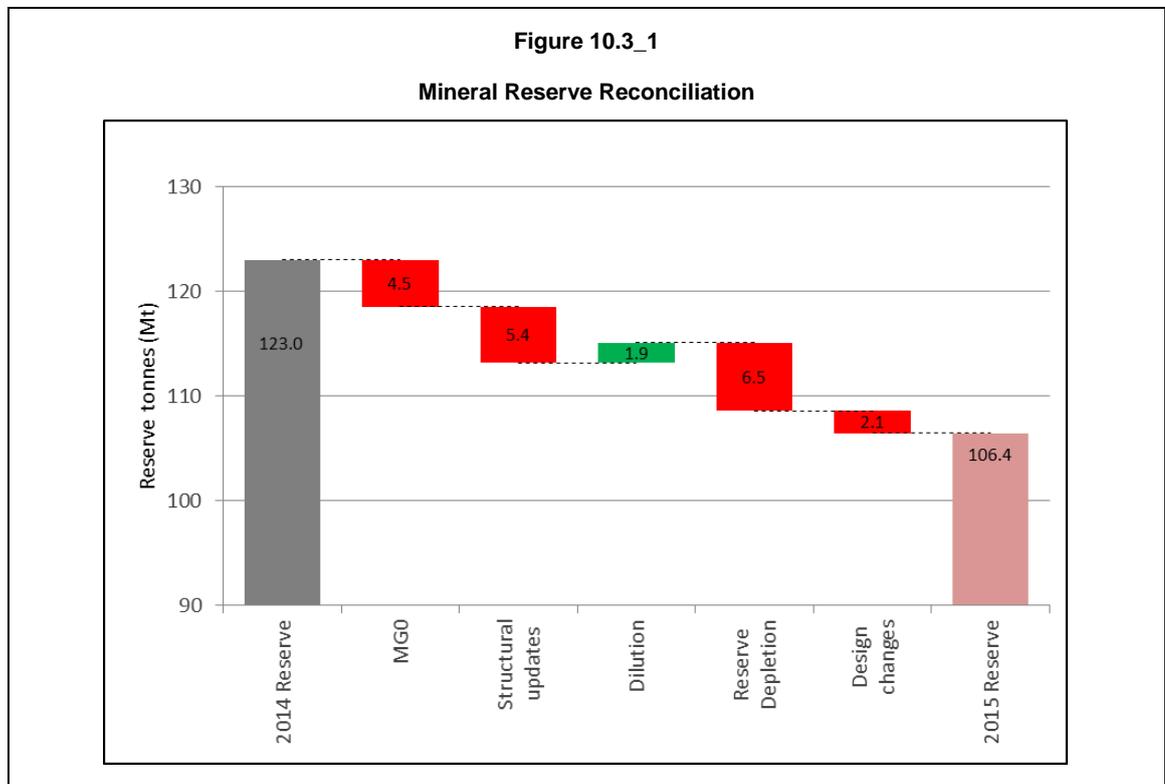
The Mineral Reserve declaration is in respect of tonnage and grade delivered to the processing facility.

**Table 10.2.5\_1  
Tharisa Underground Mineral Reserve Estimate (31 December 2015)**

<b>Proved Mineral Reserve</b>													
<b>Chromitite Layer</b>	<b>Tonnes (Mt)</b>	<b>Pt (g/t)</b>	<b>Pd(g/t)</b>	<b>Rh(g/t)</b>	<b>Au (g/t)</b>	<b>3PGE+Au (g/t)</b>	<b>Ru(g/t)</b>	<b>Ir(g/t)</b>	<b>5PGE+Au (g/t)</b>	<b>Cr<sub>2</sub>O<sub>3</sub> (%)</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Cr (%)</b>
<b>MG2AB</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>MG4</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Probable Mineral Reserve</b>													
<b>Chromitite Layer</b>	<b>Tonnes (Mt)</b>	<b>Pt(g/t)</b>	<b>Pd(g/t)</b>	<b>Rh(g/t)</b>	<b>Au (g/t)</b>	<b>3PGE+Au (g/t)</b>	<b>Ru(g/t)</b>	<b>Ir(g/t)</b>	<b>5PGE+Au (g/t)</b>	<b>Cr<sub>2</sub>O<sub>3</sub> (%)</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Cr (%)</b>
<b>MG2AB</b>	6.6	0.70	0.21	0.10	0.002	1.02	0.20	0.05	1.27	17.4	0.060	0.002	11.9
<b>MG4</b>	12.0	0.89	0.18	0.17	0.002	1.25	0.31	0.10	1.66	20.4	0.061	0.002	14.1
<b>Total</b>	<b>18.6</b>	<b>0.82</b>	<b>0.19</b>	<b>0.15</b>	<b>0.002</b>	<b>1.17</b>	<b>0.27</b>	<b>0.08</b>	<b>1.52</b>	<b>19.3</b>	<b>0.060</b>	<b>0.002</b>	<b>13.3</b>
<b>Total Mineral Reserve</b>													
<b>Chromitite Layer</b>	<b>Tonnes ('000)</b>	<b>Pt(g/t)</b>	<b>Pd(g/t)</b>	<b>Rh(g/t)</b>	<b>Au (g/t)</b>	<b>3PGE+Au (g/t)</b>	<b>Ru(g/t)</b>	<b>Ir(g/t)</b>	<b>5PGE+Au (g/t)</b>	<b>Cr<sub>2</sub>O<sub>3</sub> (%)</b>	<b>Ni (%)</b>	<b>Cu (%)</b>	<b>Cr (%)</b>
<b>MG2AB</b>	6.6	0.70	0.21	0.10	0.002	1.02	0.20	0.05	1.27	17.4	0.060	0.002	11.9
<b>MG4</b>	12.0	0.89	0.18	0.17	0.002	1.25	0.31	0.10	1.66	20.4	0.061	0.002	14.1
<b>Total</b>	<b>18.6</b>	<b>0.82</b>	<b>0.19</b>	<b>0.15</b>	<b>0.002</b>	<b>1.17</b>	<b>0.27</b>	<b>0.08</b>	<b>1.52</b>	<b>19.3</b>	<b>0.060</b>	<b>0.002</b>	<b>13.3</b>

### 10.3 Mineral Reserve reconciliation

A Mineral Reserve reconciliation was conducted between the 30 September 2014 and 31 December 2015 reported Mineral Reserve. Figure 10.3\_1 shows the variance in the 2014 and 2015 Mineral Reserve estimate.



The MGO chromite layer did not form part of the 2015 Mineral Reserve estimate due the practical and economic considerations. A volume variance occurred due to structural updates, mainly due to wireframe thickness variations between the estimated Mineral Resource wireframes and updated survey information as measured during the preceding 12 months. Planned dilution increased due to the change in mining methodology regarding the mining selectivity of chromitite layers that resulted in an increase in Mineral Reserves of approximately 1.9Mt. Reserve depletions for the period were estimated at 6.5Mt. Local design changes accounted for 2.1Mt based on the addition of a highwall ramp and the exclusion of steeper dipping areas in the far west.

## 11 Mineral Processing and Metallurgical Testing

### 11.1 Introduction

The processing facilities at the Tharisa Mine are designed to treat the (Middle Group) MG Chromitite Layers of the Bushveld Complex. These layers vary in thickness, competence and chromite and Platinum Group Metals (PGM) grades. Historically some of the MG Chromitite Layers have been mined for the recovery of chromite but not for PGM's. Tharisa Minerals has undertaken metallurgical tests on samples from these layers and confirmed the economic viability of mining and processing these ores for the recovery of both the chromite and PGM concentrates and confirmed this with the subsequent operating results.

The Tharisa Mine has been developed in a phased manner as described below.

- The **first phase** of the mine development involved the production of a chromite concentrate only from a pilot plant. Trial production commenced in March 2009. This pilot plant was later adapted to provide early revenue and from November 2009 the plant treated RoM ore at a throughput rate of 38,000 tpm.
- The **second phase** of the mine development involved the expansion of the mining operation and first phase processing facility to mine and treat 100,000 tpm of RoM ore. In addition the processing facility was expanded to incorporate both a 65,000 tpm PGM recovery circuit and a secondary chromite recovery section. This combined complex is currently known as the Genesis plant. Commissioning of the Genesis plant commenced in August 2011 and was completed in February 2012.
- The **third phase** of mine development increased the mining and processing rate by a further 300,000 tpm. This was achieved through the construction of a new standalone concentrator which operates in parallel to the existing 100,000 tpm processing facility. The new 300,000 tpm concentrator, known as the Voyager plant, recovers a primary chromite concentrate, a PGM concentrate from the primary chromite tailings and a secondary chromite concentrate from the PGM tailings.

After the construction and commissioning of the Voyager plant the total mining and processing throughput capacity of the Tharisa Mine was 400,000 tpm (4.8Mtpa) of RoM ore.

### 11.2 Processing Facilities and Flow Sheets

The original process design was based on test work undertaken by Mintek. In addition, the Tharisa Minerals processing facility was developed on a phased basis as discussed in Section 11.1. The different phases were structured to provide additional design information for the 300,000 tpm plant while generating an income stream through recovering chromite concentrate.

The Tharisa minerals operation produces the following products:

- Metallurgical Chromite Concentrate  
The typical metallurgical chromite product chrome grade from Tharisa is 41% to 42% Chrome (As  $\text{Cr}_2\text{O}_3$ ) with the silica ( $\text{SiO}_2$ ) lower than 5%.
- Chemical Grade Chromite Concentrate  
The typical chemical grade chromite product chrome grade from Tharisa is 44% to 46%  $\text{Cr}_2\text{O}_3$  with the  $\text{SiO}_2$  lower than 1.0%. This is a higher value chromite product than the metallurgical grade chromite concentrate.
- Foundry Grade Chromite Concentrate  
The typical foundry grade chromite product chrome grade from Tharisa is 44% to 46%  $\text{Cr}_2\text{O}_3$  with the  $\text{SiO}_2$  lower than 1.0%. The American Foundryman Society Grain Fineness Number (AFS Number) is managed between 45 and 50. As with the Chemical Grade Chromite, this is a higher value chromite concentrate than the metallurgical grade chromite concentrate.
- PGM Concentrate  
PGM concentrate is produced from both the processing facilities. The concentrate produced from the Voyager plant is higher grade than the concentrate from the Genesis plant due to the different chromitite reefs treated. The concentrate grade of the Genesis plant varies from 40 g/t 6E (Six Elements) PGM's to 100 g/t 6E PGM's with the average product grade increasing from 56 g/t 6E in 2014 to 78 g/t 6E in 2015. The concentrate grade of the Voyager plant varies from 104 g/t 6E PGM's to 167 g/t 6E PGM's with the average product grade increasing from 129 g/t 6E in 2014 to 139 g/t 6E in 2015. The major component of the PGM's is Platinum, followed by Palladium and Ruthenium. The concentrates are blended if required to ensure a consistent final concentrate product leaving the mine.

The Tharisa production drive is to optimise the recovery of chromite to higher value products (Chemical and Foundry Grade Concentrates) without compromising the sales of the metallurgical grade chromite concentrate. In the case of the PGM flotation circuit the main drive is to optimise PGM recovery while maintaining an acceptable PGM concentrate grade and maintain penalty elements (mainly  $\text{Cr}_2\text{O}_3$ ) within limits.

The current operational processing facilities consist of two distinct and separately operated plants which are described below.

#### Genesis Plant

The second phase of mine development established the Genesis processing plant with a design plant throughput of 100,000 tpm RoM. The Genesis plant processes predominantly the MG1 and MG4A Chromitite layers which contain the higher grade chromite and lower grade

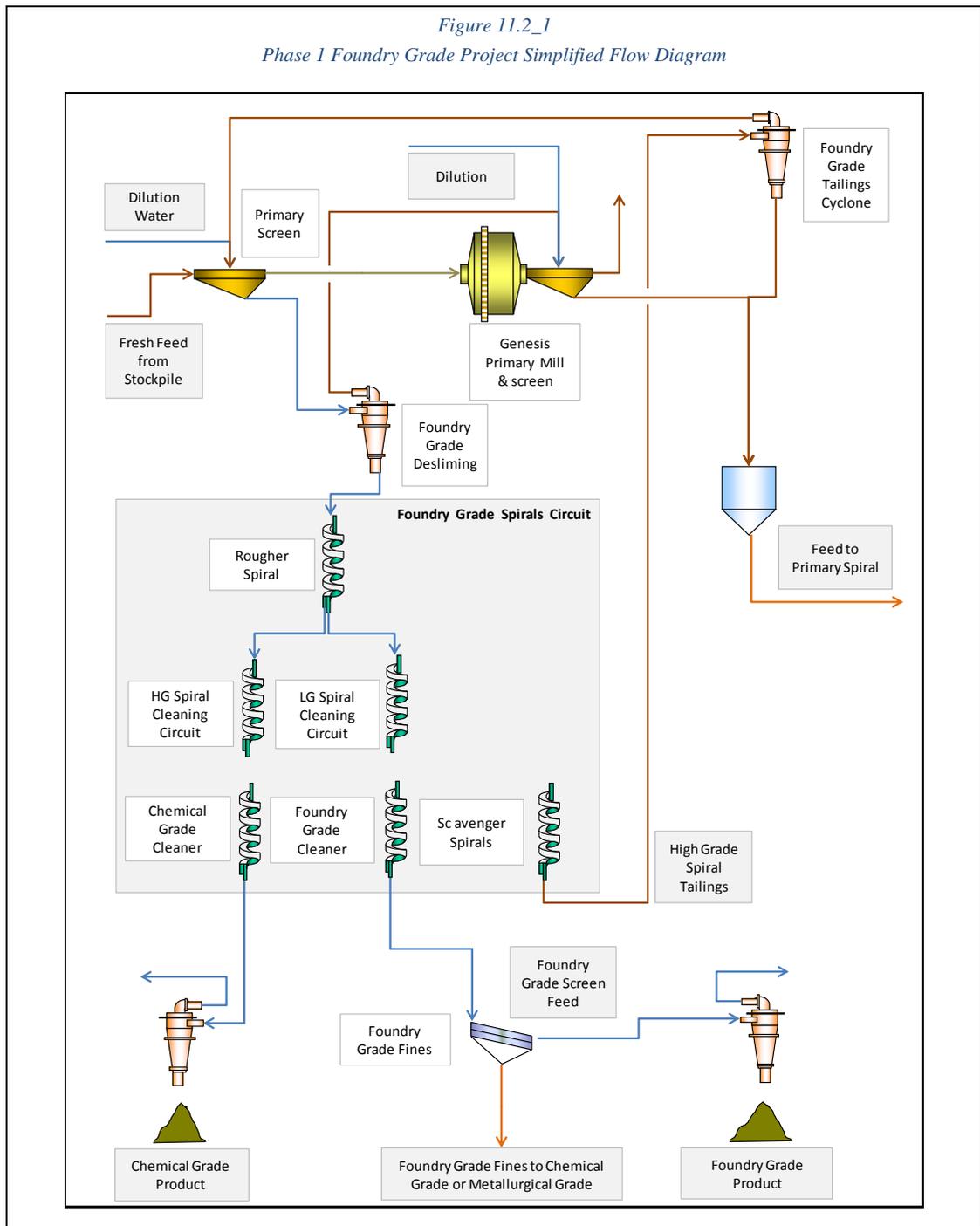
PGM's. The main focus of the Genesis plant is therefore to recover and produce higher value chromite products.

Since the original design of the Genesis plant the following projects have been implemented to optimise the production and product value.

- Foundry Grade Project

The Foundry Grade Project is an additional spiral plant that was added to the Genesis plant to treat natural fines from the crushing circuit to produce up to 2,250 tpm of foundry grade and up to 1,500 tpm of chemical grade chromite. The production of higher grade final products is associated with a minor reduction in the total metallurgical grade chromite production (but higher total value) from this plant. The simplified process flow diagram of the foundry grade circuit is presented in Figure 11.2\_1.

Figure 11.2\_1  
Phase 1 Foundry Grade Project Simplified Flow Diagram



- Additional Stages to Primary and Secondary Spiral Section

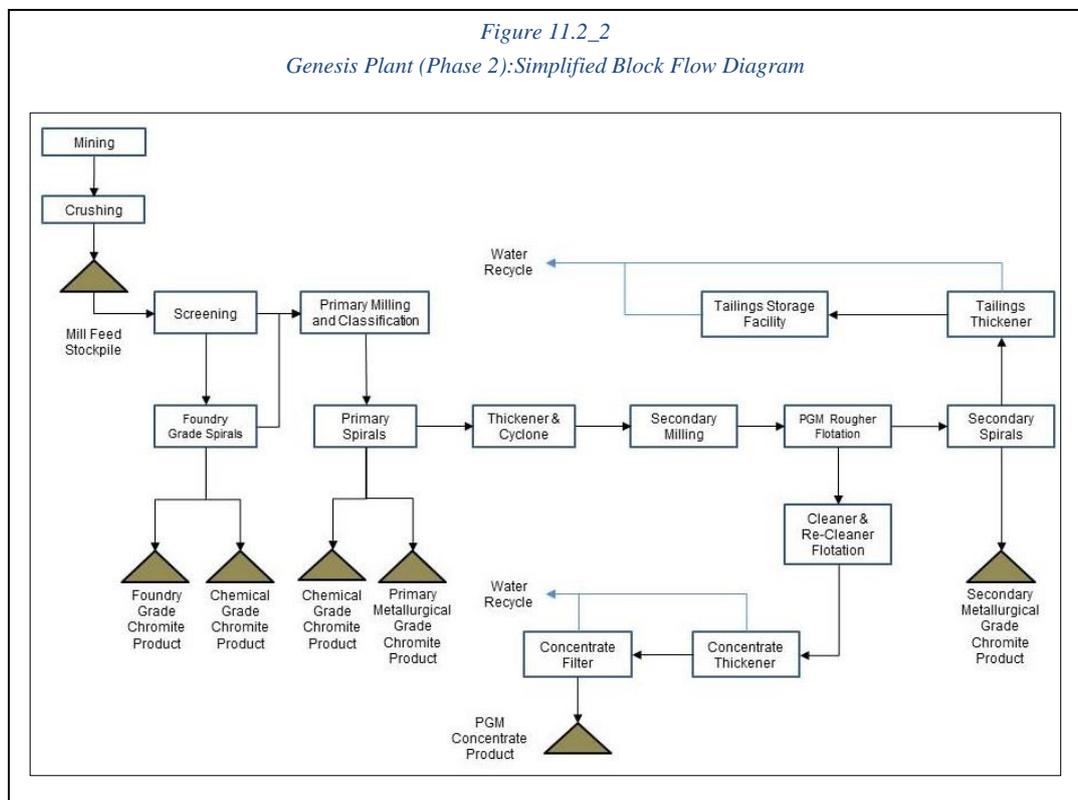
Two additional middlings cleaning spiral stages and a re-cleaner spiral stage have been added to the original primary spiral circuit. Also a re-wash circuit consisting of two additional cleaning stages has been added to clean middlings from the cleaner circuit.

Two cleaning spiral stages have been added to the Secondary spiral circuit. These additions gives additional cleaning capacity to ensure flexibility and to increase recovery on the roughers and scavengers while still maintaining the final concentrate grade.

- Production of Chemical Grade Concentrate from the Primary Spiral Section

The concentrate from the primary re-cleaner spirals is re-directed to two additional spiral cleaning stages producing a chemical grade chromite concentrate from the primary spiral circuit. The combined chemical grade chromite concentrate for the Genesis plant, from the Foundry Plant and Primary Spirals section, varies up to a maximum of 5,500 tpm dependent on the feed chromite grade.

The Genesis process flow is indicated in Figure 11.2.2 and described below.



RoM material from the open pit mining operation is received and stored on a RoM pad. The RoM material is fed either directly by truck or by front end loader into the crushing circuit. The ore is crushed to less than 12mm by a three stage crushing circuit. The crushed ore is screened at 0.6mm to remove the crushed fines. This minus 0.6mm fine material is pumped to the foundry grade spiral plant for recovery of foundry and chemical grade chromite concentrates. These concentrates are dewatered separately by dewatering cyclones and stored on separate drying pads from where it is despatched by covered road truck.

The plus 0.6mm coarse fraction from the screen is milled in a single stage ball mill operated in closed circuit with a vibrating screen with a 0.6mm cut size. The milled ore that passes through the screen combines with the tailings from the foundry grade spiral concentrator plant and is pumped to the primary spiral concentrator circuit. The primary spiral circuit further recovers chromite to produce metallurgical and chemical grade chromite concentrates. The metallurgical grade chromite concentrate is dewatered by separate dewatering cyclones and stored on separate drying pads from where the concentrate is despatched. The chemical grade concentrate joins the chemical grade concentrate from the foundry plant for dewatering and storage.

The primary spiral circuit tailings stream is dewatered by a cluster of cyclones from where the coarse solids gravitate to three open circuit secondary ball mills operated in parallel. The fine solids, cyclone overflow, feeds a thickener where the thickened fine solids are also pumped to the ball mills. The slurry discharging from the secondary mills is collected in a common tank and pumped to the flotation plant for PGM recovery. The concentrate from the first rougher flotation stage is subjected to three stages of cleaner flotation to produce a final PGM concentrate. The PGM concentrate is dewatered first through a thickener and the thickener underflow reduced to a cake in a filter press..

The PGM flotation section tailings stream is pumped to a secondary spiral concentrator section where the finer chromite, liberated by the secondary mills, is separated from the gangue material to produce a second fine metallurgical grade chromite concentrate. This fine chromite concentrate is dewatered by cyclone and stored on a separate dedicated drying pad..

The water in the tailings from the secondary spirals section is recovered in a thickener and re-circulated as process water. The thickened tailings are pumped to the final Tailings Storage Facility (TSF). Water is also recovered from the TSF and circulated back to the processing facility.

#### Voyager Plant

The third phase of mine development increased the total throughput rate to 400,000 tpm by establishing a new processing facility rated at 300,000 tpm, known as the Voyager plant. The Voyager plant operates in parallel with the 100,000 tpm Genesis plant. The Voyager plant processes predominantly the MG2, MG3 and MG4 Chromitite layers which contain the higher PGM grades and lower chromite grades.

Since the original design of the Voyager plant the following projects have been implemented to optimise the production and product value.

- PGM Rougher Flotation Concentrate Regrinding Circuit:

The original feasibility study process flow included a regrinding circuit. Subsequent to the final Mintek test work results, the regrinding circuit was removed from the design as

the PGM recovery improvement, indicated by laboratory test work, did not justify the additional capital cost required for the regrinding circuit.

- PGM Cleaner Flotation Circuit:

The original feasibility study process flow was based on a cleaner, re-cleaner and final cleaner (three stage cleaner circuit). During detail design the circuit was changed to a high grade / low grade cleaner circuit to produce a high grade and low grade PGM concentrate. (The concentrates are combined as final product). The design improvement provided additional process flexibility resulting in better flotation efficiencies.

- Three Stage Crushing Circuit:

The initial plant design was based on a single stage primary jaw crushing and Semi-Autogeneous Grinding (SAG) mill circuit. As the ore hardness was not adequately defined for the fresh ore, the mitigation factor in the original design was to include a pebble crusher in the circuit. From final test work results, the fresh ore has proven to be more competent than the original design. The consequence of this was that the final crushing circuit was changed to a three stage crushing with the primary mill operating as grate discharge ball mills.

- Production of Higher Value Chromite Products (Voyager Plant)

Tharisa has proven with plant test work that the recovery of a small fraction of higher value chemical grade chromite is possible from the Voyager plant primary spiral circuit. This required the installation of two additional cleaning spiral stages to produce a chemical grade product from the existing re-cleaner spiral concentrate. The required circuit changes to achieve the production of chemical grade chromite have been completed. In addition to spiral circuit changes, one of the chromite dewatering and stacking cyclone sections will be used to dewater and stack the chemical grade product separately from the metallurgical grade product.

- Primary Chromite Circuit Improvements to Increase Flexibility

The original 6 stage spiral circuit had single stage cleaning and middling's treatment circuits. Subsequent to the original commissioned circuit, two stages of cleaning, a dewatering cyclone cluster and a scavenger circuit have been added to the primary spiral operation. The additional spiral steps allow for more flexibility that ensures optimum chromite concentrate grade and yield; even with variable chromite feed grades. In addition, the originally installed primary spirals are being replaced with better quality, and slightly modified, spirals to improve the flow and separation characteristics.

- Secondary Chromite Circuit Improvements to Improve Yield

The original installed spiral plant included a 6 stage spiral circuit with single stage cleaning and middling's treatment circuit. Subsequent to the original implemented

circuit, three stages of high grade cleaning spirals and one stage of low grade cleaning spirals were added to the circuit. As with the primary circuit, a dewatering cyclone cluster and a scavenger spiral stage were added to the spiral circuit. The additional spiral steps improved the secondary spiral yield while maintaining an acceptable concentrate grade.

- The Implementation of High Energy Flotation

Due to the small grain size of the PGM minerals in the Tharisa ore, liberated fines are lost to tails in conventional flotation cells as they do not have enough energy to penetrate bubble surfaces. By combining high energy mechanisms with conventional mechanisms, and dedicating a cleaner circuit to each of the different recovered size fractions, the ultra-fine PGM minerals lost to tails can be recovered.

After a pilot tests program, high energy flotation mechanisms were installed in the Tharisa Voyager flotation circuit. These mechanisms have been installed in selected flotation cells in the rougher circuit and in selected flotation cells in the low grade cleaning circuit.

The current Voyager process flow is indicated in Figure 11.2.3 and described below.

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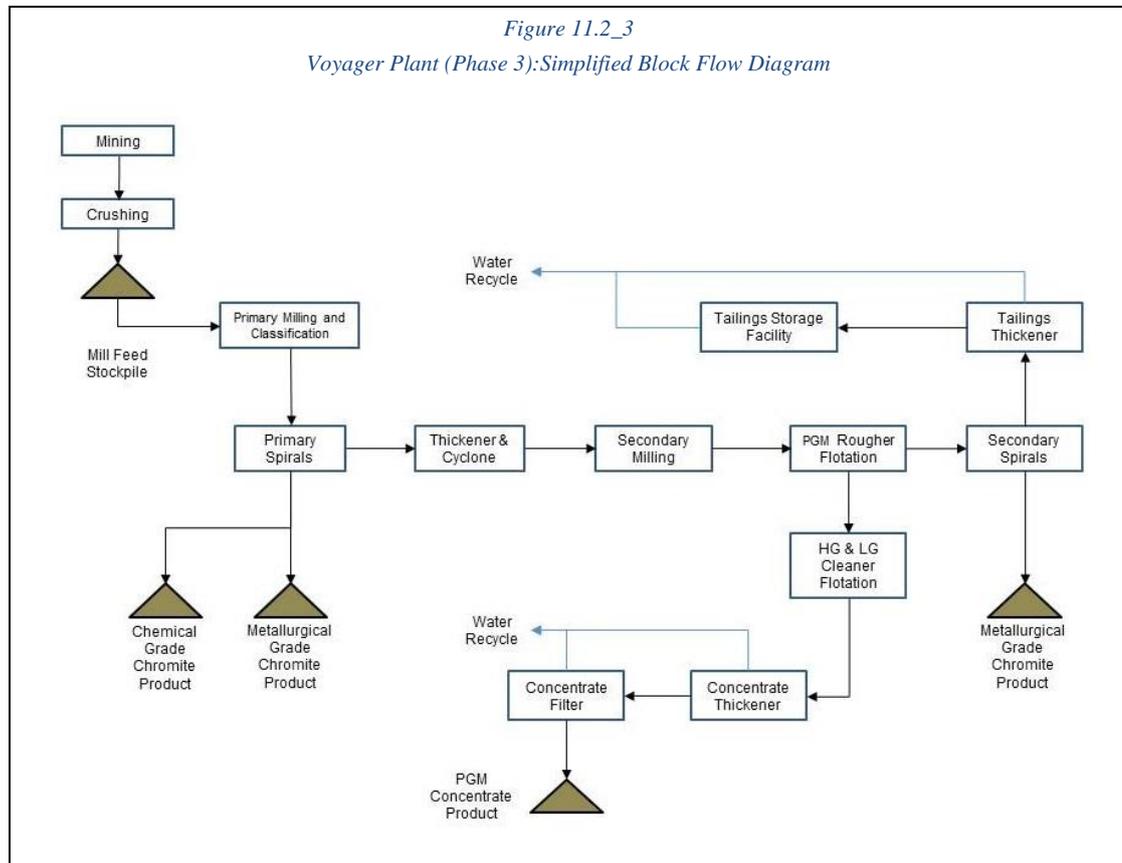
The Voyager plant requires a stable and mixed feed from the different ores from the open pit mining operations. The Run of Mine ore is delivered to the area ahead of the crushing section. It is either stockpiled or fed directly in to the plant. The required blend in to the plant is made up from stockpiled material and direct feed depending on the seams being mined in the pit.

The ore is fed to the primary jaw crusher from a vibrating grizzly feeder that removes the fine material ahead of the crusher. These fines and crushed ore is further educed through the secondary and tertiary cone crushers to a nominal particle size of 22mm, from 500mm in to the primary crusher.

The crushed ore is stored on an open stockpile from where it is fed to two ball mills operating in parallel. Each 3.35 MW ball mill is in closed circuit with dedicated mill screens sizing at 0.6mm. Material coarser than 0.6mm is returned to the mills whilst the solids finer than 0.6mm pass through the screens and are pumped to the primary spiral concentrator section for recovery of the coarse chromite. Most of the chromite concentrate recovered is metallurgical grade concentrate, but recent modifications to the circuit produce a chemical grade concentrate.

The metallurgical grade chromite concentrate from the secondary spirals joins the metallurgical grade concentrate from the primary spirals for dewatering. The combined metallurgical grade concentrate is dewatered by cyclone and stored on drying pads. Two drying pads are used, each equipped with two dewatering cyclones, allowing for four

placement options for the metallurgical grade chromite concentrate. The chemical grade concentrate is dewatered by cyclone and stored on a separate drying pad. The drying pad is equipped with two dewatering cyclones, allowing for two placement options for the chemical grade chromite concentrate. The concentrates are loaded from the drying pads by front end loader and dispatched by truck.



The tailings from the primary spiral concentrator plant is pumped to a classifying cyclone cluster where coarse solids discharge via the underflow to a single 5.5 MW ball mill that operates in open circuit. The overflow from these cyclones are fed to a thickener where the contained water is recovered and returned to the process water tank. The underflow from this thickener is then pumped to the PGM recovery section together with the secondary mill discharge in to the rougher flotation circuit. The concentrate from the rougher flotation circuit is subjected to various stages of cleaner flotation in a High grade / Low grade cleaner circuits to produce a final PGM concentrate. The PGM concentrate is dewatered by a combination of a thickener and a filter before despatch by truck.

The PGM recovery section tailings stream is pumped to a secondary spiral concentrator section where the fine chromite, liberated by the secondary mill, is separated from the gangue material to produce a second fine metallurgical grade chromite concentrate.

The water in the tailings from the secondary spiral concentrator is recovered in a thickener and re-circulated to the processing facility whilst the solid tailings (thickener underflow) are

pumped by a tailings pumping system, to the final TSF. The TSF is a shared facility with the Genesis processing facility.

Construction of the Voyager plant commenced in July 2011 and was completed in September 2012. Commissioning of this plant commenced during August 2012, first ore was introduced to the plant during September 2012 and commissioning was completed in December 2012.

The Tharisa metallurgical and engineering team has undertaken a number of plant performance evaluation studies subsequent to the 400,000 tpm processing facility being put into production. These studies have resulted in various plant upgrades (as discussed) to improve the process plant performance in terms of both recovery and concentrate grade for both chromite and PGM's.

Further improvement projects currently under investigation are described below. These projects are in various phases of testing and the final decision of which will be implementation has not being made.

- Wet High Intensity Magnetic Separation (WHIMS)

During the operation of the plants it has been found that there is chromite content in the final tailings. These losses were found to be in the fines fraction where spiral efficiencies are low. Chromite is paramagnetic and laboratory and pilot scale tests have shown that this material can be recovered with high intensity magnets.. A two stage production scale WHIMS circuit has been installed at the Voyager plant to evaluate this technology and likely plant performance.

- Column Flotation

Pilot tests are in progress to evaluate the application of column flotation to the PGM circuit to improve final PGM concentrate grade and the recovery of fine PGM particles.

- Shaking Tables

Pilot tests are in progress to evaluate the application of shaking tables in the chromite circuit to improve spiral chromite product grade and yield.

- Application of Regrind Milling

The PGM flotation circuit has undergone significant optimising to improve recovery and grade. The application of regrinding is currently under review for further PGM recovery improvement in future.

### **11.3 Genesis and Voyager Plant Metallurgical Performance**

The Tharisa combined Genesis and Voyager process plants have been operated as production units since December 2012. The ore that has been processed to date is from near surface and can be described as mixed rather than fresh ore. This means that the ore is partially oxidised which has a negative impact on the flotation recovery of the PGM's. As the

open pit deepens the RoM ore will increasingly become “fresh” (non-oxidised) with a resultant improvement in PGM recovery.

The chemical and foundry grade chromite recovery circuits were commissioned in July 2013 and production of these higher grade concentrates has continued since.

The actual production data for 2013 to 2015, together with the planned metallurgical performance is presented in Table 11.3\_1.

Description	Year	2013*	2014*	2015*	2016	2017	2018
Tonnes Milled	'000t	3,866	3,913	4,400	4,659	5,086	5,035
RoM Chromite Grade	%Cr <sub>2</sub> O <sub>3</sub>	20.7	19.4	18.3	19.5	19.6	19.3
<b>Foundry Grade Chromite Concentrate</b>							
Concentrate Tonnes	'000t	4.0	13.4	5.0	16.6	24.3	23.4
Concentrate Grade	%Cr <sub>2</sub> O <sub>3</sub>	45.0	45.4	44.4	45.0	45.0	45.0
<b>Chemical Grade Chromite Concentrate</b>							
Genesis Plant – Tonnes	'000t	11.4	46.4	18.9	51.4	64.7	62.2
Genesis Plant – Grade	%Cr <sub>2</sub> O <sub>3</sub>	45.0	45.3	44.4	45.0	45.0	45.0
Voyager Plant – Tonnes	'000t	47	81.0	88.9	79.2	200.1	199.0
Voyager Plant – Grade	%Cr <sub>2</sub> O <sub>3</sub>	44.0	43.7.0	43.7	44.0	44.0	44.0
<b>Metallurgical Grade Chromite Concentrate</b>							
Concentrate Tonnes	'000t	1,130	937	1,009	1,061	1,099	1,079
Concentrate Grade	%Cr <sub>2</sub> O <sub>3</sub>	42.0	41.2	41.3	42.0	42.0	42.0
<b>Total Chromite Concentrate</b>							
Concentrate Tonnes	'000t	1,193	1,078	1,122	1,341	1,439	1,415
Chromite Yield	%	30.9	27.6	25.5	29	29	28
Chromite Recovery	%	59.3	59.4	58.1	66	74	73
<b>PGM Concentrator Section</b>							
PGM Concentrator Feed	'000t	2,894	3,060	3,446	3,454	3,626	3,625
PGM Feed Grade	g/t	1.41	1.64	1.62	1.68	1.75	1.76
PGM's in Concentrate	ounces	57,421	78,226	118,041	123,052	151,043	164,429
PGM Concentrate Grade	g/t	60	116	131	116.25	128.37	139.79
PGM Recovery	%	43.7	48.5	65.8	66	74	80
*Actual Production							

The following needs to be noted on the historical production information:

- Production Capacity

The average production for the Genesis plant was 80,615 tpm and the Voyager plant was 284,098 tpm during 2015. This is an average total production of 366,704 tpm. The Genesis plant did achieve 100,000 tpm for one month and the Voyager plant achieved 300,000 tpm for six months during the 2015 12 month period. The average production of the Voyager plant during these six months was 319,000 tpm.

From 2015 production results it can be concluded that the Tharisa Minerals operation can achieve 400,000 tpm if operated optimally and if RoM feed is readily available.

- PGM Recovery and Grade

Both the PGM recovery and grade improved greatly from 2013 to 2015. The total recovery for 2015 was 65.8% at a concentrate grade of 131 6E g/t. The recovery and grade is better than expected and with the expected increase in the ratio of fresh (non-oxidised) ore in the plant feed, it is expected that the improving trend will continue into future.

- Chromite Recovery and Grade

The average chromite feed grade declined from 2013 to 2015 from 20.7% Cr<sub>2</sub>O<sub>3</sub> to 18.3% Cr<sub>2</sub>O<sub>3</sub>. The decline corresponded with a decline in the chromite concentrate grade and the chromite recovery in line with predicted plant performance.

The planned metallurgical production is based upon the following:

- The tonnage and head grade from the mining schedule for this period. The feed ore supply to the Genesis and Voyager plant will be stabilised to ensure the 400,000 tpm throughput target is met.
- PGM recoveries are based upon the fresh (non-oxidised) ore and oxidised ore mix in the mining schedule for this period. Higher recoveries are achieved with fresh ore. The fresh ore ratio in the plant feed will increase over the next three years.
- A programme of chromite spiral upgrading is currently under way. The combination of spiral circuit changes and spiral quality improvement is expected to provide an improvement in chromite recovery over the next three years.
- Pilot testing of WHIMS has shown a 2% (up to 10%) increase in chromite recovery as fine chromite from tailings. Two WHIMS units have been installed and final test work is currently underway to finalise the position of the WHIMS. The expected final implementation is 2016.
- Higher grade PGM concentrates can be readily produced without loss of PGM recovery as indicated by the 2015 PGM concentrator section performance. During 2015 an average concentrate grade of 131 g/t at 65.8% recovery were achieved.

- The ratio of foundry grade chromite concentrate to total chromite concentrate production averaged 0.67% from 2013 to 2015. The peak was in 2014 at 1.24%. The current budget, based on the spiral plant improvements currently underway, is 1.38% from 2016.
- The ratio of chemical grade chromite concentrate to total chromite concentrate production averaged 8.6% from 2013 to 2015. The peak was in 2014 at 11.8% and during 2015 9.6% was achieved. The current budget is to maintain the ration at 11.0% from 2016.

#### 11.4 Combined Genesis and Voyager Plant Operating Cost

The operating costs for the combined Genesis and Voyager process plants are presented in the following categories for both the historical costs and the forecast costs:

##### Labour

The labour cost includes: salaries, employee benefits, training, travel, accommodation and expense claims. The planned and actual labour component for 2015 and 2016 is indicated in Table 11.4\_1. The actual labour component for 2015 indicates that the mine is currently understaffed according to plan with 469 employees against 518 planned. The budget plan for 2016 indicates that the staffing requirements will increase with 15 people from the 2015 budget. The labour component excludes the mining contractor employees.

<b>Description</b>	<b>2015 Planned</b>	<b>2015 Actual</b>	<b>2016 Planned</b>
On Mine Support Staff	129	121	146
Plant Operation and Engineering	374	348	370
Engineering	100	92	100
Lab	29	29	29
Plant Overheads – Genesis	20	21	21
Plant Overheads – Voyager	20	20	20
Plant Overheads – Common Plant	14	12	14
Logistics	15	15	15
Operations Tailings Dam	13	14	14
Operations Genesis	48	43	44
Operations Challenger	13	10	13
Operations Voyager	57	56	57
Operations – Crusher	45	36	45
<b>Total on mine</b>	<b>503</b>	<b>469</b>	<b>518</b>

Stores

The stores cost includes: mill media, reagents, mill liners, mechanical spares, tools, laboratory consumables, lubricants, electrical spares, control and instrumentation spares, piping and valves, crane hire, engineering consumables, fuel, surveying and personnel protection equipment. The stores cost forms a large portion of the overall plant operational cost and accounts for most of the process consumables as well as the maintenance consumables.

The typical reagent and mill steel consumption are provided in Table 11.4\_2. The table indicates the budget against the actual for 2014 and 2015. The reagent and mill media consumption was historically fairly accurate.

Plant			Voyager		Genesis	
Description			2014	2015	2014	2015
Primary Mill Media	Planned	kg/tonne	1.00	1.00	0.47	0.65
	Actual	kg/tonne	1.34	1.02	0.45	0.31
Secondary Mill Media	Planned	kg/tonne	0.65	0.65	0.66	0.45
	Actual	kg/tonne	0.42	0.32	0.39	0.28
Senfloc 2660	Planned	g/tonne	25	30	25	40
	Actual	g/tonne	27	16	46	58
SNPX Minibulk	Planned	g/tonne	200	220	200	220
	Actual	g/tonne	222	210	287	234
Senfroth 200	Planned	g/tonne	35	23	43	50
	Actual	g/tonne	20	15	47	51
Sendep 30D	Planned	g/tonne	160	180	230	180
	Actual	g/tonne	169	159	237	105
Copper Sulphate	Planned	g/tonne	145	165	130	130
	Actual	g/tonne	157	141	117	101

Sundries

The sundries cost includes: sampling and analysis, tailings management, consultants, (Information Technology) IT, legal costs, office costs, plant security, outsourced services, insurances, medical costs and equipment hire.

Materials Handling Cost

The materials handling cost is the cost related to the movement of the raw materials and product in the process plant. This include for blending of products to ensure the correct quality product is loaded and transported to customers.

Utilities

The utilities cost entails the power and water supply cost.

Total Operating Cost

The operating cost data for 2013, 2014 and 2015 together with the budget operating cost for 2016 is presented in Table 11.4\_4 below.

The operating cost provided in Table 11.4\_4 is the direct operating cost relevant to the plant operation and maintenance.

The operating cost is indicated to increase by 10.0% from 2015 actual cost to the 2016 budget cost.

The major components impacting on the increased operating cost is increased labour cost, mill media cost, mill liner cost, general stores cost and materials handling cost. The cost increase is in line with what is expected within the current South African operating environment.

<b>Table 11.4_4</b>					
<b>Tharisa Mine</b>					
<b>Achieved and Planned Metallurgical Operating Cost – Excluding Overheads (ZAR/t)</b>					
<b>Operating Cost (ZAR/t)</b>	<b>Year</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016**</b>
Labour		20.33	25.29	26.94	30.92
Stores		44.98	55.95	55.86	60.12
Sundries		3.16	4.43	7.09	5.89
Materials Handling		3.82	8.65	4.74	6.89
Utilities		18.06	23.61	23.38	25.97
<b>TOTAL</b>		<b>90.34</b>	<b>117.93</b>	<b>118.00</b>	<b>129.79</b>

\*\* Budget for 2016

### 11.5 General Process Facility Observations

The process plant was found to be in good operational and running condition with the operational areas clean and neat indicating good housekeeping.

A large drive to improve the process efficiency was evident. This was clear from the amount of pilot scale test facilities installed (WHIMS, Column Flotation, Shaking Tables, Smelting Facility etc.).

In addition the active replacement of faulty spirals and installation of new spiral clusters was observed in both the Genesis and Voyager plant.

Normal maintenance activities in the form of a mill screen replacement, workshop activities and delivery of primary mill liners made it evident that the plant is considered a long term asset and that active maintenance and improvement projects are in progress on a regular basis.

A review of the capital budget indicated the following:

- A prioritising system is in place to schedule capital projects dependant on plant income with the focus on high priority and high value creation projects.
- The capital budget includes for strategic spares replacement with the total value for 2016 ZAR 17.36 million.
- The total capital budget for 2016 is ZAR 156.22 million.

The conclusions from the plant observations and capital budget review is that the Tharisa Minerals operations are actively maintaining and improving the production plant to ensure long term viable operations.

## 11.6 Tailings Storage Facilities and Waste Rock Dumps

The Tailings Storage Facilities (TSFs) design process was dominated by the need to create sufficient tailings storage capacity to serve the design life of the mine in the limited space available within the mining right area. The location of the orebody, and hence the open pit mining operations, within the mining right area necessitated that the TSFs would be constructed in close proximity to the open pit.

The proximity of the tailings storage facilities to the mining operations meant that one of the design priorities would be to minimise risks in terms of loss of life and future earnings and this in turn meant that the design of a robust impoundment would have to be adopted.

A decision was thus made to use waste rock, from the open cast mining operations, to construct a tailings impoundment. This would ultimately achieve the following:

- The efficient use of the limited space available for mining infrastructure;
- The construction of a robust structure with high factors of safety necessary due to their proximity to mining operations and the process plant;
- Ease and ability to rehabilitate the side slopes of the TSFs as soon as possible;
- The reduction of the overall footprint of the waste storage areas (tailings and waste rock);
- The reduction of closure costs.

The proximity of the TSFs to the open cast operations meant that the short waste rock haul distances lent themselves to constructing stable rockfill walls without incurring exorbitant construction costs. This results in a solution that addresses the risks to the mine and at the same time disposes of the waste rock and tailings stream efficiently.

The Waste Rock Dumps (WRDs) will serve as storage facilities to accommodate all the excess waste rock generated by the open cast mining operations not being absorbed by the construction of the TSFs as well as other construction activities. It is the mine's intention to backfill the open pits with the waste rock generated on an advancing basis once the pits have been sufficiently developed. Roll over mining is envisaged to begin in the third quarter of 2017.

The design of each of the WRDs was governed by the following:

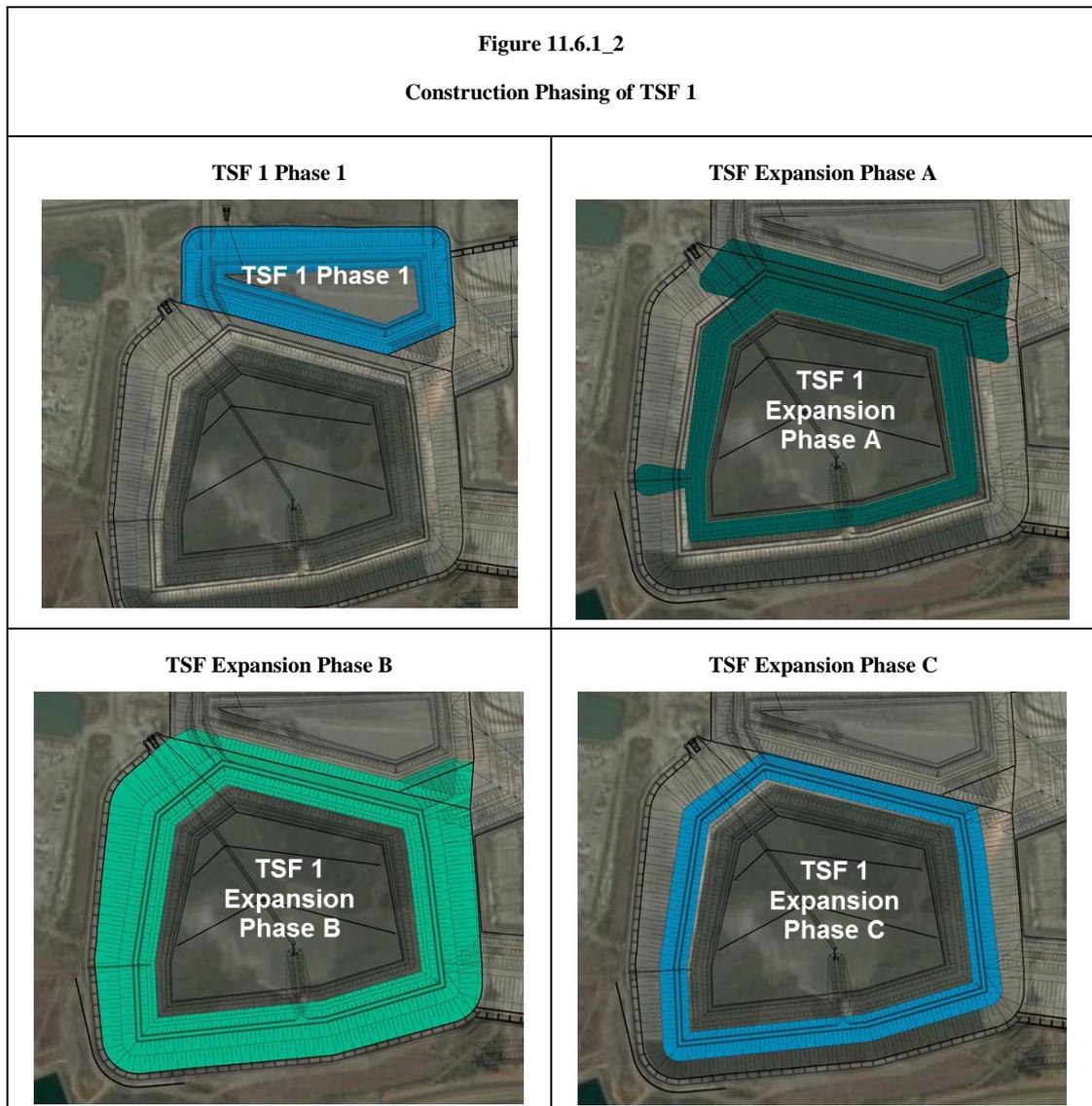
- Maximise the storage capacity of the WRDs within the footprint designated for their development;
- Ensure that their final geometry is such that it facilitates on-going rehabilitation and closure and also minimises the works required at the end of the life of mine to complete the closure process; and
- Ensure that surface water runoff and seepage emanating from the WRDs are contained.

### 11.6.1 Design and Construction of the Tailings Storage Facilities

The construction of TSF 1 has been completed successfully with the construction of the next TSF (TSF 2 Phase 1) in progress. Figure 11.6.1\_1 shows the layout of TSF 1 and TSF 2. The construction of the rockfill walls will absorb approximately 38.28Mm<sup>3</sup> of waste rock (Including the volume of waste rock allocated to the TSF 2 Division Wall) which would otherwise have been disposed of in dedicated WRDs, adding to the overall mine footprint and rehabilitation costs. The combined tailings storage capacity for TSF 1 and TSF 2 is 25.12Mm<sup>3</sup>. The construction of TSF 1 and TSF 2 has been phased as shown in Figure 11.6.1\_2 and Figure 11.6.1\_3 respectively.

**Figure 11.6.1\_1**  
Layout of Tharisa Mine's TSF 1 and TSF 2 (Combined Facility)





The phasing of the construction of TSF 1 was executed as follows:

**TSF 1 Phase 1** is a small paddock whose construction was prioritised to provide a tailings storage facility for the early deployment of the 100,000 tpm Genesis plant:

- Construction completed and paddock commissioned in August 2011.
- This phase provided 640,000m<sup>3</sup> tailings storage capacity for a period of 20 months of tailings produced by the 100,000 tpm Genesis plant.
- Approximately 860,000m<sup>3</sup> of waste rock was used for the construction of the impoundment walls.

**TSF 1 Expansion Phases A, B and C** will provide tailings storage capacity for tailings produced from both the 100,000 tpm (Genesis plant) and the 300,000 tpm (Voyager plant) for a total period of approximately four years. More specifically:

**TSF 1 Expansion Phase A:**

- Construction completed in July 2012 in time for the commissioning of the 300,000 tpm Voyager plant.
- Containment walls constructed to an elevation of 1,223mamsl which provided a storage capacity for about 18 months or 2.3Mm<sup>3</sup> of tailings.
- Approximately 3.3Mm<sup>3</sup> of waste rock was used for the construction of the impoundment walls, with an additional 0.61Mm<sup>3</sup> of waste rock placed in the key below the containment wall footprint.

**TSF 1 Expansion Phase B:**

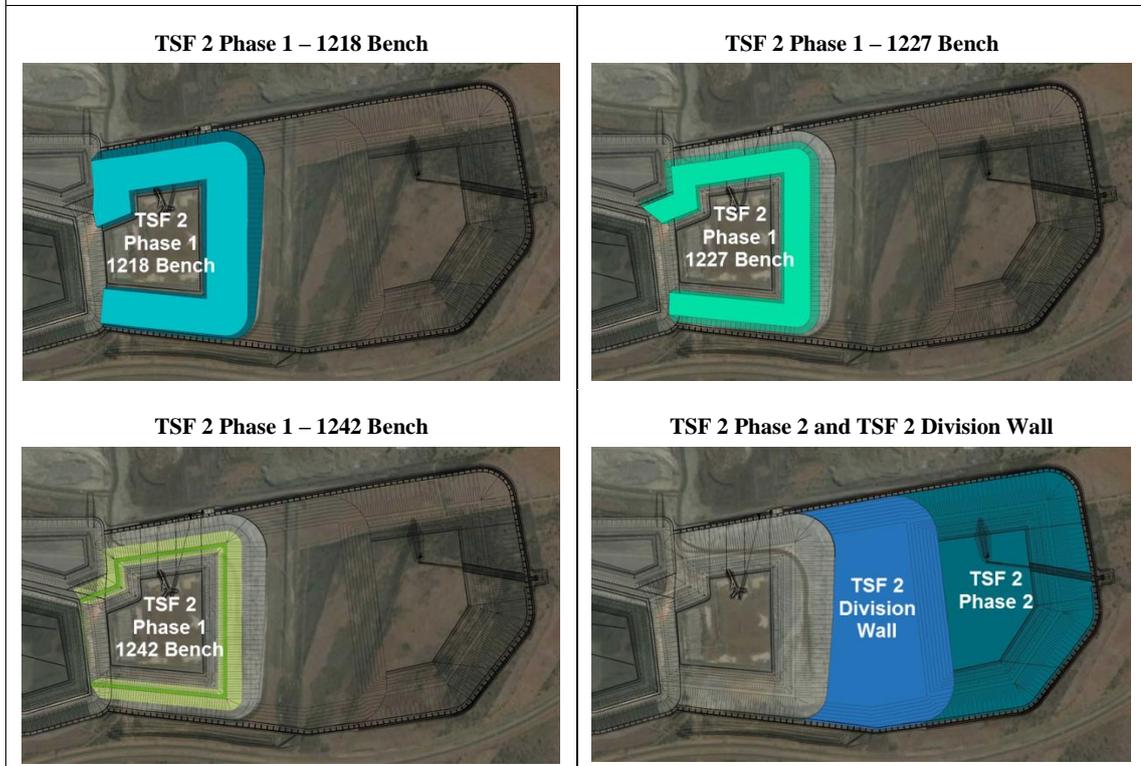
- Completion of construction of Phase B occurred in mid December 2013.
- The containment walls were constructed to an elevation of 1,230mamsl which provides a storage capacity for about 11 months or 1.69Mm<sup>3</sup> of tailings.
- Approximately 1.4Mm<sup>3</sup> of waste rock placed in the impoundment walls.

**TSF 1 Expansion Phase C:**

- Completion of the containment wall to its final design elevation of 1,242mamsl was achieved in July 2015.
- Final wall provides tailings storage for a further 18 months or 3.25Mm<sup>3</sup> of tailings and is expected to reach full capacity in September 2016.
- A further 980,000m<sup>3</sup> of waste rock was used to construct the impoundment wall to its final height.

Figure 11.6.1\_3

## Construction Phasing of TSF 2



**TSF 2 Phase 1 consists of three phased benches namely 1218 bench, 1227 bench and 1242 bench** at final elevation and will provide tailings storage capacity for tailings produced from both the 100,000 tpm (Genesis plant) and the 300,000 tpm (Voyager plant) for a total period of approximately three years and four months. The phased benches are as follows:

**TSF 2 Phase 1 – 1218 Bench:**

- Construction commenced in August 2014.
- At an elevation of 1,218mamsl this phase will provide 9 months of tailings storage capacity or 1.59Mm<sup>3</sup> of tailings.
- Approximately 3.48Mm<sup>3</sup> of waste rock will be used for the construction of the impoundment walls with an additional 0.35Mm<sup>3</sup> of waste rock placed in the key below the containment wall footprint.

**TSF 2 Phase 1 – 1227 Bench:**

- Construction to commence after completion of the 1,218 bench.
- At an elevation of 1,227mamsl this phase will provide 10 months of tailings storage capacity or 1.76Mm<sup>3</sup> of tailings.
- Approximately 1.97Mm<sup>3</sup> of waste rock will be used for the construction of the impoundment walls.

**TSF 2 Phase 1 – 1242 Bench:**

- Construction to commence after completion of the 1,227 bench and is expected to be completed around October 2017.
- At a final design elevation of 1,242mamsl this phase will provide 20 months of tailings storage capacity or 3.68Mm<sup>3</sup> of tailings.
- Approximately 1.54Mm<sup>3</sup> of waste rock will be used for the construction of the impoundment walls.

**TSF 2 Phase 2** footprint will incorporate a widened division wall between TSF 2 Phase 1 and Phase 2. The division wall will be phased towards the East and will serve as an additional waste rock disposal facility for waste production from the Eastern and Central Pits if required. TSF 2 Phase 2 will provide tailings storage capacity for tailings produced from both the 100,000 tpm (Genesis plant) and the 300,000 tpm (Voyager plant) for a total period of approximately four years and nine months. The detailed design for TSF 2 Phase 2 has not yet been completed. The preliminary design comprises the following:

- Construction to commence when the waste rock deposition rate is reduced due to width restrictions on TSF 2 Phase 1 when reaching 1,237mamsl and is expected to be completed around September 2019.
- At a final elevation of 1,236mamsl the facility will provide 4 years and 9 months of tailings storage capacity or 10.17Mm<sup>3</sup> of tailings.
- Approximately 8.04Mm<sup>3</sup> of waste rock will be used for the construction of the impoundment walls with an estimated additional 0.36Mm<sup>3</sup> of waste rock to be placed in the key below the containment wall footprint.
- 15.34Mm<sup>3</sup> of waste rock to be used for the construction of the division/co-disposal wall.

Table 11.6.1\_1 summarises the capacities and operation life of TSF 1 and TSF 2.

<b>Tailings Storage Facility</b>	<b>Waste Rock Capacity (m<sup>3</sup>)</b>	<b>Tailings Storage Capacity (m<sup>3</sup>)</b>	<b>Operation Life</b>
TSF 1 Phase 1	884,000	640,000 (Genesis Plant)	September 2011 – March 2013
TSF 1 Expansion	6,290,000	560,000 (Voyager Plant)	October 2012 – March 2013
		6,700,000 (Genesis and Voyager)	April 2013 – September 2016
TSF 2 Phase 1	7,340,000	7,030,000	October 2016 – December 2019
TSF 2 Phase 2	8,400,000	10,170,000	January 2019 – September 2024
TSF 2 Division Wall	15,340,000	N/A	

### 11.6.2 Capital Costs for the TSFs

Table 11.6.2\_1 summarises the capital expense costs associated with the construction of TSF 1, TSF 2 and the Future TSF. These costs exclude rehabilitation and other life cycle costs.

<b>Description</b>	<b>Cost</b>
<b>TSF 1 Phase 1 (2011 – 2013)</b>	R12.2 mil
<b>TSF 1 Expansion (2012 – 2016)</b>	R43.1 mil
<b>TSF 2 Phase 1 (2016 – 2019)</b>	R50.6 mil
<b>TSF 2 Phase 2 (2019 – 2024)</b>	R49.1 mil
<b>Future TSF (As at 2015 rates – 2024 -2044)</b>	R240.0 mil
<b>Total (excluding rehabilitation and closure costs)</b>	<b>R395.0 mil</b>

It is estimated that the tailings storage requirements for the next 20 years following 2024, i.e. after TSF 2 Phase 2 has reached full capacity, will have a capital cost implication of approximately R240 million. This estimate includes the cost of a liner system, a requirement included due to new environmental legislation, and excludes rehabilitation and closure costs.

### 11.6.3 Environmental Protection Measures for the TSF

The key design features and environmental protection measures for the TSFs are summarised in Table 11.6.3\_1.

<b>Table 11.6.3_1</b>	
<b>Tailings Complex Key Features and Environmental Protection Measures</b>	
<b>Feature</b>	<b>Detail</b>
Physical Dimensions	<p><b>TSF No.1 Phase 1</b> – Footprint = 16ha; Max height = 17m; Tailings Capacity = 0.64Mm<sup>3</sup>; Wall Waste Rock Volume = 0.79Mm<sup>3</sup>; Clay Key Cut Waste Rock Volume = 0.09Mm<sup>3</sup></p> <p><b>TSF No.1 Expansion</b> – Footprint = 52ha; Max height = 38m; Tailings Capacity = 7.28Mm<sup>3</sup>; Wall Waste Rock Volume = 5.68Mm<sup>3</sup>; Clay Key Cut Waste Rock Volume = 0.61Mm<sup>3</sup></p> <p><b>TSF No.2 Phase 1</b> – Footprint = 50 ha; Max height = 40m; Tailings Capacity = 7.03Mm<sup>3</sup>; Wall Waste Rock Volume = 7.0Mm<sup>3</sup>; Clay Key Cut Waste Rock Volume = 0.35Mm<sup>3</sup></p> <p><b>TSF No.2 Phase 2</b> – Footprint = 96.83ha; Max height = 45m; Tailings Capacity = 10.17Mm<sup>3</sup>; Wall Waste Rock Volume = 8.04Mm<sup>3</sup>; Division Wall Waste Rock Volume = 15.34Mm<sup>3</sup>; Clay Key Cut Waste Rock Volume = 0.36Mm<sup>3</sup></p>
Tailings Delivery and Deposition	<p>Two slurry delivery pipelines per processing facility (i.e. Genesis and Voyager plants) for pumping tailings in slurry form to the TSFs. HDPE pipes are used for the delivery pipelines.</p> <p>Each TSF will have delivery pipe uptakes situated on the side of the dam closest to the plants. These uptakes will be connected to a pipeline positioned around the inside crest of each TSF with flanged T pieces (allowing for open end deposition) positioned every 75m. Deposition will cycle around each TSF by continually opening and closing a number of the T Pieces.</p> <p>Deposition in TSF 2 will only commence once TSF 1 has reached full capacity.</p>
Diversion	Storm water diversion trenches or swales around the upstream sides of both TSFs to direct clean surface water run-off around and away from the TSFs.
Topsoil Stripping	Topsoil within the TSF containment wall footprint areas will be stripped and stockpiled in accordance with the topsoil conservation guide in close proximity to the final toe on the upstream side of each TSF. A stripping depth of 200mm was recommended by the soils study. Stripping and stockpiling of topsoil will be done as part of the initial TSF construction works.
Lining	<p>In-situ low permeability black clays will reduce infiltration of leachate from the TSFs to ground water. The black clays vary between 1.0m to 2.0m in the basin of TSF 1 and between 4.5m to 6m in the basin of TSF 2.</p> <p>Seepage cut off trenches around the perimeter of the TSFs excavated into the insitu norites will assist to collect any water seeping through the basin of the TSFs. These trenches will be dewatered and the water pumped back for processing.</p>
Embankments	<p>Compacted clay toe walls and elevated compacted clay platforms will be constructed along the inner toe of the TSFs to enable the construction and efficient operation of inner toe drains which will assist with the lowering of the elevation of the phreatic surface within the facilities as well as the consolidation of tailings.</p> <p>Each TSF waste rock containment wall will be developed at an overall outside slope of</p>

<b>Table 11.6.3_1</b>	
<b>Tailings Complex Key Features and Environmental Protection Measures</b>	
<b>Feature</b>	<b>Detail</b>
	<p>1V:3H. The waste rock will be spread in maximum 2m thick layers and compaction will be carried out by 19t vibratory rollers and as well as traffic compaction. The clay keys requiring to be removed beneath the waste rock walls for stability issues will be removed allowing the walls to be founded on competent norite thus improving the overall stability of the TSF.</p> <p>Ramps at gradients of 1V:10H (6°) will be provided at various locations around each TSF to allow for access by both mine haul trucks and TSF operators onto the containment walls and into each TSF.</p>
Under Drains & Decanting system	<p>A 750mm high by 6.5m wide wall toe drains constructed using filter sand and stone material will be installed along the upstream toe of the clay starter wall on a slightly elevated compacted clay platform. Water collected from the drain will be removed via a number of 160mm diameter HDPE pipes running beneath the rockfill wall.</p> <p>Supernatant water will be decanted from each TSF via a central decant (penstock) and report to a concrete lined return water sump, from which water will be pumped back to the plant. Each sump has a capacity of 1000m<sup>3</sup>.</p> <p>Surface run-off from the TSF side slopes and ramps will be retained by a series of nominally compacted catchment paddocks (constructed using local clays) around the perimeter of each TSF. Water will then either evaporate or seep into the basin from these catchment paddocks. Water from the Western Wall of TSF No.1 Expansion will be channelled into a v-drain and discharged into the sump.</p>
Access and Access Control	<p>Mining haul roads for construction of the TSF containment walls will have a minimum width of 25m and will be constructed using waste rock along the northern sides of the TSFs.</p> <p>A 6m wide waste rock road will be constructed around the perimeter of each TSF for access during operations, routine inspections and maintenance.</p> <p>A perimeter fence around each TSF is not planned. Rather a perimeter fence around the whole of the mine site will be installed.</p>
Waste Minimisation	<p>A portion of TSF 1 Phase 1's Platinum Group Metals (PGMs) tailings has been re-processed.</p> <p>No opportunities for the reduction of the tailings production rate are envisaged.</p>
Rehabilitation	<p>A 300mm topsoil cover to be applied over the outer slopes of the TSF. Topsoil rehabilitation and vegetation establishment to commence on completion of containment wall construction to final height.</p>
Monitoring	<p>The monitoring of the TSFs will include:</p> <p>Safety aspects e.g. monthly review of freeboard during operational phase, presence of seepage, functioning of toe drains etc, quarterly inspections (operational phase) and annual audits.</p> <p>Groundwater pollution aspects including monitoring of at least 3 boreholes located on the perimeter of each TSF to ascertain upstream and downstream groundwater levels and quality including pH, EC, TDS, NO<sub>3</sub>, Ca, Mg, Fe, Mn, Na, Cl, K, SO<sub>4</sub>, HCO<sub>3</sub>, PO<sub>4</sub>, Cr (VI) and piezometric level. Monitoring frequency of major cations and anions quarterly, minor</p>

<b>Table 11.6.3_1</b>	
<b>Tailings Complex Key Features and Environmental Protection Measures</b>	
<b>Feature</b>	<b>Detail</b>
	<p>constituents annually after 2 years of quarterly monitoring – quarterly report.</p> <p>Vegetation cover and success rate. The rehabilitation and vegetation of the outer slope of each TSF will be done during the operational phase – quarterly report.</p> <p>Erosion damage and general condition of catchment paddocks, drainage outlet pipes, solution trench and sumps – quarterly report.</p> <p>Dust generation – annual report.</p>
Dust Control	<p>The height of the TSF waste rock containment walls being a minimum of 1m above the tailings beach gives both TSFs a low dust generation potential due to the coarse particle size of the waste rock. In addition, rehabilitation and vegetation of the TSF outside slopes further reduces the risk of dust generation.</p> <p>During the construction of the TSF containment walls, dust suppression will be undertaken by wetting both the haul roads as well as the crest of the TSF walls.</p>
Closure	<p>Ensure final level of tailings is at least 2m below the level of the waste rock containment wall crest to provide freeboard for storm water intercepted on the top surface. The top surface will serve as a store and evaporate facility for rainfall.</p> <p>Adjust the topography of the top surface of the TSFs to create a low area near the centre of the facility. This will be developed as a wetland and will receive run-off from the entire top surface of the facility.</p> <p>Remove all pipelines, pumps, barges, catwalks, electrical cables etc. from the TSF surfaces and surrounds.</p> <p>Within a period of between 5 and 10 years after deposition ceases grout up the under drainage outlet pipes.</p> <p>Construct the final cover to the top surface of the TSFs by importing topsoil from the topsoil stockpiles and covering the top surface with a minimum depth of topsoil of 0.3m.</p> <p>Establish vegetation on the top surface of the TSFs using a selection of indigenous trees, shrubs, grasses, aloes etc.</p> <p>The TSF catchment paddocks are rehabilitated in the same manner as for the waste rock dumps.</p>

#### **11.6.4 Design and Construction of the Waste Rock Dumps**

The WRDs were designed in such a manner to enable their on-going rehabilitation and the control of surface water runoff, as it is probable that they will become permanent features of the post mining landscape.

The East Mine WRD 1 (EMWRD 1) is currently receiving waste rock produced from over and interburden removal from the Eastern as well as the Central Pits. The facility's original design slopes were not maintained during construction, however this will be rehabilitated, as per the EIA commitment, before Mine Closure. The development of the proposed East Mine WRD 2

(EMWRD 2) has been delayed and is pending approval from the Department of Mineral Resources (DMR) with an estimated approval period of up to six months.

As there is currently an uncertainty regarding the commencement date for the development of the EMWRD 2, a short term alternative has been identified. An extended division wall between TSF 2 Phase 1 and TSF 2 Phase 2 has been identified as an area to provide for additional waste rock capacity and extend the life of the EMWRD 1.

The TSF 2 Division Wall can accept waste rock during the 13 hours of day shift excluding Sundays (due to noise restrictions in this area) and will accommodate approximately 63 percent of the total waste production per day. Approximately 27 percent of the total waste production from the Eastern and Central Pits will be used for the construction of TSF 2 Phase 1. EMWRD 1 will accommodate the balance (10 percent) of the waste during night shifts and Sundays. The mining plan is to be adjusted to ensure that mainly reef (and not waste) is mined during the night shift and Sundays.

The West Mine WRD 1 (WMWRD 1) is currently receiving waste rock produced by over and interburden removal from the Western Pit. The Marikana Road, between the Central and West Pits, is to be rerouted to the west to maximise the Central Pit footprint. The new road design incorporates underpasses which will allow the safe tramming of waste rock from the Central Pit to the WMWRD 1.

Based on current information it is envisaged that roll-over mining on the East Mine will commence in approximately two years or September 2017. Waste rock generated on the East Mine will be disposed of by backfilling the Eastern and Central open pits on an advancing basis from South to North.

The West Mine WRD 2 (WMWRD 2) is still in the preliminary design phase and its development is expected to commence in the second half of 2020. Figure 11.6.4\_1 shows the layout of all available WRD facilities as well as the pits from where the waste rock is sourced. The total approximate waste rock capacity in the facilities is 81.13Mm<sup>3</sup>, which excludes the volume of the TSF 2 Division Wall, accounted for in the TSF section of this report.

Figure 11.6.4\_1

Layout of Tharisa Mine's WRDs



#### 11.6.5 Design Life of the Waste Rock Dumps

The **East Mine WRD 1** accommodates waste rock produced from the Eastern and Central Pits.

- This facility provides storage capacity for a period of approximately 32 months of waste rock produced from both the Eastern and the Central Pits.
- Full capacity is forecast to be reached in May 2016 (Provided that the proposed waste destination plan is followed from December 2015 – i.e. only 10% of waste reporting to the facility).

The **East Mine WRD 2** will accommodate waste rock from the Eastern and Central Pits as soon as approval from the DMR is received.

- Start date for deposition of waste rock on this facility is forecast to be in June 2016.
- This facility provides storage capacity for a period of approximately 32 months of waste rock produced from the Eastern and Central Pits.
- Capacity is forecast to be reached in February 2019.

The **TSF 2 Division Wall** providing waste rock capacity for the 13 hours of day shift excluding Sundays.

- Start date for deposition of waste rock on this facility to be in December 2015.

- This facility provides storage capacity for a period of approximately 21 months of waste rock produced from the Eastern and Central Pits during day shift, with 63 percent of the total waste allocated to it.
- Capacity is forecast to be reached in September 2017.
- The facility footprint and capacity can be reduced when the approval of the EMWRD 2 from the DMR is received and/or the construction of the route from the East Mine to the West Mine has been completed.

The **West Mine WRD 1** accommodates waste rock produced from the Western and Central Pits.

- This facility provides storage capacity for a period of approximately 84 months of waste rock produced from the Western Pit as well as waste rock from the Central Pit from May 2016 to August 2017.
- Capacity is forecast to be reached in July 2020.

The **West Mine WRD 2** will accommodate waste rock produced from the Western Pit as soon as the WMWRD 1 has reached full capacity.

- Start date for deposition of waste rock on this facility is expected to be August 2020.
- This facility provides storage capacity for a period of approximately 62 months of waste rock produced from the Western Pit.
- Capacity is forecast to be reached in October 2025.

Table 11.6.5\_1 summarises the waste rock capacity and operational life of all four WRDs.

Waste Rock Dump	Waste Rock Capacity (m <sup>3</sup> )	Operation Life
East Mine WRD 1	21,700,000	September 2013 – May 2016
East Mine WRD 2	22,210,000	June 2016 – February 2019
TSF 2 Division Wall	15,340,000	December 2015 – September 2017
West Mine WRD 1	21,800,000	August 2013 – July 2020
West Mine WRD 2	15,430,000	August 2020 – October 2025

### 11.6.6 Capital costs for the construction of the Waste Rock Dumps

Table 11.6.6\_1 summarises the capital costs for Tharisa Mine's East mine and West Mine's WRDs. These costs exclude rehabilitation and other life cycle costs.

<b>Table 11.6.6_1</b>	
<b>Summary of Capital Costs for the WRDs</b>	
Description	Cost
Eastern WRD	R2.48 mil
Central WRD	R2.21 mil
North Eastern Waste Rock Dump	R3.00 mil
Western Waste Rock Dump	R2.10 mil
<b>Total (excluding rehabilitation and closure costs)</b>	<b>R9.79 mil</b>

### 11.6.7 Environmental Protection Measures of the Waste Rock Dumps

The key design features and environmental protection measures for the Tharisa Mine WRDs are summarised in Table 11.6.7\_1.

<b>Table 11.6.7_1</b>	
<b>Waste Rock Dumps Key Features and Environmental Protection Measures</b>	
Feature	Detail
Physical Dimensions	<p><b>East Mine WRD 1</b> – Footprint = 73.8ha; Max height = 75m; Waste Rock Capacity = 21.7Mm<sup>3</sup>.</p> <p><b>East Mine WRD 2</b> – Footprint = 102.6ha; Max height = 60m; Waste Rock Capacity = 22.2Mm<sup>3</sup>.</p> <p><b>TSF 2 Division Wall</b> – Footprint = 43.5ha; Max height = 45m; Waste Rock Capacity = 15.34Mm<sup>3</sup>.</p> <p><b>West Mine WRD 1</b> – Footprint = 69.8ha; Max height = 75m; Waste Rock Capacity = 21.79Mm<sup>3</sup>.</p> <p><b>West Mine WRD 2</b> – Footprint = 79.03ha; Max height = 50m; Waste Rock Capacity = 15.43Mm<sup>3</sup>.</p>
Waste Rock Transport and Deposition	<p>Open pit waste rock is loaded onto mine dump trucks and transported to waste rock dumps.</p> <p>Waste rock dump access ramps constructed with a maximum gradient of 1V:10H (6°) for mine dump trucks. Waste rock is dumped and spread/flattened with a bulldozer.</p>
Diversion	Storm water diversion trenches or swales around the upstream boundaries of the WRDs to direct clean surface water run-off around and away from the WRDs.
Topsoil Stripping	Topsoil within the WRD footprint areas will be stripped and stockpiled in accordance with

<b>Table 11.6.7_1</b>	
<b>Waste Rock Dumps Key Features and Environmental Protection Measures</b>	
<b>Feature</b>	<b>Detail</b>
	the topsoil conservation guide in close proximity to the final toe on the upstream side of each WRD. A stripping depth of 200mm was recommended by the soils study. Stripping and stockpiling of topsoil will be done immediately in advance of dumping.
Lining	No lining will be provided in addition to the in-situ black clays or turf found at surface. The low permeability clays will reduce infiltration of leachate from the waste rock to the ground water.
WRD Configuration and Development	<p>The WRDs are configured to enable their on-going rehabilitation and the control of surface water runoff. The configuration of the dumps may be summarised as follows:</p> <p>The side slopes of each dump will be constructed to a final slope of 1V:3H. The toe line of each consecutive lift will continue where the previous lift' crest line ends.</p> <p>A 1.5m high levelled wall will be constructed to the edge of the storm water control bench to collect surface water runoff from the slope above. The wall is expected to comprise a 1.5m high berm with an inside slope of 1V:1.5H placed, levelled and compacted during the placement of waste rock to also serve as a safety berm for traffic on the dump.</p> <p>On commencement of the next lift of the dump the storm water control bench will be subdivided into paddocks by secondary storm water control berms to prevent the concentration of runoff at low points on the bench.</p> <p>Benches will be top soiled and vegetated to enhance evapotranspiration. Infiltration of runoff into the dump will be encouraged by loosening the surface of the waste on the bench prior to the placement of soil.</p>
Under Drains & Surface Run-Off Control	<p>No under drains will be provided. A 5m key is installed around the perimeter underneath the toe of each facility to prevent creep.</p> <p>Surface run-off and toe seepage will be retained by a series of catchment paddocks (constructed using local clays) around the perimeter of each WRD and allowed to evaporate.</p>
Access and Access Control	<p>Mining haul roads will have a minimum width of 25m and will be constructed using waste rock.</p> <p>A 6m wide waste rock road will be constructed around the perimeter of each WRD for access during operations, routine inspections and maintenance of the catchment paddocks.</p> <p>A perimeter fence around each WRD is not planned. A perimeter fence around the whole of the mine site has been installed.</p>
Monitoring	Monitoring of seepage water retained in the perimeter catchment paddocks and of boreholes around the perimeter of each WRD to determine pH, EC, TDS, NO <sub>3</sub> , Ca, Mg, Fe, Mn, Na, Cl, K, SO <sub>4</sub> , HCO <sub>3</sub> , PO <sub>4</sub> , and Cr (VI).
Dust Control	<p>Operational Phase: Watering of haul roads for dust suppression.</p> <p>Post Operational Phase: No measures necessary due to the coarse particle size distribution.</p>
Rehabilitation and Closure	WRDs will be re-vegetated using a combination of indigenous trees, shrubs, and grasses etc. with the topsoil and clay removed from the footprint of each WRD serving as a growth medium. The vegetation will be irrigated initially until it is no longer dependant on artificial irrigation for survival.

<b>Table 11.6.7_1</b>	
<b>Waste Rock Dumps Key Features and Environmental Protection Measures</b>	
<b>Feature</b>	<b>Detail</b>
	<p>Final catchment paddocks constructed of durable waste rock materials covered with a clay layer to be provided. The catchment paddocks will be vegetated in a manner similar to that stated above to blend in to the natural Bushveld. The catchment paddocks will be sized to contain run-off from a 1:50 year 7 day duration storm event.</p> <p>On closure of the WRDs, access ramps and berms will be eliminated prior to rehabilitation to reduce erosion risks.</p> <p>No active groundwater protection measures are envisaged given the relatively low pollution potential of waste rock.</p> <p>In the event that surface water quality monitoring around the WRDs indicates that Class 4 (SANS 241:2005) water is likely to emanate as surface run-off from the dumps, soak-aways will be provided within the catchment paddocks to minimise the risk of exposure of Class 4 water to wildlife, livestock and humans.</p> <p>The crest of the WRDs will be provided with a durable waste rock berm to prevent drainage from the top surface from eroding the side slopes.</p>

## 11.7 Smelting and Beneficiation

Tharisa has secured a long term off take agreement with Impala Refining Services (IRS) for its PGM concentrates.

## 12 Infrastructure and Logistics

### 12.1 Roads

The Tharisa Mine is traversed east/west by local un-surfaced roads originally constructed to service the local farming community. In a north/south direction the mine is split by a local tarred road connecting Buffelspoort with Marikana. This in turn is linked to the N4 Bakwena Highway locally linking Rustenburg to Brits, and internationally linking Mozambique to Botswana and Namibia.

### 12.2 Water Supply

The primary sources of water to the site are:

- Borehole water from onsite wellfields;
- Water from open pit dewatering including additional dewatering boreholes situated around the mining area to ensure safe operation;
- Storm water or run-off contaminated water collected and recycled back to the plant;
- Rand Water Board water allocation;
- Excess water from nearby mining companies (Samancor) under supply agreement.

The water allocation to the Tharisa Mine site is given in Table 12.2\_1. The table indicates the water volumes allocated under the current water licence and existing agreements. The table also indicates additional water allocations applied for by the mine. The application to amend the water licence was submitted during 2013. In addition the mine is busy with a submission to convert certain water licences for agricultural use into water for industrial use to be available in emergency situations, for instance extended periods of drought.

<b>Table 12.2_1</b>		
<b>Summary of Water Sources</b>		
<b>Source</b>	<b>Sources under Current Licence and Agreements</b>	<b>Sources under Amendments</b>
	<b>Capacity (m<sup>3</sup>/Annum)</b>	<b>Capacity (m<sup>3</sup>/Annum)</b>
Borehole Water - Wellfield	114,000	419,000
Open Pit Dewatering	322,613	322,613
Mine Dewatering - Quarry	439,927	439,927
Storm Water	785,352	785,352
Rand Water Board and Agreements	266,000	266,000
Emergency Water – Agricultural Licence	0	900,000
<b>Total Water Sources</b>	<b>1,927,892</b>	<b>3,132,892</b>

As indicated the existing water licence and agreements allows Tharisa mine the use of 1,927,892m<sup>3</sup>pa. The total water licence will amount to 3,132,892m<sup>3</sup>pa if the proposed amendments are approved.

### 12.3 Potable Water

Potable water is obtained from either Rand Water or appropriate borehole water. The abstracted groundwater is treated in order to make it suitable for potable supply.

### 12.4 Process Water

The main water supply is obtained from dewatering of the open pits and borehole water from the onsite wellfield, supplemented by Rand Water as well as excess water from nearby mining companies (Section 12.2).

The monthly average water consumption required to feed the process plants is approximately 394,400m<sup>3</sup> for a throughput of 400,000 tpm. This amounts to 0.99m<sup>3</sup>pt feed.

Between 54% and 75% the water utilised within the plant is recycled from the tailings dams and from other sources reducing the total required make-up water. The amount of water recycled is dependent on the season. The recycle portion is greater in the rainy season and lower in the dry season.

The average required make-up water from water sources external to the recycle systems ranges between 0.35m<sup>3</sup>pt and 0.45 m<sup>3</sup>pt RoM feed..

### 12.5 Water Balance and Priority for Water Use

A site wide climatic water balance was modelled for the entire operation as part of the EIA/EMP report, which took cognisance of environmental conditions (such as seasonal changes, rainfall and evaporative loss). The water balance was modelled based on monthly climatic data and predicted mine usage requirements.

A water usage protocol has been adopted. The protocol ensures that dirty water is re-used as far as possible and that the water level in key storage dams is kept as low as possible to maximise storage capacity in the event of an extreme storm event (complying with the Regulation 704 requirement to not overflow more than once in 50 years).

The protocol for water use is ranked as follows:

- TSF/process water dam;
- Storm water/pollution control dams;
- Seepage/rainwater ingress to the open pits; and
- Rand Water supply/groundwater abstraction boreholes/agricultural water.

The water use protocol is strictly applied in order to ensure compliance with Regulation 704 as well as to minimise water treatment and operating costs.

## 12.6 Stormwater Management Plan

A storm water management strategy for the mine was developed as part of the approved EIA/EMP and has been updated to cater for changes in mine infrastructure. A summary of the key design features is presented below:

- Clean storm water will be diverted around mine infrastructure and, where possible, routed towards existing watercourse(s) or conveyed into the veld;
- Wherever possible, the footprint of dirty storm water catchment areas will be minimised by isolating these areas from clean water run off using bunds and/or channels;
- Storm water from the surface of the TSF is pumped to the process water dam for re-use;
- Storm water from the side slopes of the TSF drains towards the eastern pit for further re-use;
- Storm water from the plant area, will drain via channels to the plant Storm Water Dam. Any excess flow will be conveyed from the Storm Water Dam to the Hercul Quarry;
- Storm water from the East mining area will drain to the existing MCC dam; excess flow will be conveyed to the Storm Water Dam;
- Storm water from the plant Storm Water Dam, MCC Dam and Hercul Quarry will be transferred to the process water dam for re-use in the plants;
- Storm water and groundwater collected within the open pits will be pumped to the process water dam for re-use in the plants;
- Storm water from the waste rock dumps will be collected by perimeter drainage ditches and passed through a settlement dam prior to usage within the plants.

## 12.7 Containment Dams

The operation features several containment and transfer dams which form part of the operational water management strategy for the mine; a summary of these dams is presented in the Table 12.7\_1.

Dam	Capacity (m <sup>3</sup> )
Raw Water Dam	45,000
Hernic Quarry	200,000
Plant Storm Water Dam	30,000
Process Water Dam	15,000
MCC Dam	40,000
Borehole water	12,000

The above mentioned dams as well as six (6) boreholes are authorised water usages as per Tharisa Minerals' water usage license which was issued in July 2012 by the Department of Water Affairs.

## 12.8 Power

During May 2010 Tharisa Minerals submitted an application to Eskom for a 40 MVA premium electrical power supply. A premium supply is a ring main supply from two different Eskom distribution substations.

In order to meet the commissioning date of the concentrator, the power supply project was split into three phases.

Phase 1 was commissioned in June 2012 ahead of the scheduled concentrator commissioning date of July 2012. This phase secured a non-premium power supply of 30 MVA from a single Eskom substation. This supply exceeds the mine's current power requirement of 23.5 MVA.

Phase 2 was commissioned and provided a premium power supply to the Tharisa site.

Phase 3 provided for the construction of an overhead line between the Eskom's Middlekraal and Bighorn substations. This was completed in September 2015 and increases the available power supply to the mine from the current 30MVA to 40MVA, as per the original Eskom application. The current Eskom NMD (notified maximum demand) is 30 MVA.

Based on the current Eskom notified maximum demand of 30 MVA, the electrical spare capacity is 21.6%.

Once Eskom approves the increased NMD, the electrical spare capacity will be approximately 41.25%, which can be utilised to accommodate future expansions in the short and medium term.

## **12.9 Communications**

Tharisa Minerals uses up to date information, communication and telecommunications systems, including an enterprise resource planning (ERP) system, virtual servers and various high speed, point to point networks between its various sites. The networks that have been established allow for the use of virtual-private networks, the replication of servers, dedicated and high speed connections between the ERP system components, zero cost telephone calls between Tharisa's various sites, as well as video conferencing facilities. Tharisa Minerals has also implemented a 'unified e-mail management system' which is hosted off-site, thereby providing continuity and back-up through the archiving of all inbound, outbound and internal e-mails.

## **12.10 Logistics of Chromite Concentrate Distribution**

Chrome concentrate logistics management and procurement has been outsourced to a Tharisa plc group company, Arxo Logistics (Pty) Ltd (Arxo), which is responsible for the cost-effective management of the entire logistics chain from the mine to Tharisa Minerals final customers, most of whom are in China. Arxo's responsibilities include the activities of sourcing third party services, capacity planning, technology solutions, distribution planning, warehouse management and shipping.

### **12.10.1 Current Logistics**

Arxo makes use of various distribution channels to move the mine's product to Richards Bay and Durban Ports for shipment abroad. A dedicated rail siding has been allocated to Tharisa and is located 6km from the mine site. Arxo has also secured adequate trucking and warehousing facilities to cater for the full requirement of 160,000 tpm of final chrome product.

### **12.10.2 Planned Logistics**

Rail transport – a long term maxirail contract has been entered into with Transnet.

Road transport:- Agreements have been entered into with a number of transporter contractors who have sufficient capacity to transport the balance of chromite concentrate not railed.

Storage Facilities Sufficient warehousing facilities have been secured and contracted to handle volumes in bulk or containers from the Tharisa Mine to FOB Durban. The following facilities have been secured at Richards Bay

- 45,000t at any given time through the dry bulk terminal. The dry bulk terminal is currently the most cost effective terminal to be used in conjunction with rail;

- 15,000t at any given time through the multipurpose terminal.

Shipping Facilities Shipping is not considered to be a risk due to the availability of bulk vessels and container shipping capacity.

On Mine Rapid Load-out Facility The mine is currently in a feasibility phase for establishing a rapid load out facility on the mine, together with a dedicated new rail siding. The focus of the project is to reduce materials handling at the mine and thereby reducing the total logistic cost of the final product.

## **12.11 Occupational Health and Safety**

### **12.11.1 Key Areas of Legislation**

The Mine Health and Safety Act No 29 of 1996 (MHSA) was developed under the auspices of a tripartite relationship between State, Employer and Employee organisations. The result is a large emphasis on employee participation regarding the Health and Safety matters.

Section 26 of the MHSA requires consultation between the employer (Tharisa Minerals) and employee representatives or organised labour in the form of Trade Unions. From this consultation a Health and Safety agreement must be concluded which spells out the management of the relationship between employer and employee regarding Health and Safety issues. Tharisa Mine has a Safety and Health agreement in place.

Health and safety representatives have been appointed for the various designated working places as described in the Health and Safety Agreement, in compliance with the MHSA. Regular interactions between management and representatives take place to ensure good communication between management and safety representatives.

Other important sections of the MHSA deal with the Inspector of Mines' powers when encountering unsafe or unhealthy occurrences, practices or conditions at a Mine, including the power to halt an operation should he consider the workplace to be unsafe or unhealthy (Section 50). The inspector also has the option of imposing an administrative penalty in place of an instruction to halt operations at the mine (Section 54).

Sections 60 and 65 of the MHSA deal with the requirement to conduct investigations or inquiries into any accident or occurrence at a mine. These sections are fairly extensive, allowing an inspector access to safety and health documentation kept by a mine

Other important sections of the MHSA deal with:-

- Health and Safety Policy (Section 8)
- Health and Safety Training (Section 10)
- Employer to access and respond to risk (Section 11)
- Medical surveillance (Section 13)
- Manufacturing and suppliers' duty for the Health and Safety (Section 21)

From the above it can be seen that it is a fundamental requirement to have systems and resources in place to ensure compliance with the requirements of the MHSA and its associated regulations. Not meeting these obligations can result in severe penalties and consequences for the mine as well as its employers (including owners and managers) who fail to comply with the MHSA.

### **12.11.2 Mine Health and Safety**

Tharisa Minerals is subject to the MHSA. The objectives of this Act are:

- i) To protect the health and safety of the persons at the mine
- ii) To require the employer and the employees to identify hazards and eliminate, control and minimise the risks relating to health and safety at the mine
- iii) To give effect to the public international law obligations of South Africa that concern health and safety at mines
- iv) To provide for employees participation in matters of health and safety through health and safety representatives and the health and safety committees at mines
- v) To provide for the effective monitoring of health and safety conditions
- vi) To provide for the enforcement of health and safety measures
- vii) To provide for the investigations and inquiries to improve health and safety at the mines
- viii) To promote :
  - A culture of health and safety in the mining industry
  - Training in health and safety in the mining industry
  - Co-operation and consultation on health and safety between the State, employers, employees and their representatives.

The MHSA is administrated by the DMR and the Inspector of Mines conducts site inspections on a regular basis to ensure compliance with the requirements of the MHSA.

Wellness Programs which include policies dealing with HIV/AIDS and tuberculosis are being requested by the DMR to ensure that the mining industry caters not only for the occupational health of employees whilst at work, but also instil a program in which they promote awareness and provide treatment programmes for employees as well as surrounding communities regarding primary health issues such as HIV/AIDS, tuberculosis, cancer, hypertension etc.”

### **12.11.3 Processing Facilities Health and Safety.**

The processing facility is considered to be part of the Tharisa Mine and the same requirements in terms of the legislation are applicable.

### **12.11.4 Contractors Health and Safety**

All employees, including contractors, have to undergo a medical examination to ensure their fitness to work. This examination is conducted by a Tharisa Minerals appointed Occupational

Health Practitioner. This examination is reviewed on an annual basis to ensure that persons are fit to perform their duties in a healthy and safe manner.

Tharisa Minerals makes use of a Contractors Compliance Pack (CCP) and all contractors are required to demonstrate their safety performance as well as compliance with the mine's own Health and Safety requirements. This CCP is investigated on a regular basis for each contractor to ensure compliance with the mine's system.

#### **12.11.5 Legal Appointments**

In terms of the requirements of the MHSA, all the legal appointments have been reviewed and suitable and experienced people have been appointed, and the DMR notified accordingly. These appointments have also been divided between the two appointed General Managers (Mining and Process) respectively.

## 13 Environmental and Social

In 2008, an Environmental Impact Assessment and Environmental Management Programme (EIA/EMP) report was compiled for Tharisa Mine by Metago Environmental Engineers (Pty) Ltd (Metago), now SLR Consulting (Africa) (Pty) Ltd (SLR), an independent environmental consulting company. This EIA/EMP was submitted in support of the mining right application and the environmental authorisation applications in terms of the MPRDA and NEMA. Similarly, in 2012 Tharisa Mine received a water use licence which sets out permitted water and waste activities and the required mitigation measures for managing potential water related impacts. In 2014, environmental authorisation was sought to address a number of operational and infrastructure changes at the mine. An EIA/EMP report was compiled by SLR, the independent environmental consulting company, to support the application process. The 2014 EIA/EMP report was submitted in support of environmental authorisations in terms of the MPRDA and NEMA. An application to update the mine's water use license to cater for the relevant changes is still required. This chapter identifies the related compliance issues and the potential environmental impacts (both biophysical and social) of the Tharisa Mine based on the outcomes of the EIA processes. These impacts were assessed and management measures proposed with input from various specialists. The outcome of both the 2008 and 2014 EIA/EMP processes determined that all potential impacts of the mine can be managed to a satisfactory level, provided that the mitigation measures detailed in the EIA/EMP are adhered to.

### 13.1 Existing Environment

The details relating to the physiography, soils, land use, flora and fauna, groundwater, surface water and climate are presented in Section 4.

### 13.2 Interested and Affected Parties (IAPs) Consultation Process

The scope of environmental issues that were considered in both the 2008 and 2014 EIA were given specific context and focus through consultation with authorities and IAPs. Included below is a summary of the process that was followed, the people that were consulted and the issues that were identified.

#### 13.2.1 Authorities and interested and affected parties (IAPs)

The following authorities and IAPs were involved in the 2008 and 2014 EIA/EMP processes:

##### Regulatory authorities:

- Department of Mineral Resources (DMR) (previously the DME)
- Department of Rural, Environment and Agricultural Development (DREAD) (previously known as Department of Economic Development, Environment, Conservation and Tourism (DEDECT) and Department of Agriculture, Conservation and Environment (DACE))

- Department of Water and Sanitation (DWS) (previously Department of Water Affairs (DWA) and Department of Water Affairs and Forestry (DWAF))
- Department of Environmental Affairs and Tourism: Air Pollution Management (DEAT:APM)
- National Department of Agriculture (NDA)
- South African Heritage Resources Agency (SAHRA)
- Department of Transport, Roads and Community Safety (NWDTRCS) (previously Department of Public Works and Roads)
- North West Parks and Tourism Board and
- Department of Rural Development and Land Reform (DRDLR) (previously Department of Land Affairs (DLA))

Interested and Affected Parties (IAPs)

- landowners in and surrounding the mine area
- land occupiers and communities in and surrounding the mine area (various villages, farm labourers, squatters and informal settlers)
- surrounding mines and industries
- non-government organisations
- local authorities (Bojanala Platinum District Municipality, Rustenburg Local Municipality and Madibeng Local Municipality) and
- any other people/entities that choose to register as IAPs

**13.2.2 Summary of issues raised**

A summary of issues raised by authorities and IAPs in 2008 is given below. These include:

- clarity on the environmental assessment process and procedural issues
- understanding of the mine and alternatives
- sterilisation of minerals
- recognition of communities
- topography
- soils
- land capability
- blasting
- land use – disruption to current activities
- biodiversity
- sensitive areas
- air quality
- noise

- heritage resources
- visual aspects
- traffic/road use/transport
- water supply
- rehabilitation
- disturbance of ground and surface water (quality and quantity) and
- socio-economic aspects (land values, relocation, crime, social investment, services/housing).

Similar issues and concerns were raised in the 2014 process with the addition of:

- understanding of Tharisa's stakeholder communication process
- land use: tourism, economic losses and compensation
- employment and SLP related aspects
- resettlement related issues.

### **13.3 Environmental Impact Assessment and Management**

The following section provides a summary of the findings of the 2008 and 2014 EIA/EMP processes and the associated environmental management measures.

#### **13.3.1 Specialist input**

In 2008, specialist information was used both to determine the state of the pre-mine environment and to assess potential environmental impacts relating to the mining activities at the Tharisa Mine. This information was obtained from work done by the appointed specialists, Metago's (now SLR) existing knowledge of both the region and the specific site and information provided by the technical project team. These specialist investigations are listed below and the findings have been incorporated in the impacts description in the section below:

- Design of waste facilities, floodlines, water balance, design of water management facilities and closure calculations
- Land and aquatic biodiversity study
- Groundwater study
- Air quality study
- Traffic study
- Heritage study
- Socio-economic impact assessment
- Soils and land capability studies
- Blast impact study and
- Visual impact study.

In 2014, relevant specialist studies were updated to cater for the changes at the mine. Where relevant, design information was provided by the technical project team. The specialist investigations are listed below and the findings have been incorporated in the impacts description to follow:

- Updated design of waste facilities, water balance, storm water management strategy and closure calculations
- Land and aquatic biodiversity study
- Groundwater study
- Air quality study
- Heritage study
- Economic impact assessment
- Soils and land capability studies
- Noise study
- Blast impact study and
- Visual impact study.

### 13.3.2 Risk Analysis and Environmental Management

Potential impacts were identified by Metago/SLR in consultation with IAPs and regulatory authorities, specialist consultants and mine management. Where relevant, cumulative on and off-site impacts were considered. As indicated in the EIA/EMP reports, the discussion and impact assessment for each sub-section covered the construction, operational, decommissioning and closure phases where relevant.

The criteria used to assess the impacts and the method of determining the significance of the impacts was based on Metago/SLR's method of determination of the significance of impacts. This method also complies with the method provided in the EIA guideline document.

Management measures to address the identified impacts were given in the corresponding section of Chapter 6 in the 2008 EIA/EMP report and in Chapter 19 in the 2014 EIA/EMP report. These management measures were taken into account in the assessment of the significance of the mitigated impacts.

A discussion of the more significant project related issues is provided below:

**Hazardous excavations:** All excavations into which, or off which, people and animals could fall, were considered hazardous. If unmanaged, these could result in high impacts because the excavations could cause injury or death to people and animals. With the security, fencing and warning measures, as included in the 2008 and 2014 EIA/EMP reports, this impact will be managed to an acceptable level.

**Impact on soil resources and land capability:** The majority of the pre-mining soils on site are considered to be of moderate agricultural potential. With the changes in infrastructure and

operations at the mine catered for in the 2014 EIA/EMP report, the disturbance footprint has increased to approximately 1026ha. In the unmanaged scenario this impact could be of high significance, however implementation of the topsoil management plan included in the 2008 and 2014 EIA/EMP reports mitigate this impact to an acceptable level. At closure approximately 50% of the disturbed land (excluding the TSF and waste rock dumps) will be rehabilitated to a functional land use. The EIA/EMP commitment is to restore the majority of the land back to agricultural potential with grazing and wilderness capabilities

**Road disturbance and traffic safety:** Changing the configuration of the road network, and increased traffic on existing public road networks could result in an inconvenience to current road users, greater accidents (to people and animals) and increased road damage. In the managed scenario, the largest component of mine related traffic (product carrying trucks) will be directed to the Marikana siding or will use the N4. Tharisa has approached Transnet to establish a private siding on the mine site. It is understood by SLR that the EIA process for the siding has been initiated by Transnet. Other safety related measures included in the 2008 EIA/EMP report, mitigates related impacts to an acceptable level.

**Infrastructure and blast related impacts:** Damage (to people, animals and structures) from open pit blasting could potentially be caused by fly-rock, air blast and vibrations. In the unmanaged scenario this impact could be high, but with the appropriate infrastructure diversions/relocations, land acquisitions, blast designs, warning requirements and monitoring requirements (as included in both the 2008 and 2014 EIA/EMP reports) these impacts will be reduced to acceptable levels.

**Loss of biodiversity:** Although large parts of the mine area were already disturbed by agricultural, community and mining related activities, the mine hosts some sensitive habitats with associated flora and fauna species. In the unmanaged scenario, the mine could damage this biodiversity and cause impacts of high significance. The 2008 infrastructure site selection process attempted to limit the disturbance of the more sensitive areas and the biodiversity action plan included in the EIA/EMP report was designed to further reduce the impacts to an acceptable level. In the 2014 EIA/EMP report disturbance of some of the more sensitive areas was unavoidable due to space constraints. Emphasis was however placed on minimising further disturbance and protecting the Sterkstroom and its floodplain.

**Impact on surface water:** The mine infrastructure will impact a number of non-perennial water courses. In the unmanaged scenario, the impact on water flows and surface hydrology will be high. With the implementation of the management measures, as included in the 2008 and 2014 EIA/EMP reports, this impact can be mitigated to an acceptable level. Notwithstanding the above, if Tharisa Mine's surface water systems are not managed, along with implementing appropriate management of pollution sources, significant pollution could be released into the environment. The updated surface water management system design, as included in the 2014 EIA/EMP report, is therefore aimed at compliance with Regulation 704 of 4 June 1999 and is sufficient to manage both clean and dirty surface water provided the recommendations of the specialist study are adhered to.

**Impact on ground water:** The specialist investigations conservatively predicted that the tailings dam complex and waste rock dumps could have a negative impact on water quality in surrounding ground and surface water resources. This could include some third party boreholes. Mine dewatering could also result in decreased yields at these boreholes. To cater for the event that these users experience negative impacts on their ground water supply, Tharisa Mine has committed to monitoring the boreholes of these landowners, implementing quality related remediation measures, and where required, compensating affected third parties with water of equivalent quality and quantity to what they enjoy at present. Tharisa is also in the process of updating the geochemistry sample data of tailings and waste rock material and tailings return water. This study is expected to be completed in early 2016. Long term closure planning of the tailings dam and waste rock dumps is important in mitigating potential pollution impacts.

The specialist investigations identified that the use of the Hercul Quarry as a water storage dam has the potential to negatively impact the water quality of the Sterkstroom; however additional investigation and monitoring is needed to verify this. The 2014 EIA/EMP report provides for this monitoring and related seepage management measures.

It has been indicated by the mine that an emergency discharge into the Sterkstroom has taken place. Although SLR has not had sight of the relevant paperwork, it was indicated by the mine that the necessary reporting to DWS had taken place and that water quality analyses had been conducted. The mine reported that there were no abnormalities detected in the sampled water.

**Impact on air quality:** In the unmanaged scenario, it was predicted that there could be unacceptable off-site impacts from dust generating activities. To mitigate this, dust controls are required to mitigate impacts from the main emission sources, air quality will be monitored to check whether the controls are effective, and land has been purchased by Tharisa Minerals to keep unacceptable impacts within mine property as far as possible. Additional mitigation included in the 2014 EIA/EMP report provides for the relocation of sensitive receptors within the mining right boundary where health related risks have been identified.

**Visual impact:** In the unmanaged scenario, it was predicted that there could be a high impact on sensitive views from the south of the mine, in particular. The measures included in the 2008 and 2014 EIA/EMP reports mitigate this impact to an acceptable level. Key management components include rehabilitation of the pre-built tailings dam walls from the outset, visual screening berms, and control of colours and lighting within the mine area and are in place

**Noise impact:** In the unmanaged scenario, it was predicted that there would be a potential for high noise impacts on surrounding residents particularly at night. In the case of the President van Rensburg /Retief School there is the potential for high impacts during the day. The measures included in the 2008 and 2014 EIA/EMP reports mitigate this impact to an acceptable level. Key components include noise control berms of sufficient height, guidance

on waste rock handling activities and restrictions on operating times for certain noise generating activities are in place.

**Impact on heritage resources:** The Tharisa Mine hosts significant heritage resources. Despite the avoidance of many of these through the 2008 site selection process, in the unmanaged scenario, the impact on some of these resources could be high. The 2014 EIA/EMP report which catered for changes to the mine layout identified additional resources of high significance that would be disturbed. To mitigate this, the necessary assessments and applications have been made for the grave sites that will be affected by the mine. It is assumed that this also applies to historical structures although this could not be confirmed at the time of completing this report. All graves that were located inside the mining footprint area have been relocated.

**Socio-economic impacts:** The mine will have a number of positive economic benefits for the local communities in the area, the greater region and South Africa. These benefits will be in the form of capital investment, employment, support services, and foreign exchange income. In addition, a number of potential negative impacts were identified. These include: issues associated with involuntary relocation, informal settlements and associated problems of crime, disease and security concerns, pressure on housing infrastructure and services, and issues around land sales and impacts on land values. It has been indicated by the mine that a clear strategy supported by policies and action plans to address the issues are being developed and implemented by the mine.

### 13.3.3 Summary of Potential Environmental Impacts

A summary of the significance of identified impacts in the 2008 and 2014 EIA/EMP is provided in the Table 13.3.3\_1.

Environmental component	Potential impact	Significance of the impact			
		Rating from 2008 EIA/EMP		Updated rating from 2014 EIA/EMP	
		Unmitigated	Mitigated	Unmitigated	Mitigated
Geology	Loss and sterilization of mineral resources	No impact expected		No impact expected	
Topography	Hazardous excavations and infrastructure	High	Medium	High	Medium
	Surface subsidence	Medium	Low	Medium	Low
Soils and land capability	Loss of soil resources and land capability	High	Medium	Assessed separately as outlined below	
	Loss of soil resources and land capability through physical disturbance	Not assessed separately in the approved EIA and EMediumP		High	Medium-High
	Loss of soil resources and land capability through pollution			High	Low
Biodiversity	Physical destruction of	High	Medium	High	Medium

**Table 13.3.3\_1  
Summary of Potential Environmental Impacts**

Environmental component	Potential impact	Significance of the impact			
		Rating from 2008 EIA/EMP		Updated rating from 2014 EIA/EMP	
		Unmitigated	Mitigated	Unmitigated	Mitigated
	biodiversity				
	General disturbance of biodiversity	High	Medium	High	Medium
Surface water	Alteration of surface drainage lines	High	Medium	High	Medium
	Contamination of surface water resources	High	Low	High	Low
Groundwater	Groundwater contamination	High	Medium	High	Medium
	Reduction in groundwater levels / availability – impacts on third party users	High	Low	High	Low
	Reduction in groundwater levels / availability – impacts on baseflow	High	Medium	High	Medium
Air quality	Air pollution through dust generation (including PM <sub>10</sub> and PM <sub>2.5</sub> )	High	Medium	High	High-Medium
Noise	Noise pollution	High	Medium	High-Medium	Medium-Low
Visual	Negative visual impacts	High	Medium	High	Medium
Heritage, palaeontological and cultural resources	Loss of heritage, palaeontological and cultural resources	High	Low	High	Low
Land use	Loss of or changes to existing land uses	Not assessed in the approved EIA and EMediumP		High	Medium-Low Low (at closure)
Socio-economic	Blasting impacts	High	Medium	High	Medium
	Road disturbance and traffic safety	High	Medium	Remains unchanged	
	Economic impact (negative)	Medium+	Medium+	Medium+	Medium+
	Economic impact (positive)	Medium	Medium-Low		
	Inward migration and associated social issues	High-Medium	Medium-Low	High	Medium-Low

**Interpretation of the significance**

Significance	Decision guideline
H High	It would influence the decision regardless of any possible mitigation.
M Medium	It should have an influence on the decision unless it is mitigated.
L Low	It will not have an influence on the decision.
+	Denotes a positive impact.

The outcome of both the 2008 and 2014 EIA process determined that there was no environmental reason for Tharisa Mine's application not to be approved provided the mitigation outlined in the EMP is implemented.

#### 13.4 Permitting

The Tharisa Mine currently operates with the following environmental authorisations:

- An environmental decision from the North West DMR in terms of the MPRDA for the mining operation;
- An environmental decision from the North West DMR in terms of the MPRDA for changes to the mine operations and infrastructure;
- Environmental authorisation from the North West DREAD in terms of the National Environmental Management Act, 107 of 1998 (NEMA) for the activities that were triggered by the mining operation as presented in the 2008 EIA/EMP report; and
- Environmental authorisation from the North West DREAD in terms of the NEMA for the activities that were triggered by the changes to the mining operation as presented in the 2014 EIA/EMP report.
- Waste and Water Management: Tharisa Minerals was granted an integrated water use license from the North West Province DWS in terms of the National Water Act, 36 of 1998 (NWA) in July 2012. Included in the license are relevant exemptions from Regulation 704 of 4 June 1999 as well as registration for all dams with a safety risk (i.e. with both a wall greater than 5m and a capacity of 50,000m<sup>3</sup>).
- Approval for the construction of the road intersections, diverting roads and closing roads: Tharisa has confirmed that the D1325 road deviation approval has been obtained from the North West Department of Roads and Transport in terms of the relevant Provincial Road Ordinance. Any changes to the approved deviation as a result of the east pit extension will need to be discussed and agreed to with the North West Department of Transport Roads and Community Safety
- Permits for damaging or removing heritage resources such as graves: Tharisa Minerals has obtained a permit in terms of the National Heritage Act, 25 of 1999 for the exhumation and relocation of graves to be disturbed by the mining of the east pit. For the 2014 changes, prior to damaging or removing heritage resources within the central waste rock dump footprint, additional permissions will need to be sought.

Additional environmental authorisations/permits required are listed below:

- Waste and Water Management: Amendment of the mine's water use license to cater for water uses associated with changes addressed in the 2014 EIA/EMP report and if required, updating of the existing dam safety risk registrations

- As from the 2 September 2014, a waste management license in terms of the National Environmental Management: Waste Act, 59 of 2008, is required for mineralised waste disposal facilities. At the time of compiling the 2014 EIA/EMP report, there was a lack of transitional arrangements and clarity on the required license and therefore provision was included for Tharisa to consult with the relevant competent authority to obtain input on the way forward. From more recent changes to the legislation, it is SLR's understanding that existing residue deposits and/or stockpiles that were approved in terms of the MPRDA prior to 24 July 2015 must continue to be managed in accordance with the EMP, approved in terms of the MPRDA, which is regarded as having been approved in terms of NEM:WA. (Regulation 4 of GN R 633 refers.). The establishment of deposits and/or stockpiles that are not approved in existing EMPs now require a waste management license and supporting environmental assessment process. What is uncertain is under which provision facilities approved under the MPRDA but not yet constructed fall.
- Air quality: an air emission license (AEL) from the North West DREAD in terms of the National Environmental Management: Air Quality Act (NEM:AQA), 39 of 2004, for an activity listed in Government Notice 248 of 31 March 2010. The activity relates to the drying of mineral solids at the chrome sand drying plant (activity sub-category 4.1: Drying and Calcining).
- Registering the sewage plant in addition to the water licence that has been obtained: Tharisa Minerals has applied for the registration of both the sewage plant and the required personnel to the DWA in terms of Regulation 2834 of 27 December 1965.
- Permit to removing or damaging any protected plant species: Tharisa Minerals will compile and submit the necessary documents when required. When needed the permits will be obtained from the Department of Agriculture, Fisheries and Forestry (DAFF) and DEDECT in terms of the National Forests Act, 84 of 1998 and the Nature Conservation ordinance of Transvaal (12 of 1983), respectively.

In addition to the above it is important to note that since the start of the 2014 EIA process (commenced in 2011), the eastern waste rock dump has subsequently been built and therefore this component is excluded from the NEMA process but still remains part of the MPRDA process. A Section 24G application would likely need to be submitted to address this non-compliance. This requires confirmation and input from the decision-making authorities.

### **13.5 Environmental Protection and Monitoring**

As indicated in the 2008 and 2014 EIA/EMP reports, Tharisa Minerals is committed to and has implemented the monitoring programmes detailed below. Table 13.5\_1 sets out the monitoring costs as per the EMP commitments.

Table 13.5_1 Environmental Monitoring Costs			
Item	EMP Monitoring Commitment	2016 Budget	Period
1	Water quality – monthly for surface and quarterly for groundwater	R 420,000	October 2015 to September 2016
2	Air quality – monthly	R 375,000	October 2015 to September 2016
3	Noise monitoring – annually	R 60,000	October 2015 to September 2016
4	Biomonitoring – biannually	R80,000	October 2015 to September 2016
5	EMP performance assessment – every 2 years and WUL audit annually	R 175,000	October 2015 to September 2016
TOTAL		R 1,200,000	

Note: Expenditure has occurred as per budget

In general, the approach to each monitoring programme will include:

- a formal procedure and appropriately calibrated equipment;
- where samples require analysis they will be preserved according to laboratory specifications;
- an accredited, independent, commercial laboratory will undertake sample analyses;
- parameters to be monitored will be identified in consultation with a specialist in the field and/or the relevant authority;
- if necessary, following the initial monitoring results, certain parameters may be removed from the monitoring programme in consultation with a specialist and/or the relevant authority;
- monitoring data will be stored in a structured database;
- data will be interpreted and reports on trends in the data will be compiled by an appropriately qualified person on a quarterly basis; and
- both the data and the reports will be kept on record for the life of mine.

### 13.5.1 Groundwater and Surface Water

A set of monitoring points (33 for ground water and 13 for surface water), a programme and the parameters for both ground and surface water on and off the site have been set out. These parameters may be modified on the basis of input from an appropriate specialist and the DWS. It is also possible that the programme will be modified as part of the amended integrated water license process.

### 13.5.2 Air

Dust monitoring comprising a network of 12 dust buckets (directional and single) has been set out. The dust buckets will be placed immediately downwind of potentially significant dust generating sources. The target off-site dust fallout reading is less than 600mg/m<sup>2</sup>/day. A PM10 monitor for ambient concentrations has been set up in the middle of the mining right

area adjacent to security control office. The 2014 EIA/EMP report makes provision to revisit the location of this station to support management of impacts. The buckets and PM10 monitor will be measured daily and reported on a monthly basis.

### **13.5.3 Blasting**

Monitoring is done for each blast to verify that fly rock is being contained within 500m from the blast, that the ground vibration is less than or equal to a peak particle velocity of 12mm/s at a distance of 500m from the blast, and that the airblast is less than or equal to 130dB. Specific locations of the monitoring seismographs have been identified by an appropriate specialist during the pre-blast survey. These points may move as the open pit mining progresses.

### **13.5.4 Noise**

Noise monitoring is done on an annual basis to confirm that implemented noise management measures are effective. Monitoring will be done by an appropriately qualified environmental noise specialist. The noise measurement points may be modified on the basis of input from an appropriate specialist.

### **13.5.5 Bio monitoring**

The Tharisa Mine monitors the aquatic ecology integrity of water courses in the vicinity of the mining operations as per the water license conditions. Monitoring points exist up and downstream in the Sterkstroom.

### **13.5.6 Tailings and Other Dams**

In addition to the abovementioned environmental monitoring programmes, the following issues will, as a minimum and where applicable, be monitored by a professional engineer on a quarterly basis:

- phreatic surface, slope stability, adequacy of freeboard, integrity of walls, the position of the pools, silt trap sediment, presence of seepage, and functioning of drains;
- the success of vegetation establishment on the outer side walls; and
- erosion damage.

### **13.5.7 Additional monitoring**

In addition to the prescribed monitoring network as discussed above, the mine in the past has done ad hoc additional monitoring on request from neighbours to the south and west of the operations.

### **13.5.8 General**

The mine's environmental manager will conduct internal management audits against the commitments in the EIA/EMP reports. During the construction of changes to the mine catered for in the 2014 EIA/EMP report, these audits will be conducted bi-monthly. In the operational phase, these audits will be conducted on an annual basis. The audit findings will be documented for both record keeping purposes and for informing continual improvement.

In addition, and in accordance with the MPRDA and the NWA, an independent environmental professional will conduct an EMP performance assessment every 2 years and a water use licence audit every year. The mine's compliance with the provisions of the EMP and conditions of the water use licence will be assessed and reported in the relevant reports.

### **13.5.9 Reporting**

As a minimum, the following documents will be submitted to the relevant authorities on an ongoing basis:

- EMP performance assessment, submitted every two years to DMR;
- closure cost update, submitted annually to the DMR;
- tailings, waste rock and DMS waste management and risk report, submitted annually to the DMR;
- dust and noise monitoring reports, submitted annually to the DMR and DREAD; and
- water licence audit and water monitoring reports, submitted annually to DWS.

### **13.6 Rehabilitation and Mine Closure**

Tharisa's philosophy towards rehabilitation is to do this concurrently with the operational phase, where possible, to limit the financial, environmental and social impact of the decommissioning and closure stages.

Tharisa have not finalised a formal and detailed closure plan yet. Conceptual planning has taken place for the purposes of the environmental assessment processes undertaken. Nonetheless, the calculations of the current financial closure liability associated with the mine were completed in accordance with the Guideline Document for the Evaluation of the Quantum of Closure-Related Financial Provision Provided by a Mine as published by the DMR, previously the Department of Minerals and Energy (DME), dated January 2005. The MPRDA requirement is for the financial closure liability to be updated and submitted to the DMR annually. The most recent calculation values the closure liability at R143,796,799 (as at 31 December 2015). This calculation allows for making any remaining open pit voids safe (by sloping the pit walls and putting perimeter berms in place) but excludes the cost of backfilling the open pit voids with waste rock and restoring agricultural land potential. This is in accordance with the amended closure objective to only partially backfill the open pits based on a revised mine plan, and it has been approved by the DMR.

The September 2015 closure liability calculation is only planned to be submitted to the DMR for feedback and approval in December 2015. Tharisa Minerals currently provide a financial guarantee to the value of R117.4 million through a Guardrisk Insurance Company Limited policy.

On 20 November 2015, new financial provision regulations in terms of the National Environmental Management Act, for prospecting, exploration, mining and production operations came into effect. These regulations require mining companies to develop detailed

closure plans that support a financial provision calculation to varying degrees of accuracy (depending on the predicted life of mine) and based on actual rates. Existing operations have a period of 15 months from the 20 November 2015 to comply.

### 13.7 EMPR Performance Assessment and Water Licence Audit

An EMP performance assessment was completed in 2013. Based on the EMP and water licence performance assessments undertaken by the Ethical Exchange in July 2013 and a follow up site visit by SLR in November 2013 in support of the 2013 CPR update, Tharisa Mine was found to be in compliance with the majority of its environmental and water management obligations. Of the observed non-compliances, some are listed below:

- deviations from the approved infrastructure layout plan;
- incorrect storage and handling of non-mineralised waste and hydrocarbons. It must be noted that most of these issues were addressed in 2013;
- abstraction of water in excess of the authorised limits;
- various surface water management aspects including the incomplete provision of clean and dirty water separation infrastructure around all stockpiles/dumps and the incorrect use of the unlined Hercul Quarry for dirty water storage;
- unauthorised disposal of waste rock on a non-perennial watercourse;
- temporary storage of tailings during the early development stage of the plant in an unauthorised facility; and
- Incomplete implementation of the biodiversity and soil management plans.

Some of these issues are being addressed through management interventions. Where relevant, some of these issues have been addressed through the 2014 MPRDA and NEMA environmental authorisation processes. Verification of the mine's compliance with the 2014 EIA/EMP report will be done as part of the 2015 EMP performance assessment. The assessment was conducted in December 2015 with a final report due in February 2016. The findings will be presented to management and recommendations considered, budgeted and actioned where necessary. The 2014 water license audit conducted by MSA in November 2014 identified similar issues to those listed above. The audit also identified the potential need for a waste management license for the old processing plant/scrap yard area. In addition the following authorisation application processes are either in progress or imminent:

- A water use licence amendment to address the various water and waste management issues.
- A potential NEMA rectification application to address the unauthorised disposal of waste rock on a non-perennial watercourse. Although SLR has not had sight of the relevant paperwork, it is indicated by the mine that this was investigated and determined not to be required as it is catered for in a WUL amendment application.

## **13.8 Social and Labour Plan**

In compliance with its obligations under the MPRDA, whereby each mining company is required to adopt a new Social and Labour Plan each 5 years, in November 2013 Tharisa Minerals adopted a new Social and Labour Plan, the salient features of which are listed below.

### **13.8.1 Objectives**

The objects of the Social and Labour Plan are to promote employment and advance social and economic welfare of the local communities, contribute towards transformation in the mining sector and contribute towards socio-economic development in the area in which the Tharisa Mine is situated. In order to achieve the objectives, the following specific undertakings and commitments were given by Tharisa Minerals:

#### Local Recruitment

Tharisa Minerals agreed that all new, novice and entry level appointments would be taken from the local community, unless such positions could not be filled from applicants within the local community.

#### Skills Development

Tharisa Minerals undertook and committed itself towards skills development of its workforce. This would be achieved through bursaries, internships, learnership and apprenticeship programmes, portable skills programmes, career progression programmes, mentorship programmes and community adult basic education, all of which are detailed on the Social and Labour Plan.

### **13.8.2 Employment Equity Plan**

Tharisa Minerals bound itself to an employment equity plan whereby there would be focus on HDSAs in management and participation of women in mining.

### **13.8.3 Local Economic Development Programme**

The aim of this programme is to eradicate poverty and create community upliftment. A number of projects have been included in the SLP. It is understood by SLR that these are at various stages of development. An update on projects as provided by Tharisa is outlined below. No details were available on the planned scheduling and budget allocation at the time of completing this report:

- Housing project: The provision of land, development of a formal township (in co-operation with the Rustenburg Local Municipality which would be required to provide bulk services) and construction of brick house units for people who do not qualify for RDP houses. Discussions with relevant stakeholders are ongoing.
- Gardening service: still in progress with all Tharisa gardens being serviced.

- Sewing Project: with particular focus on aspects of the PPE clothing to be used by the Tharisa Mine workforce. This project is able to provide services on small orders from Tharisa and other clients. Plans are at an advance stage to ensure that this project is self sustaining.
- Brick Making project: to provide bricks suitable for the housing project, is now on hold until the proposed relocation of Madithlokwa is finalised.
- Construction projects: A number of construction projects which were requested by Tharisa have been completed. The last project was the paving of the walk way to the training centre. Orders have been placed by Tharisa for additional paving projects.
- Cleaning services: Rocasize is in discussion with Tharisa to provide all the cleaning service requirements in and around the administration blocks.
- Stemming material: It has been identified that once the crusher plant has been relocated, it will be able to crush and provide stemming materials for use by MCC. This will generate a huge income for Rocasize.
- Courier services: It has been identified that there is a need for a courier service for Tharisa (Mine).
- Scats and scrap metal: There is an opportunity for Rocasize to collect scats and scrap metal for sale. This will be another income generating project for Rocasize. Discussions are ongoing with Tharisa to determine how this could be implemented.
- Waste management project: with focus initially on waste produced at the Tharisa Mine. The type of waste that this project would address has not yet been specified.

## **14 Technical-Economic Model**

### **14.1 Introduction**

A Technical Economic Model (TEM) for the Tharisa Mine has been constructed by Coffey in order to confirm the feasibility of the mine and to substantiate the declaration of mineral reserves. Tharisa is contemplating capital expenditures to improve the efficiencies on the mine. Coffey thus did TEM's for two scenarios:

- TEM Excluding Optimisation Projects
- TEM Including Optimisation Projects

This valuation has been prepared in accordance with "The South African Code for the Reporting of Mineral Asset Valuation (The SAMVAL Code) 2008 Edition (as amended in July 2009)" prepared by The South African Mineral Asset Valuation Committee (SAMVAL) Working Group under the Joint Auspices of the Southern African Institute of Mining and Metallurgy and the Geological Society of South Africa ([www.samcode.co.za](http://www.samcode.co.za)).

#### **14.1.1 Competent Valuator and Effective Date**

The Competent Valuator for the purposes of this report is Hannes Bornman. He is a registered Professional Engineer (Pr.Eng.) in terms of the Engineering Profession Act, 46 of 2000 (the EPA) and is a "Competent Person" as defined in the SAMREC Code. He has 30 years' experience in hard and soft rock mining with more than 9 years experience in the valuation of platinum, chrome, gold, copper, coal, diamond, bauxite and uranium mines.

All the facts presented in this report are correct to the best knowledge of the Competent Valuator. This is a forward looking document and the analyses and conclusions are limited only by the reported forecasts and conditions. Neither Coffey, nor the Competent Valuator, has any material interest in Tharisa Mine, its Parent Companies, subsidiaries or projects. The work, and any other work done by Coffey for Tharisa, is strictly in return for professional fees. Payment for the work is not in any way dependent on the outcome of the work or on the success or otherwise of Tharisa's own business dealings. There is no conflict of interest in Coffey undertaking the independent mine valuation as contained in this document.

Hannes Bornman is a full-time employee of Coffey and has sufficient experience which is relevant to the style of mineralization and type of mining under consideration and to the valuation which he is undertaking to qualify as a Competent Valuator as defined in "The South African Code for the Reporting of Mineral Asset Valuation (2008) (as amended in July 2009)" Prepared by The South African Mineral Asset Valuation Committee (SAMVAL) Working Group (SAMVAL Code). Hannes Bornman has visited the property under valuation and consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The effective date of the valuation is 31 December 2015.

### 14.1.2 Methodology

There are numerous recognised methods used in valuing “mineral assets”. The most appropriate application of these various methods depends on several factors, including the level of maturity of the mineral asset, and the quantity and type of information available in relation to any particular asset.

The SAMVAL Code, sets out minimum standards and guidelines for Public Reporting of Mineral Asset Valuation for all styles of solid mineralization or mineral asset in South Africa which is binding upon the Competent Valuator involved in the valuation.

The mineral property can be defined in accordance with the level of asset maturity under the various categories as summarised in Table 14.1.2\_1.

<b>Table 14.1.2_1 Glossary of Valuation Terms (SAMVAL Code, 2008)</b>	
<b>Exploration Property</b>	A Mineral Asset that is being actively explored for mineral deposits but for which economic viability has not been demonstrated. Exploration Properties have asset values derived from their potential for the discovery of economically viable mineral deposits. Exploration property interests are bought and sold in the market. Many of these transactions involve partial-interest arrangements, such as farm-in, option or joint-venture arrangements.
<b>Development Property</b>	A Mineral Asset that is being prepared for mineral production and for which economic viability has been demonstrated by a Feasibility Study or Pre-feasibility Study and includes a Mineral Asset which may not be financed or under construction.
<b>Production Mines</b>	A Mineral Asset that is in production
<b>Dormant Properties</b>	A Mineral Asset that is not being actively explored or exploited, in which the Mineral Resources and Mineral Reserves have not been exhausted, and that may or may not be economically viable.
<b>Defunct Properties</b>	A Mineral Asset on which the Mineral Resources and Mineral Reserves have been exhausted and exploitation has ceased, and that may or may not have residual assets and liabilities.

The SAMVAL Code recognises three generally accepted approaches to Mineral Asset Valuation: -

**Cash Flow Approach:** The Cash Flow Approach relies on the ‘value-in-use’ principle and requires determination of the present value of future cash flows over the useful life of the Mineral Asset.

**Market Approach:** The Market Approach relies on the principle of ‘willing buyer, willing seller’ and requires that the amount obtainable from the sale of the Mineral Asset is determined as if in an arm’s-length transaction.

**Cost Approach:** The Cost Approach relies on historical and/or future amounts spent on the Mineral Asset.

The Competent Valuator is required to apply at least two Valuation approaches.

The relationship between the maturity of the property and the approach to the valuation as presented in the SAMVAL Code are reproduced in Table 14.1.2\_2.

Valuation Approach	Exploration Properties	Development Properties	Production Properties	Dormant Properties		Defunct Properties
				Economically Viable	Not Viable	
<b>Cash Flow</b>	Not generally used	Widely used	Widely used	Widely used	Not generally used	Not generally used
<b>Market</b>	Widely used	Less widely used	Quite widely used	Quite widely used	Widely used	Widely used
<b>Cost</b>	Quite widely used	Not generally used	Not generally used	Not generally used	Less widely used	Quite widely used

In the case of Tharisa Mine, which is a producing mine, the primary valuation was undertaken using a discounted cashflow (DCF) approach utilising the planned production profile together with the costing relating to the LoM.

#### Discounted Cash Flow

In generating the financial model and deriving the valuations, the following approach was adopted:

- The DCF valuation was set up in financial years ending September (the Company's financial year end).
- A discount rate of 8.5% per annum (in real terms) was assumed for the base case discount factor, but the NPV was also calculated for a range of discount rates.
- The impact of the Mineral Royalties Act using the formula for unrefined metals was included.
- Sensitivity analyses were performed to ascertain the impact of discount rates, commodity prices, exchange rates, total working costs and capital expenditures.
- Valuation of the tax entity was performed on a stand-alone basis.
- The full value of the operation was reported – no attributable value was calculated

The approach to the second valuation selected was that of looking at comparative transactions.

#### Comparative Transactions

Recent work was undertaken to determine market values for listed companies active in the Southern African region and these values were plotted against the respective stages of exploration (including resource definition) in order to create value benchmarks for comparison.

Analysis of the transaction data where transactions involved the acquisition of classified Mineral Resources can be used to investigate the value ascribed to contained metal in these

resources. This is based on the reasonable assumption that effectively all the value was ascribed to those resources and their upside.

#### 14.2 Sources of information

The information has been supplied by Tharisa and various independent technical advisors to Tharisa. It is based on this information that the cash flow model was constructed.

The following sources were used as inputs:

- Commodity prices – Average of Macquarie, Investec, HSBC and ABSA – January 2015 real term view. (Published prices from Industrial Minerals for foundry sand and 45% chemical grade products); (For the purposes of the financial evaluation, foundry grade and 45% chemical grade chromite concentrate is sold to Arxo Metals at the price of 42% metallurgical grade chromite plus 10%).
- Exchange rate forecasts – Average of Macquarie, Investec, HSBC and ABSA – January 2016 real term view.
- Operating costs and capital expenditures – Tharisa Minerals.
- RoM tonnage, chrome and PGM grade forecast – Ukwazi.
- Grades, metal splits, recovery/yields and other process parameters – MDM Engineering and Tharisa Minerals actual plant performance data.
- Royalties and taxes were calculated as per South African legislation.
- No financing or other instruments were considered in the model and the NPV and IRR were calculated on the free cash flow of the project, both before and after tax and royalties. Depreciation and other non-cash items were ignored.

### 14.3 Capital Budgets

Table 14.3\_1 is the summary of the capital budgets utilised in the TEM Excluding Optimisation Projects.

<b>Table 14.3_1</b>			
<b>Tharisa Mine</b>			
<b>Total Capital Budget Excluding Optimisation Projects (ZAR millions)</b>			
<b>Description</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Ongoing Capital	62.84	33.52	23.85
Strategic Spares	17.36	14.42	3.21
Tailings Storage Facility	43.22	7.37	27.93
Infrastructure	42.8	20.69	21.79
Magnetic Separation			
High Energy Floatation			
Ultra-Fine Grind			
Rail Siding		100.0	85.0
Silos			
Provision to fill final void			20.41
<b>TOTAL CAPITAL</b>	<b>166.22</b>	<b>176.00</b>	<b>182.19</b>

Table 14.3\_2 is the summary of the capital budgets utilised in the TEM Including Optimisation Projects.

<b>Table 14.3_1</b>			
<b>Tharisa Mine</b>			
<b>Total Capital Budget Including Optimisation Projects (ZAR millions)</b>			
<b>Description</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Ongoing Capital	62.84	33.52	23.85
Strategic Spares	17.36	14.42	3.21
Tailings Storage Facility	43.22	7.37	27.93
Infrastructure	42.8	20.69	21.79
Magnetic Separation		125.0	125.0
High Energy Floatation			
Ultra-Fine Grind		180.0	
Rail Siding		100.0	85.0
Silos			
Provision to fill final void			20.41
<b>TOTAL CAPITAL</b>	<b>166.22</b>	<b>481.0</b>	<b>307.19</b>

#### 14.4 Operating Costs

Table 14.4\_1 is the summary of the plant recovery parameters utilised in the TEM Excluding Optimisation Projects.

Table 14.4_1 Tharisa Mine Plant Recovery Parameters Excluding Optimisation Projects					
Parameter	2016	2017	2018	2019	Value (Long Term avg)
Chrome Mass Yield	29%	29%	28%	27%	28%
PGM Concentrator recovery	66%	74%	73%	73%	75%
PGM Concentrate grade	116.25	128.37	126.77	125.67	128.24

The following Optimisation Projects are planned to increase the chrome yield and PGM recoveries as shown in Table 14.4\_2.

- Magnetic Separation and Shaking Tables
  - From FY2019
  - Capital of R250 million (R125 million in FY2017 & R125 million in FY2018)
  - Additional R5 per tonne milled on total tonnes milled
  - 37.5% yield for Genesis and Voyager
- Ultra Fine Grind
  - From FY2018
  - Capital of R180 million during FY2017
  - Additional R30 per tonne milled on Voyager portion only
  - Recovery at Voyager up from 75% to 80%

Table 14.4_2 Tharisa Mine Plant Recovery Parameters Including Optimisation Projects					
Parameter	2016	2017	2018	2019	Value (Long Term avg)
Chrome Mass Yield	29%	29%	28%	33%	36%
PGM Concentrator recovery	66%	74%	80%	80%	80%
PGM Concentrate grade	116.25	128.37	139.79	137.39	138.76

## 14.5 Revenue Factors

Table 14.5\_1 is the summary of the revenue factors utilised in the technical-economic model.

Table 14.5_1 Tharisa Mine Revenue Factors		
Parameter	Unit	Value
Exchange rate long term (real)	ZAR/US\$	13.23
PGM Basket price (Real) long term	US\$/ troy oz (5PGE+Au)	966
Met Grade chrome concentrate CIF long term (42% Cr <sub>2</sub> O <sub>3</sub> )	US\$ / conc t	155
Chemical-grade chromite 44% Cr <sub>2</sub> O <sub>3</sub> , wet bulk, CIF to China	US\$ / conc t	203
Foundry-grade chromite 45% Cr <sub>2</sub> O <sub>3</sub> , wet bulk, (Arxo Metals) FOT	US\$ / conc t	144
Chemical-grade chromite 45% Cr <sub>2</sub> O <sub>3</sub> , wet bulk, (Arxo Metals) FOT	US\$ / conc t	98
Nickel Price	US\$/tonne	13,485
Copper Price	US\$/tonne	5,713
PGM payment factor (5PGE+Au)	%	80%
Nickel payment factor	%	72.5%
Copper payment factor	%	67.5%

## 14.6 Cost Factors

Table 14.6\_1 summarises the cost factors utilised in the TEM by Coffey Mining.

Table 14.6_1 Tharisa Mine Cost Factors (Excluding Optimisation)		
Parameter	Unit	Value
Opencast Mining costs long term	ZAR/RoM t	246.73
Underground Mining costs long term	ZAR/RoM t	482.45
Chrome plant processing costs long term	ZAR/feed t	53.80
CIF transportation cost (Mine to China) long term	ZAR/t concentrate	567
PGM plant processing costs	R/t PGM feed	74.72
On Mine overhead cash cost	ZAR/ feed t	27.95
Tharisa Minerals SA Head Office Cost	ZAR/ feed t	15.29
Arxo Logistics Commission	%	3%

The following fiscal parameters were utilised by Coffey Mining in its technical economic model:

Company tax rate of 28%

Capital expenditures written off in the year incurred

Royalty percentage =  $0.5 + [\text{earnings before interest and taxes}/(\text{gross sales in respect of unrefined mineral resources} \times 9)] \times 100$ . The percentage so determined must not exceed 7%.

#### 14.7 Steady State Production

Table 14.7\_1 provides a summary of the steady state production profile.

<b>Table 14.7_1 Tharisa Mine Technical Economic Model Steady State Production</b>			
<b>Product</b>	<b>Unit</b>	<b>Excluding Optimisation</b>	<b>Including Optimisation</b>
Metallurgical grade Chromite Concentrate 42% Cr <sub>2</sub> O <sub>3</sub>	tpa	1,014,000	1,492,000
Chemical Grade Chromite Concentrate 44% Cr <sub>2</sub> O <sub>3</sub>	tpa	256,800	154,000
Foundry grade Chromite Concentrate (Arxo Metals)	tpa	15,000	8,900
Chemical Grade Chromite Concentrate 45% Cr <sub>2</sub> O <sub>3</sub> (Arxo Metals )	tpa	40,013	34,000
<b>Total Chrome Concentrate</b>	<b>tpa</b>	<b>1,330,000</b>	<b>1,689,000</b>
PGMs in PGM Concentrate	5PGE+Au oz pa	147,399	159,000

#### 14.8 Summary of the Technical Financial Model Inputs

Table 14.8\_1 and Table 14.8\_2 summarises the inputs and outputs of the TEM Excluding Optimisation Projects and the TEM Including Optimisation Projects constructed by Coffey.

The TEM's confirmed that the mine is viable with a positive Net Present Value (NPV). The TEM's further confirmed that the mine is most sensitive to changes in revenue and least sensitive to changes in capital. This is because relatively little capital is spent on mining equipment as this is a contract mining operation.

Table 14.8\_1

**Tharisa Mine**  
**Summary of the Technical Financial Model Excluding Optimisation Projects**

	Unit	Opencast Mining			Opencast & Underground Mining							U/G Steady State 2037 - 2057	Declining Underground										
		2016	2017	2018 - 2029	2030	2031	2032	2033	2034	2035	2036		2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068
<b>ROM tonnage</b>	<i>Mtpa</i>	4.989	5.036	5.037	4.801	4.619	4.576	4.560	4.515	4.503	4.471	4.747	4.452	3.996	3.471	3.407	3.257	2.949	2.758	2.462	2.469	2.103	1.907
<b>Grade to PGM circuit</b>																							
SPGE+Au	<i>g/t</i>	1.68	1.75	1.73	1.77	1.60	1.56	1.58	1.66	1.64	1.68	1.88	1.94	1.96	2.03	1.96	1.93	1.98	2.01	2.04	2.04	2.04	2.11
Cr <sub>2</sub> O <sub>3</sub>	%	19.48%	19.59%	18.63%	18.46%	17.72%	17.53%	17.68%	19.48%	18.92%	19.22%	19.34%	19.24%	19.13%	19.61%	18.83%	18.93%	19.39%	19.70%	19.68%	19.58%	19.48%	19.63%
<b>Metal to PGM Circuit</b>																							
SPGE+Au	<i>Kg</i>	5,805	6,361	6,272	6,120	5,310	5,146	5,173	5,398	5,325	5,417	6,425	6,207	5,631	5,069	4,796	4,524	4,198	3,989	3,611	3,627	3,090	2,893
<b>Chrome Plant</b>																							
Chrome plant feed	<i>Mtpa</i>	4.659	5.036	5.037	4.801	4.619	4.576	4.560	4.515	4.503	4.471	4.747	4.452	3.996	3.471	3.407	3.257	2.949	2.758	2.462	2.469	2.103	1.907
Yield	%	28.8%	28.6%	27.2%	26.9%	25.8%	25.6%	25.8%	28.4%	27.6%	28.0%	28.2%	28.1%	27.9%	28.6%	27.5%	27.6%	28.3%	28.7%	28.7%	28.6%	28.4%	28.6%
Metallurgical Grade (42%)	<i>Mtpa</i>	1.061	1.099	1.042	0.989	0.915	0.898	0.903	0.990	0.959	0.968	1.027	0.966	0.876	0.784	0.739	0.711	0.659	0.626	0.558	0.557	0.472	0.431
Chemical Grade - (44%)	<i>Mtpa</i>	0.212	0.251	0.248	0.241	0.242	0.238	0.239	0.258	0.251	0.253	0.266	0.252	0.232	0.208	0.197	0.189	0.175	0.166	0.148	0.148	0.126	0.115
Foundry grade - Arxo Metals	<i>Mtpa</i>	0.017	0.024	0.022	0.017	0.010	0.009	0.009	0.010	0.009	0.009	0.013	0.009	0.002	-	-	-	-	-	-	-	-	-
Chemical Grade - (45%) Arxo Metals	<i>Mtpa</i>	0.051	0.065	0.057	0.045	0.027	0.025	0.025	0.026	0.024	0.024	0.034	0.023	0.006	-	-	-	-	-	-	-	-	-
Chrome concentrate produced	<i>Mtpa</i>	1.341	1.439	1.369	1.293	1.194	1.170	1.176	1.283	1.243	1.254	1.340	1.250	1.115	0.993	0.936	0.899	0.834	0.793	0.707	0.705	0.598	0.546
<b>PGM Plant</b>																							
Flotation plant feed	<i>Mtpa</i>	3.453	3.626	3.627	3.457	3.325	3.295	3.283	3.251	3.242	3.219	3.418	3.205	2.877	2.499	2.453	2.345	2.123	1.986	1.772	1.778	1.514	1.373
PGEs in Plant feed	<i>Kg</i>	5,805	6,361	6,272	6,120	5,310	5,146	5,173	5,398	5,325	5,417	6,425	6,207	5,631	5,069	4,796	4,524	4,198	3,989	3,611	3,627	3,090	2,893
6E PGM rougher feed grade	<i>g/t</i>	1.68	1.75	1.73	1.77	1.60	1.56	1.58	1.66	1.64	1.68	1.88	1.94	1.96	2.03	1.96	1.93	1.98	2.01	2.04	2.04	2.04	2.11
Concentrator recovery	%	66%	74%	72%	72%	69%	68%	69%	72%	71%	73%	76%	77%	77%	78%	77%	77%	77%	78%	78%	78%	78%	80%
PGM's in concentrate	6E Kg	3,827	4,698	4,521	4,417	3,651	3,520	3,591	3,864	3,792	3,933	4,861	4,761	4,340	3,968	3,695	3,464	3,250	3,110	2,832	2,846	2,425	2,301
PGM's in concentrate	6E oz	123,052	151,043	145,349	142,018	117,389	113,183	115,442	124,227	121,918	126,435	156,280	153,059	139,548	127,582	118,801	111,366	104,488	99,975	91,045	91,513	77,976	73,975
Concentrate grade	6E g/t	116	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
Tonnes of concentrate	tonnes	32,925	36,597	36,610	35,946	35,420	35,298	35,252	35,121	35,087	34,994	35,790	34,940	33,628	29,986	29,435	28,142	25,476	23,833	21,269	21,334	18,173	16,476
Exchange rate	ZAR/USD	15.78	15.00	13.84	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23
PGM Basket price (Real)	USD/oz	809.16	916.33	974.00	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79
PGM Basket price (Real)	R/g	397.02	427.52	431.92	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42
42% met grade chrome CIF price to TFI including discount	US\$/t conc	107.00	120.00	135.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00
SOC Agreement IRS	Payment %	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
Arxo Logistics Commission	%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Effective 42% Met grade price (CIF to China)	ZAR/tonne	1,637	1,746	1,813	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989
Effective 44% Chem grade price (CIF to China)	ZAR/tonne	1,989	2,099	2,215	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600
Effective 45% Chem grade price (to Arxo metals)	ZAR/tonne	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261
Effective Foundry grade price (to Arxo metals)	ZAR/tonne	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843
Effective PGM Price	ZAR/6E ounce	10,212	10,996	11,109	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222
Chrome Revenue - Export Chrome concentrate	ZAR mil	2,278	2,600	2,572	2,703	2,513	2,464	2,476	2,701	2,617	2,640	2,815	2,632	2,358	2,102	1,982	1,904	1,766	1,678	1,496	1,494	1,266	1,156
Chrome Revenue - Sales to Arxo Metals	ZAR mil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PGM Revenue (Incl Base Metals)	ZAR mil	1,268	1,674	1,519	1,466	1,214	1,171	1,194	1,284	1,261	1,307	1,612	1,579	1,440	1,316	1,226	1,150	1,079	1,032	939	944	805	763
<b>TOTAL REVENUE</b>	<b>ZAR mil</b>	<b>3,546</b>	<b>4,275</b>	<b>4,092</b>	<b>4,170</b>	<b>3,727</b>	<b>3,635</b>	<b>3,671</b>	<b>3,985</b>	<b>3,878</b>	<b>3,947</b>	<b>4,427</b>	<b>4,211</b>	<b>3,798</b>	<b>3,418</b>	<b>3,208</b>	<b>3,054</b>	<b>2,845</b>	<b>2,710</b>	<b>2,436</b>	<b>2,438</b>	<b>2,070</b>	<b>1,919</b>
<b>Operating Cost</b>																							
Mining costs	ZAR mil	1,263.4	1,288.7	1,238.8	829.3	513.8	399.5	696.9	981.5	1,675.6	2,108.1	2,317.9	2,106.0	1,887.0	1,635.8	1,603.4	1,533.0	1,384.2	1,295.8	1,156.3	1,158.9	992.4	907.8
Chrome plant processing costs	ZAR mil	250.6	270.9	271.0	258.3	248.5	246.2	245.3	242.9	242.3	240.5	255.4	239.5	215.0	186.7	183.3	175.2	158.6	148.4	132.4	132.8	113.2	102.6
Chrome Transport cost (CIF to China)	ZAR mil	763.8	810.1	676.1	636.4	598.2	587.2	590.4	645.2	625.4	631.4	668.3	629.9	572.5	513.2	483.9	465.0	431.2	409.8	365.4	364.7	309.1	282.3
PGM plant processing costs	ZAR mil	250.6	270.9	271.0	258.3	248.5	246.2	245.3	242.9	242.3	240.5	255.4	239.5	215.0	186.7	183.3	175.2	158.6	148.4	132.4	132.8	113.2	102.6
Laboratory cost	ZAR mil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
On mine overhead cost	ZAR mil	130.2	140.7	140.8	134.2	129.1	127.9	127.5	126.2	125.9	125.0	132.7	124.4	111.7	97.0	95.2	91.0	82.4	77.1	68.8	69.0	58.8	53.3
<b>Total Tharisa On Mine Cash Cost (including chrome transport)</b>	<b>ZAR mil</b>	<b>2,658.7</b>	<b>2,781.4</b>	<b>2,597.7</b>	<b>2,116.6</b>	<b>1,738.0</b>	<b>1,607.0</b>	<b>1,905.4</b>	<b>2,238.7</b>	<b>2,911.3</b>	<b>3,345.5</b>	<b>3,629.7</b>	<b>3,339.3</b>	<b>3,001.1</b>	<b>2,619.5</b>	<b>2,549.1</b>	<b>2,439.5</b>	<b>2,215.1</b>	<b>2,079.5</b>	<b>1,855.3</b>	<b>1,858.3</b>	<b>1,586.6</b>	<b>1,448.6</b>
Tharisa Minerals SA Head Office	ZAR mil	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5	68.4	61.4	53.3	52.4	50.1	45.3	42.4	37.8	37.9	32.3	29.3
<b>Total Cash Cost Tharisa Minerals South Africa</b>	<b>ZAR mil</b>	<b>2,732.2</b>	<b>2,854.9</b>	<b>2,671.2</b>	<b>2,190.0</b>	<b>1,811.5</b>	<b>1,680.5</b>	<b>1,978.9</b>	<b>2,312.1</b>	<b>2,984.8</b>	<b>3,419.0</b>	<b>3,703.2</b>	<b>3,407.7</b>	<b>3,062.6</b>	<b>2,672.8</b>	<b>2,601.5</b>	<b>2,489.6</b>	<b>2,260.4</b>	<b>2,121.9</b>	<b>1,893.2</b>	<b>1,896.2</b>	<b>1,618.9</b>	<b>1,477.9</b>
<b>Total chrome + PGM cost (excluding mining, HO &amp; overheads)</b>	<b>ZAR mil</b>	<b>1,265.1</b>	<b>1,352.0</b>	<b>1,218.1</b>	<b>1,153.0</b>	<b>1</b>																	

	Unit	Opencast Mining			Opencast & Underground Mining							U/G Steady State	Declining Underground										
		2016	2017	2018 - 2029	2030	2031	2032	2033	2034	2035	2036	2037 - 2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068
Nickel Payment factor (IRS)	%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%
Copper price	US\$/t	4,941	5,276	5,700	5,639	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713
Nickel price	US\$/t	8,940	10,147	13,157	12,117	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485
<b>Capital Expenditure</b>	ZAR mil																						
Ongoing Capital	ZAR mil	63	34	29	30	30	30	30	30	30	30	30	30	30	30	25	20	20	20	15	15	15	-
Strategic Spares	ZAR mil	17	14	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tailings Storage Facility	ZAR mil	43	7	29	5	5	5	5	5	5	5	5	5	5	-	-	-	-	-	-	-	-	-
Infrastructure	ZAR mil	43	21	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnetic Separation	ZAR mil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
High Energy Floatation	ZAR mil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ultra Fine Grind	ZAR mil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rail Siding	ZAR mil	-	100	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silos	ZAR mil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Underground Mining Project	ZAR mil	-	-	-	258	294	471	499	363	230	116	-	-	-	-	-	-	-	-	-	-	-	-
Provision to fill final void	ZAR mil	-	-	20	20	20	20	20	20	20	20	1	-	-	-	-	-	-	-	-	-	-	-
Closing Environmental Rehab	ZAR mil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	144
<b>TOTAL CAPITAL</b>	ZAR mil	<b>166</b>	<b>176</b>	<b>189</b>	<b>314</b>	<b>349</b>	<b>527</b>	<b>554</b>	<b>419</b>	<b>285</b>	<b>172</b>	<b>36</b>	<b>35</b>	<b>35</b>	<b>30</b>	<b>25</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>144</b>
<b>TOTAL REVENUE</b>	ZAR mil	<b>3,546</b>	<b>4,275</b>	<b>4,092</b>	<b>4,170</b>	<b>3,727</b>	<b>3,635</b>	<b>3,671</b>	<b>3,985</b>	<b>3,878</b>	<b>3,947</b>	<b>4,427</b>	<b>4,211</b>	<b>3,798</b>	<b>3,418</b>	<b>3,208</b>	<b>3,054</b>	<b>2,845</b>	<b>2,710</b>	<b>2,436</b>	<b>2,438</b>	<b>2,070</b>	<b>1,919</b>
<b>TOTAL COSTS</b>	ZAR mil	<b>2,732</b>	<b>2,855</b>	<b>2,671</b>	<b>2,190</b>	<b>1,811</b>	<b>1,680</b>	<b>1,979</b>	<b>2,312</b>	<b>2,985</b>	<b>3,419</b>	<b>3,703</b>	<b>3,408</b>	<b>3,063</b>	<b>2,673</b>	<b>2,601</b>	<b>2,490</b>	<b>2,260</b>	<b>2,122</b>	<b>1,893</b>	<b>1,896</b>	<b>1,619</b>	<b>1,478</b>
<b>CAPITAL EXPENDITURE</b>	ZAR mil	<b>166</b>	<b>176</b>	<b>189</b>	<b>314</b>	<b>349</b>	<b>527</b>	<b>554</b>	<b>419</b>	<b>285</b>	<b>172</b>	<b>36</b>	<b>35</b>	<b>35</b>	<b>30</b>	<b>25</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>144</b>
<b>Net Cash before Royalties &amp; Tax</b>	ZAR mil	<b>648</b>	<b>1,244</b>	<b>1,232</b>	<b>1,666</b>	<b>1,567</b>	<b>1,428</b>	<b>1,137</b>	<b>1,254</b>	<b>608</b>	<b>356</b>	<b>688</b>	<b>768</b>	<b>701</b>	<b>716</b>	<b>582</b>	<b>545</b>	<b>564</b>	<b>568</b>	<b>528</b>	<b>526</b>	<b>436</b>	<b>297</b>
<b>Net Cash after Royalties &amp; Tax</b>	ZAR mil	<b>634</b>	<b>1,189</b>	<b>1,073</b>	<b>1,141</b>	<b>1,089</b>	<b>1,051</b>	<b>872</b>	<b>908</b>	<b>457</b>	<b>264</b>	<b>437</b>	<b>489</b>	<b>447</b>	<b>456</b>	<b>370</b>	<b>345</b>	<b>358</b>	<b>361</b>	<b>334</b>	<b>334</b>	<b>277</b>	<b>225</b>
<b>Discount Rate</b>	%	<b>8.5%</b>																					
<b>NPV (Before tax and royalties)</b>	<b>R mil</b>	<b>15,832</b>																					
<b>NPV (After tax and royalties)</b>	<b>R mil</b>	<b>11,474</b>																					
- All costs are expressed in quarter four 2015 real terms.																							
- The table reflects cash cost excluding depreciation, royalties, interest payments and any other non-cash cost.																							
- Real term adjustments, to mining cost was included taking cognisance of the increase in mining stripping ratios and underground mining (for the life of mine).																							

Table 14.8\_2

**Tharisa Mine**  
**Summary of the Technical Financial Model Including Optimisation Projects**

	Unit	Opencast Mining			Opencast & Underground Mining								U/G Steady State 2037 - 2057	Declining Underground									
		2016	2017	2018 - 2029	2030	2031	2032	2033	2034	2035	2036	2058		2059	2060	2061	2062	2063	2064	2065	2066	2067	2068
<b>ROM tonnage</b>	<i>Mtpa</i>	4.989	5.036	5.037	4.801	4.619	4.576	4.560	4.515	4.503	4.471	4.747	4.452	3.996	3.471	3.407	3.257	2.949	2.758	2.462	2.469	2.103	1.907
<b>Grade to PGM circuit</b>																							
SPGE+Au	<i>g/t</i>	1.68	1.75	1.73	1.77	1.72	1.68	1.69	1.79	1.77	1.84	1.88	1.94	1.96	2.03	1.96	1.93	1.98	2.01	2.04	2.04	2.04	2.11
Cr <sub>2</sub> O <sub>3</sub>	%	19.48%	19.59%	18.63%	18.46%	17.72%	17.53%	17.68%	19.48%	18.92%	19.22%	19.34%	19.24%	19.13%	19.61%	18.83%	18.93%	19.39%	19.70%	19.68%	19.58%	19.48%	19.63%
<b>Metal to PGM Circuit</b>																							
SPGE+Au	<i>Kg</i>	5,805	6,361	6,272	6,120	5,725	5,528	5,541	5,811	5,742	5,925	6,425	6,207	5,631	5,069	4,796	4,524	4,198	3,989	3,611	3,627	3,090	2,893
<b>Chrome Plant</b>																							
Chrome plant feed	<i>Mtpa</i>	4.659	5.036	5.037	4.801	4.619	4.576	4.560	4.515	4.503	4.471	4.747	4.452	3.996	3.471	3.407	3.257	2.949	2.758	2.462	2.469	2.103	1.907
Yield	%	28.8%	28.6%	32.5%	33.2%	34.1%	33.7%	33.9%	36.8%	35.9%	36.4%	36.6%	36.4%	36.1%	36.9%	35.4%	35.6%	36.5%	37.1%	37.0%	36.9%	36.7%	36.9%
Metallurgical Grade (42%)	<i>Mtpa</i>	1.061	1.099	1.300	1.274	1.255	1.231	1.234	1.323	1.288	1.295	1.388	1.290	1.141	1.012	0.954	0.917	0.850	0.808	0.720	0.719	0.609	0.557
Chemical Grade - (44%)	<i>Mtpa</i>	0.212	0.251	0.280	0.278	0.284	0.281	0.283	0.309	0.300	0.304	0.312	0.304	0.294	0.269	0.254	0.244	0.226	0.215	0.192	0.191	0.162	0.148
Foundry grade - Arxo Metals	<i>Mtpa</i>	0.017	0.024	0.013	0.008	0.007	0.006	0.006	0.006	0.006	0.005	0.008	0.005	0.001	-	-	-	-	-	-	-	-	-
Chemical Grade - (45%) Arxo Metals	<i>Mtpa</i>	0.051	0.065	0.046	0.033	0.026	0.025	0.024	0.023	0.023	0.021	0.031	0.021	0.005	-	-	-	-	-	-	-	-	-
Chrome concentrate produced	<i>Mtpa</i>	1.341	1.439	1.639	1.592	1.573	1.543	1.548	1.661	1.616	1.626	1.738	1.620	1.441	1.281	1.208	1.161	1.076	1.023	0.912	0.910	0.771	0.704
<b>PGM Plant</b>																							
Flotation plant feed	<i>Mtpa</i>	3.453	3.626	3.627	3.457	3.325	3.295	3.283	3.251	3.242	3.219	3.418	3.205	2.877	2.499	2.453	2.345	2.123	1.986	1.772	1.778	1.514	1.373
PGEs in Plant feed	<i>Kg</i>	5,805	6,361	6,272	6,120	5,725	5,528	5,541	5,811	5,742	5,925	6,425	6,207	5,631	5,069	4,796	4,524	4,198	3,989	3,611	3,627	3,090	2,893
6E PGM rougher feed grade	<i>g/t</i>	1.68	1.75	1.73	1.77	1.72	1.68	1.69	1.79	1.77	1.84	1.88	1.94	1.96	2.03	1.96	1.93	1.98	2.01	2.04	2.04	2.04	2.11
Concentrator recovery	%	66%	74%	80%	81%	79%	79%	79%	80%	80%	80%	78%	80%	84%	85%	85%	85%	85%	85%	85%	85%	85%	85%
PGM's in concentrate	6E Kg	3,827	4,698	5,018	4,954	4,528	4,387	4,404	4,635	4,585	4,743	5,032	4,977	4,710	4,309	4,077	3,845	3,568	3,391	3,069	3,083	2,627	2,459
PGM's in concentrate	6E oz	123,052	151,043	161,325	159,280	145,592	141,055	141,588	149,027	147,415	152,505	161,768	160,016	151,420	138,524	131,074	123,626	114,713	109,011	98,675	99,121	84,451	79,066
Concentrate grade	6E g/t	116	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
Tonnes of concentrate	tonnes	32,925	36,597	36,610	35,946	35,420	35,298	35,252	35,121	35,087	34,994	35,790	34,940	33,628	29,986	29,435	28,142	25,476	23,833	21,269	21,334	18,173	16,476
Exchange rate	ZAR/USD	15.78	15.00	13.84	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23
PGM Basket price (Real)	USD/oz	809.16	916.33	974.00	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79	965.79
PGM Basket price (Real)	R/g	397.02	427.52	431.92	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42	397.42
42% met grade chrome CIF price to TFI including discount	US\$/t conc	107.00	120.00	135.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00	155.00
SOC Agreement IRS	Payment %	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
Arxo Logistics Commission	%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Effective 42% Met grade price (CIF to China)	ZAR/tonne	1,637	1,746	1,813	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989
Effective 44% Chem grade price (CIF to China)	ZAR/tonne	1,989	2,099	2,215	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600
Effective 45% Chem grade price (to Arxo metals)	ZAR/tonne	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261
Effective Foundry grade price (to Arxo metals)	ZAR/tonne	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843	1,843
Effective PGM Price	ZAR/6E ounce	10,212	10,996	11,109	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222	10,222
Chrome Revenue - Export Chrome concentrate	ZAR mil	2,278	2,600	3,080	3,329	3,295	3,234	3,245	3,487	3,393	3,414	3,638	3,404	3,045	2,712	2,557	2,457	2,279	2,166	1,931	1,927	1,633	1,492
Chrome Revenue - Sales to Arxo Metals	ZAR mil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PGM Revenue (Incl Base Metals)	ZAR mil	1,268	1,674	1,684	1,643	1,503	1,456	1,462	1,538	1,521	1,573	1,668	1,650	1,562	1,428	1,352	1,275	1,183	1,124	1,017	1,022	871	815
<b>TOTAL REVENUE</b>	<b>ZAR mil</b>	<b>3,546</b>	<b>4,275</b>	<b>4,764</b>	<b>4,972</b>	<b>4,798</b>	<b>4,691</b>	<b>4,707</b>	<b>5,025</b>	<b>4,914</b>	<b>4,988</b>	<b>5,306</b>	<b>5,054</b>	<b>4,607</b>	<b>4,141</b>	<b>3,909</b>	<b>3,733</b>	<b>3,462</b>	<b>3,290</b>	<b>2,948</b>	<b>2,949</b>	<b>2,504</b>	<b>2,307</b>
<b>Operating Cost</b>																							
Mining costs	ZAR mil	1,263.4	1,288.7	1,238.8	829.3	513.8	399.5	696.9	981.5	1,675.6	2,108.1	2,317.9	2,106.0	1,887.0	1,635.8	1,603.4	1,533.0	1,384.2	1,295.8	1,156.3	1,158.9	992.4	907.8
Chrome plant processing costs	ZAR mil	250.6	270.9	324.0	312.2	301.5	299.0	298.0	295.4	294.7	292.8	309.0	291.7	264.9	234.0	230.2	221.4	203.3	192.1	174.6	175.1	153.6	142.0
Chrome Transport cost (CIF to China)	ZAR mil	763.8	810.1	826.0	802.1	796.0	781.6	784.4	843.9	821.1	826.7	878.8	824.3	741.8	662.3	624.4	600.0	556.4	528.8	471.5	470.5	398.8	364.2
PGM plant processing costs	ZAR mil	250.6	270.9	326.0	311.3	301.2	298.9	297.8	295.3	294.5	294.3	308.9	289.4	262.2	233.6	229.5	219.9	202.3	174.7	173.2	152.6	132.5	
Laboratory cost	ZAR mil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
On mine overhead cost	ZAR mil	130.2	140.7	140.8	134.2	129.1	127.9	127.5	126.2	125.9	125.0	132.7	124.4	111.7	97.0	95.2	91.0	82.4	77.1	68.8	69.0	58.8	53.3
<b>Total Tharisa On Mine Cash Cost (including chrome transport)</b>	<b>ZAR mil</b>	<b>2,658.7</b>	<b>2,781.4</b>	<b>2,855.5</b>	<b>2,389.2</b>	<b>2,041.6</b>	<b>1,906.9</b>	<b>2,204.6</b>	<b>2,542.3</b>	<b>3,211.7</b>	<b>3,646.9</b>	<b>3,947.3</b>	<b>3,635.8</b>	<b>3,267.5</b>	<b>2,862.6</b>	<b>2,782.7</b>	<b>2,665.3</b>	<b>2,428.6</b>	<b>2,284.3</b>	<b>2,045.8</b>	<b>2,046.8</b>	<b>1,756.2</b>	<b>1,599.8</b>
Tharisa Minerals SA Head Office	ZAR mil	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5	68.4	61.4	53.3	52.4	50.1	45.3	42.4	37.8	37.9	32.3	29.3
<b>Total Cash Cost Tharisa Minerals South Africa</b>	<b>ZAR mil</b>	<b>2,732.2</b>	<b>2,854.9</b>	<b>2,929.0</b>	<b>2,462.6</b>	<b>2,115.0</b>	<b>1,980.3</b>	<b>2,278.0</b>	<b>2,615.8</b>	<b>3,285.2</b>	<b>3,720.4</b>	<b>4,020.8</b>	<b>3,704.2</b>	<b>3,328.9</b>	<b>2,916.0</b>	<b>2,835.1</b>	<b>2,715.4</b>	<b>2,473.9</b>	<b>2,326.7</b>	<b>2,083.7</b>	<b>2,084.7</b>	<b>1,788.5</b>	<b>1,629.1</b>
<b>Total chrome + PGM cost (excluding mining, HO &amp; overheads)</b>	<b>ZAR mil</b>	<b>1,265.1</b>	<b>1,352.0</b>	<b>1,475.9</b>	<b>1,425.6</b>	<b>1,398.</b>																	

	Unit	Opencast Mining			Opencast & Underground Mining							U/G Steady State	Declining Underground										
		2016	2017	2018 - 2019	2030	2031	2032	2033	2034	2035	2036	2037 - 2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068
Nickel Payment factor (IRS)	%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%
Copper price	US\$/t	4,941	5,276	5,700	5,639	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713	5,713
Nickel price	US\$/t	8,940	10,147	13,157	12,117	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485	13,485
<b>Capital Expenditure</b>	ZAR mil																						
Ongoing Capital	ZAR mil	63	34	39	40	40	40	40	40	40	40	40	40	40	40	35	30	25	20	15	15	15	-
Strategic Spares	ZAR mil	17	14	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tailings Storage Facility	ZAR mil	43	7	24	5	5	5	5	5	5	5	5	5	5	5	-	-	-	-	-	-	-	-
Infrastructure	ZAR mil	43	21	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnetic Separation	ZAR mil	-	125	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
High Energy Floatation	ZAR mil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ultra Fine Grind	ZAR mil	-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rail Siding	ZAR mil	-	100	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silos	ZAR mil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Underground Mining Project	ZAR mil	-	-	-	258	294	471	499	363	230	116	-	-	-	-	-	-	-	-	-	-	-	-
Provision to fill final void	ZAR mil	-	-	20	20	20	20	20	20	20	20	1	-	-	-	-	-	-	-	-	-	-	-
Closing Environmental Rehab	ZAR mil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	144
<b>TOTAL CAPITAL</b>	ZAR mil	<b>166</b>	<b>481</b>	<b>318</b>	<b>324</b>	<b>359</b>	<b>537</b>	<b>564</b>	<b>429</b>	<b>295</b>	<b>182</b>	<b>46</b>	<b>45</b>	<b>45</b>	<b>40</b>	<b>35</b>	<b>30</b>	<b>25</b>	<b>20</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>144</b>
<b>TOTAL REVENUE</b>	ZAR mil	<b>3,546</b>	<b>4,275</b>	<b>4,764</b>	<b>4,972</b>	<b>4,798</b>	<b>4,691</b>	<b>4,707</b>	<b>5,025</b>	<b>4,914</b>	<b>4,988</b>	<b>5,306</b>	<b>5,054</b>	<b>4,607</b>	<b>4,141</b>	<b>3,909</b>	<b>3,733</b>	<b>3,462</b>	<b>3,290</b>	<b>2,948</b>	<b>2,949</b>	<b>2,504</b>	<b>2,307</b>
<b>TOTAL COSTS</b>	ZAR mil	<b>2,732</b>	<b>2,855</b>	<b>2,929</b>	<b>2,463</b>	<b>2,115</b>	<b>1,980</b>	<b>2,278</b>	<b>2,616</b>	<b>3,285</b>	<b>3,720</b>	<b>4,021</b>	<b>3,704</b>	<b>3,329</b>	<b>2,916</b>	<b>2,835</b>	<b>2,715</b>	<b>2,474</b>	<b>2,327</b>	<b>2,084</b>	<b>2,085</b>	<b>1,788</b>	<b>1,629</b>
<b>CAPITAL EXPENDITURE</b>	ZAR mil	<b>166</b>	<b>481</b>	<b>318</b>	<b>324</b>	<b>359</b>	<b>537</b>	<b>564</b>	<b>429</b>	<b>295</b>	<b>182</b>	<b>46</b>	<b>45</b>	<b>45</b>	<b>40</b>	<b>35</b>	<b>30</b>	<b>25</b>	<b>20</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>144</b>
<b>Net Cash before Royalties &amp; Tax</b>	ZAR mil	<b>648</b>	<b>939</b>	<b>1,517</b>	<b>2,185</b>	<b>2,324</b>	<b>2,174</b>	<b>1,864</b>	<b>1,980</b>	<b>1,334</b>	<b>1,086</b>	<b>1,240</b>	<b>1,304</b>	<b>1,233</b>	<b>1,185</b>	<b>1,039</b>	<b>987</b>	<b>963</b>	<b>943</b>	<b>850</b>	<b>849</b>	<b>700</b>	<b>534</b>
<b>Net Cash after Royalties &amp; Tax</b>	ZAR mil	<b>634</b>	<b>918</b>	<b>1,376</b>	<b>1,474</b>	<b>1,573</b>	<b>1,527</b>	<b>1,337</b>	<b>1,372</b>	<b>922</b>	<b>731</b>	<b>792</b>	<b>832</b>	<b>788</b>	<b>757</b>	<b>663</b>	<b>629</b>	<b>613</b>	<b>599</b>	<b>539</b>	<b>539</b>	<b>445</b>	<b>375</b>
<b>Discount Rate</b>	%	<b>8.5%</b>																					
<b>NPV (Before tax and royalties)</b>	<b>R mil</b>	<b>20,751</b>																					
<b>NPV (After tax and royalties)</b>	<b>R mil</b>	<b>14,703</b>																					
- All costs are expressed in quarter four 2015 real terms.																							
- The table reflects cash cost excluding depreciation, royalties, interest payments and any other non-cash cost.																							
- Real term adjustments, to mining cost was included taking cognisance of the increase in mining stripping ratios and underground mining (for the life of mine).																							

## 14.9 Cash Flow Approach – Excluding Inferred Resources

### 14.9.1 Opencast Mine

The tail of the opencast mine was shortened in this scenario due to the fixed costs on the mine that will have to be covered with diminished production in the last year or two.

### 14.9.2 Underground Mine

In the valuation of the Tharisa Mine excluding the inferred mineral resources, it was decided to exclude the underground production profile as a close proxy for the exclusion of inferred mineral resources. This assessment considers that the ZAR2bn necessary to establish the underground mine will not be recouped by the 18,649Mt Probable Reserves available for underground mine production. The bulk of the underground operations would obtain their production from areas declared as an inferred mineral resource.

### 14.9.3 Modifying Factors

All modifying factors in this valuation are the same as in the valuation where the underground production, a proxy for the inferred mineral resources, were included.

### 14.9.4 Effect of Underground Production/Inferred Mineral Resources on DCF Valuation

Table 14.9.4\_1 presents aspects of the TEM in which the underground mine have been excluded as a close proxy for exclusion of the inferred mineral resources from the production profile.

**Table14.9.4\_1**  
**Tharisa Mine Technical Economic Model**  
**Effect of Underground Production/Inferred Resources on DCF Valuation**

Parameter	Unit	Excluding Optimisation		Including Optimisation	
		Including Underground	Excluding Underground	Including Underground	Excluding Underground
Life of Mine	Years	53	21	53	21
ROM over LOM	Mt	235.44	90.60	235.44	90.60
LOM C <sub>2</sub> O <sub>3</sub>	Mt	65.33	24.6	82,221	29.44
LOM PGM's	Moz	7.35	2.60	7.93	2.892
Capital	ZAR Million	5,089	1,871	5,964	2,437
Discount Rate	%	8.5%	8.5%	8.5%	8.5%
High NPV	ZAR Million	15,947	13,178	21,355	12,655
Low NPV	ZAR Million	6,049	6,018	7,001	5,546
<b>Preferred NPV</b>	<b>ZAR Million</b>	<b>11.474</b>	<b>10,655</b>	<b>14,703</b>	<b>9,923</b>

Coffey prefers the DCF valuation where the underground production has been excluded.

#### **14.10 Market Approach**

Tharisa is unique in the sense that there are no other opencast chrome mines with PGM's as co-products in South Africa. There are therefore no similar mine transactions that can be used to value Tharisa according to the Market Approach. Since it is an operating mine the Cost Approach is not generally used (Figure 1 in the SAMVAL Code).

Coffey approached the problem by first valuing the PGM content of Tharisa Mine, and then the chrome content, using publicly available transactions.

#### **14.11 PGM Comparative Transactions**

Table 14.11\_1 shows the transactions relied upon as well as the resultant value attributable to Tharisa PGM's, based on a Market Approach.

#### **14.12 Chrome Comparative Transactions**

Chromex sold its 74% interest in the Chromex mine to the Ruukki Group (Mogale Alloys) in 2010 for £37.0 million. The full consideration plus debt, less cash of this transaction was US\$59.17 million as at the date of acquisition.

In 2009 AMCOL International Corporation bought Chrome Corporation's 74% of the Ruighoek chromite mine for US\$26.4 million. Using these two transactions, Coffey placed a value on the chromite content of Tharisa Mine, using the Market approach. Table 14.12\_1 indicates the implied value of Tharisa Mine's 828 Mt chromitite resource based on the transactions described above.

Table 14.11_1 Tharisa Mine PGM Valuation using Market Approach							
Target*	Acquirer	Date announced	% of shares acquired	EV (US\$m)	Deal value (US\$m)	4PGM Resources purchased (Moz)	Deal Value (US\$/4PGM oz)
Northam	ENRC	26-Apr-10	12.20%	2297	300	137.1	17.94
Anooraq Resources	Anglo Platinum	2-Feb-12	100.00%	418	213	20.9	10.19
Zimbabwe Platinum Mines	Zimplats Mhondoro – Ngexi, ESOT, NIEEF	11-Jan-13	51.00%	1904	971	107.4	17.73
<b>Mean of all</b>							<b>15.28</b>
Tharisa Implied Valuation							
Tonnes resources	4PGMg/t	Grams per Oz	Oz contained 4PGM	Multiple	Transaction value/resources valuation		
					US\$m	ZARm**	
835,000,000	1.15	31.1035	30,872,731	15.82	471.89	7,321.73	
					Discount factor		100%
					Enterprise value		471.89
							7,322

\*Operating PGM mine sales in last 5 years

\*\*ZAR:US\$ at spot on 31/12/2015 – 15.52

**Table 14.12\_1**  
**Tharisa Mine**  
**Chrome Valuation using Market Approach**

Target*	Acquirer	Date announced	% of shares acquired	Deal value (US\$m)	Chrome resource Mt	Transaction US\$/t	Target Cr <sub>2</sub> O <sub>3</sub> %	Tharisa Cr <sub>2</sub> O <sub>3</sub> %	Tharisa US\$/t based on grade	Tharisa implied valuation US\$M
Chromex	Ruukki Group	30-Sep-10	74.00%	59	31.7238	1.87	38.22%	20.38%	0.99	830.5
Ruighoek Chrome Project	AMCOL International Corporation	23-Feb-09	74.00%	26.4	9.47792	2.79	43.65%	20.38%	1.30	1085.9
<b>Mean value</b>										<b>958.2</b>

\*Chrome project sales in last 5 years

### 14.13 Value according to Market Approach

Based on the Market Approach the following value can thus be attributed to Tharisa as shown in Table 14.13\_1.

Table 14.13_1 Tharisa Mine Market Approach Valuation of 100% of Tharisa Mine		
Transaction type	US\$	ZARm
<b>PGM comparable transaction valuation (Resources)</b>	<b>472</b>	<b>7,322</b>
Chrome Corporation transaction valuation (Resources)	830	16,849
Chromex transaction valuation (Resources)	1086	12,885
<b>Chrome comparable transaction valuation (Resources)</b>	<b>958</b>	<b>14,867</b>
Low valuation	1,302	20,207
High valuation	1,558	24,170
<b>Average</b>	<b>1,430</b>	<b>22,189</b>

### 14.14 Summary

In the Valuation, a Comparative Transaction Valuation and a DCF Valuation were compared. Table 14.14\_1 summarises the results of the valuations.

Table 14.14_1 Tharisa Mine Valuations of the Tharisa Mine on 31 December 2015 (ZAR Million)					
Valuation Methodology	DCF Excluding Optimisation		DCF Including Optimisation		Comparative Transaction
	Including Underground	Excluding Underground	Including Underground	Excluding Underground	
High NPV	15,947	13,178	21,355	12,655	17,229
Low NPV	6,049	6,018	7,001	5,546	14,404
<b>Preferred NPV</b>	<b>11,474</b>	<b>10,655</b>	<b>14,703</b>	<b>9,923</b>	<b>15,817</b>

### 14.15 Conclusion

Coffey prefers the Cash Flow Approach to valuating the Tharisa Mine as it is a producing mine with known production and cost parameters. Coffey prefers the DCF valuation excluding the underground production as a close proxy for exclusion of inferred mineral resources, as the inferred mineral resources have a lower level of confidence.

The Market Approach valuation is based on a combination of transactions for properties that is not very similar to the Tharisa Mine. Coffey considers that it is not a true reflection of the

market price of Tharisa Mine. Table 14.15\_1 are thus the values Coffey attributes to Tharisa Mine.

<b>Table 14.15_1</b> <b>Tharisa Mine</b> <b>Preferred Valuation of the Tharisa Mine on 31 December 2015</b>			
<b>Valuation Methodology</b>	<b>Preferred Value ZAR million</b>	<b>High Value ZAR million</b>	<b>Low Value ZAR million</b>
<b>Discounted Cashflow excluding underground production</b>	10,655	13,547	6,018

## 15 Risk Analysis

### 15.1 Introduction

The risk analysis presented here is not a formal risk assessment. Coffey prefers to highlight areas of risk and the potential impacts of that risk that would normally be expected in similar operations. The focus is on highlighting areas of risk that are of relevance to project financiers or to potential project purchasers or investors.

In this report the risk analysis determines the level of risk which is classified from minor to major, as presented in Table 15.1\_1.

Table 15.1_1 Definitions of the Levels of Risk	
Level of Risk	Explanation
<b>Major Risk</b>	The factor poses an immediate danger of a failure, which if uncorrected, will have a material effect (>15% to 20%) on the project cash flow and performance and could potentially lead to project failure.
<b>Moderate Risk</b>	The factor, if uncorrected, could have a significant effect (10% to 15% or 20%) on the project cash flow and performance unless mitigated by some corrective action.
<b>Minor Risk</b>	the factor, if uncorrected, will have little or no effect (<10%) on project cash flow and performance.

The likelihood of a risk must also be considered as is the likelihood that within a seven year period, the event may occur and is classified as likely (will probably occur), possible (may occur) or unlikely (unlikely to occur).

The impact of a risk and its likelihood are combined into an overall risk assessment as presented in Table 15.1\_2.

Table 15.1_2 Overall Risk Assessment Matrix			
Likelihood of Risk (within a 7 year period)	Level of Risk		
	Minor	Moderate	Major
<b>Likely</b>	Medium	High	High
<b>Possible</b>	Low	Medium	High
<b>Unlikely</b>	Low	Low	Medium

## 15.2 Risk Summary

Based on the sections above, a summary of the perceived risks to the Tharisa Mine are presented in Table 15.2\_1.

<b>Table 15.2_1 Overall Risk Assessment Analysis</b>			
<b>Hazard/Risk Issue</b>	<b>Likelihood</b>	<b>Consequence Rating</b>	<b>Overall Risk Assessment</b>
<b><u>Geology and Mineral Resources</u></b>			
Significant Variance in Resource Tonnage	Unlikely	Moderate	Low
Resource Grade Variation	Unlikely	Moderate	Low
Significant Variance in Geological losses	Unlikely	Minor	Low
Western Extend of Mineral Resource	Possible	Minor	Low
<b><u>Mining Engineering</u></b>			
Tonnage variation	Possible	Moderate	Medium
Grade Variation	Possible	Moderate	Medium
Open Pit Mining Method	Unlikely	Minor	Low
Production Schedule	Unlikely	Moderate	Low
Highwall Collapse	Possible	Moderate	Medium
Underground Mining Method	Unlikely	Minor	Low
Negative change in Opex	Possible	Moderate	Medium
Negative change in Capex	Possible	Moderate	Medium
<b><u>Metallurgy and Processing</u></b>			
RoM Grade Variation – Feed to Plant	Possible	Moderate	Medium
Recoveries	Possible	Moderate	Low
Negative change in Opex	Possible	Moderate	Low
Process Technology / Complexity	Unlikely	Moderate	Low
Negative change in Capex	Unlikely	Moderate	Low
Ore response to processing	Unlikely	Minor	Low
<b><u>Infrastructural</u></b>			
Water Supply	Possible	Moderate to Minor	Medium to Low
Power Supply	Unlikely	Moderate	Low
<b><u>Environmental*</u></b>			
Potential for ground and surface water contamination	Possible	Moderate to Minor	Medium to Low
Relocation of informal settlement and related social issues	Possible	Moderate to Minor	Medium to Low
Potential for air pollution	Possible	Moderate to Minor	Medium to Low
Blasting and noise disturbance of surrounding land users	Possible	Minor	Low
Soil and biodiversity management	Possible	Minor	Low
Traffic impacts	Possible	Minor	Low
Disturbance of archaeological resources	Possible	Minor	Low
Rehabilitation and closure planning	Possible	Moderate to Minor	Medium to Low
Ongoing permitting	Unlikely	Minor	Low
TSF and waste rock dump rehabilitation	Unlikely	Low	Low
<b><u>Manpower and Management</u></b>			
Lack of Skills availability	Possible	Moderate	Medium
Inability to retain skills	Unlikely	Moderate	Medium
HIV	Possible	Minor	Low
Labour costs	Possible	Moderate	Medium
Disruptions to business	Possible	Moderate	Medium
Industrial action	Possible	Moderate	Medium
Safety/DMR	Possible	Moderate	Medium
<b><u>Infrastructure</u></b>			
Water Supply	Possible	Moderate	Medium
Power Supply	Unlikely	Moderate	Medium

\* Environmental risks shown above reflects the managed scenario which assumes successful implementation of the EMP commitments

Based on the above risk summary, Coffey considers the Tharisa Mine to have an overall **Low to Medium Risk**.

### 15.3 Geology and Mineral Resources

The level of technical risk is defined as the likelihood of variation of resource tonnage and/or grade from the stated values.

The geological model developed by Coffey and the application to the mineral resource estimate.

- The geological model developed presents a tabular deposit with some dykes and faults crossing the property. However smaller scale faulting (<10m throw) must be considered. No potholes have been delineated although it is considered likely that some potholing of the MG Chromitite Layers has occurred. As these Chromitite Layers are not mined extensively elsewhere, it is difficult to assess the degree of potholing or the presence of small scale faulting. The application of a 7.5% - 15% geological loss is made based on knowledge of the Bushveld Complex and is intended to represent those areas where the MG Chromitite Layer is replaced by mafic pegmatites, intersected by faults or dykes, or disrupted by potholes.

The interpretation of the position of the most westerly point where a mineral resource can be declared is subjective.

- The interpreted position is considered to represent the likely extent of the deposit that can realistically be exploited based on the current data available, the current understanding of the geology and the macro economic understanding. It is possible that this boundary could move. It is considered more likely to move westward, effectively increasing the mineral resource base.

The overall geological risk is therefore considered **Low**.

### 15.4 Mining

Coffey Mining associates a **medium risk** rating for the mining operation due to a concern relating to the amount of dilution which may report to the RoM ore and into the processing facility. Tharisa must place special emphasis on grade control and mining the width of the ore zone with limited dilution.

Any delay in the relocation of the roads, overhead power lines and water canals in the east pit area poses a scheduling risk. Reasonable time allocations were made in the LoM schedule for these relocations. Sufficient flexibility exists in the mining plan to reschedule activities to maintain the planned build-up profile.

The planned construction of a dam from the pit void at the end of the economic life of the operation poses a risk since the required regulatory approval must still be obtained. This application is in process and it is reasonable to assume that it will be approved.

### 15.5 Geotechnical Engineering

Geotechnical open pit slope and underground bord and pillar designs have been carried out using a probability based design, numerical modelling and dynamic wedge analysis, developed from detailed rock mass and rock material data coupled with structural data collected, which provide for greater certainty in the geotechnical design that is at an acceptable level of confidence for a mine of this size.

Coffey associates a **Low Risk** with the geotechnical engineering.

### 15.6 Metallurgy and Processing

The process utilised at Tharisa Minerals are conventional crushing, milling, spiral gravity concentration and flotation. The auxiliary processes used like thickening, reagent make-up, concentrate dewatering and concentrate filtration are well known processes and poses a low operational risk.

The processing plant have been in operation as a 400,000 tpm unit since December 2012 and the process has been proven to be successful in recovering Chromite concentrate and PGM concentrate from the Middle Group (MG) Chromitite layers of the Bushveld Complex.

The main risks associated with the metallurgy and processing are the following:

- RoM feed variation

The chromite feed grade has a significant impact on the chromite recovery and yield. Similarly the PGM recovery and concentrate grade is influenced by the PGM feed grade into the plant. From the available production data the chromite feed grade seems to be variable day to day and has been declining since the plant commissioning. This variable and possible lower than design chromite feed grade can impact negatively on the production performance of the processing facility. The variable feed grade has been identified as a medium risk due to the possible influence on the production performance.

- Chromite and PGM recovery

From the production data the PGM recovery has been following an upward trend since the plant commissioning. This is due to projects implemented in the process plant to improve recovery as well as an increase of fresh non-oxidised ore ratio in the plant feed. The chromite recovery was fairly stable with a slight decrease from 2014 to 2015. The budget for the chromite recovery going forward indicates a steep increase of chromite recovery from 58-59% to 73-74% from 2015 to 2016. This is with similar chromite feed grade. Although a large process improvement drive is currently underway

the realization of the high recoveries at a similar feed grade is identified as a medium risk.

- Opex cost increase

The Tharisa Minerals operating unit cost per feed tonne has been maintained stable between 2014 and 2015. The budget for 2016 indicates a significant increase in the total operating cost (cost including overheads). Increased operating cost can have a negative impact on the long term viability of the operation and has therefore being indicated as a medium risk.

- Other process risks

Less significant or low process risks includes the increasing complexity of the spiral circuits as the primary recovery method used for chromite recovery. This increased circuit complexity requires detailed knowledge of the circuit and can trigger a skill shortage of operators to ensure good production performance if adequate training is not supplied.

The process technology employed has been identified as a low risk as the process has been proven to be successfully able to treat the MG ore.

The plant capital cost has been identified as a low risk as this is managed well and a system is in place to prioritise the capital spent to ensure the capital cost does not increase above normal requirements.

The risk review of the processing facility indicates that the risk associated with metallurgy and processing is deemed to be **Medium Risk**.

## 15.7 Infrastructure

Tharisa Minerals has obtained commitments to water and power that are suitable for the operations of the mine. According to the mine water consultant, there is adequate water to take the mine up to 400,000 tpm and maintain it at steady state production. This is in agreement with the water licence and water balance, however there may be a risk of water shortages during extreme dry times. If the amendment of the water licence is approved, allowing use of agricultural water, in the risk during extreme dry seasons will be reduced and allow the mine to function as required. Tharisa Minerals has finalised the arrangements with Eskom for provision of power as required, ensuring sufficient power for steady production.

Coffey associates a **Medium to Low Risk** rating for infrastructure.

## 15.8 Environmental

There are a number of environmental issues material to the future of the Tharisa Mine. The more significant issues are:

- Potential for ground and surface water contamination and reduction of water resources available to surrounding users;
- Potential for air pollution;
- Blasting and noise disturbance of surrounding land users;
- Soil and biodiversity management;
- Traffic impacts;
- Disturbance of archaeological resources;
- Rehabilitation and closure planning; and
- On going permitting.

The outcome of both the 2008 and 2014 EIA/EMP processes determined that all potential impacts of the mine can be managed to a satisfactory level, provided that the management measures detailed in the EIA/EMP reports are adhered to.

Coffey is of the opinion that a **Medium Risk** is associated with the environmental issues based on the managed scenario which assumes successful implementation of the EMP commitments.

## 15.9 Manpower and Management

The mining industry has a wealth of experienced workers immediately available. However, the population of skilled professionals/workers is aging and so suitable individuals will need to be identified and recruited and where there are skills or experience gaps, suitable training programmes implemented to provide the necessary skilling.

Coffey considers that there is **Low to Medium Risk** in terms of the available skills and experience and of the projected productivity on the mine.

### 15.10 Risk Summary

Based on the sections above, a summary of the perceived risks to the Tharisa Mine are presented in Table 15.10\_1.

<b>Table 15.10_1</b>	
<b>Tharisa Mine Technical Risk Summary</b>	
<b>Item</b>	<b>Relative Risk</b>
Geology and Mineral Resources	Low
Mining Engineering and Mineral Reserves	Low to Medium
Geotechnical Engineering	Low
Metallurgy and Processing	Medium
Infrastructure	Low to Medium
Environmental	Medium
Manpower and Management	Low to Medium

Based on the above risk summary, Coffey considers the Tharisa Mine to have an overall **Low to Medium Risk**.

## 16 Glossary of Definitions and Technical Terms

Term	Description
Au	Chemical symbol for Gold
Ir	Chemical symbol for Iridium
Os	Chemical symbol for Osmium
Pd	Chemical symbol for Palladium
Pt	Chemical symbol for Platinum
Rh	Chemical symbol for Rhodium
Ru	Chemical symbol for Ruthenium
3PGE+Au	Pt, Pd, Rh and Au
4E	Pt, Pd, Rh and Au
5PGE+Au	Pt, Pd, Rh, Ru, Ir and Au
6PGE+Au	Pt, Pd, Rh, Ru, Ir, Os and Au
7E	Pt, Pd, Rh, Ru, Ir, Os and Au
aeromagnetic survey	A geophysical survey method to measure the strength of the earth magnetic field using a magnetometer aboard or towed behind an aircraft.
AIDS	Acquired immune deficiency syndrome or acquired immunodeficiency syndrome (AIDS) is a disease of the human immune system caused by the human immunodeficiency virus (HIV)
anorthosite	A rock comprised of largely feldspar minerals and minor mafic iron-magnesium minerals
Arxo	Arxo Logistics (Pty) Ltd, a company registered and incorporated in South Africa. Arxo is the appointed logistics contractor for the Tharisa Mine.
Bushveld Complex	A major intrusive igneous body in the northern part of South Africa, that has undergone remarkable magmatic differentiation. It is by far the largest layered intrusion known. The Bushveld Complex is a leading source of chromium and PGMs.
Chromitite	A rock composed essentially of chromite, that typically occurs as layers or irregular masses exclusively associated with magmatic complexes. The bulk of the world's exploitable chromitite occurs almost exclusively in layered complexes.
Chromitite layers	Thick accumulations of chromite grains to form almost monomineralic bands or layers. Chromitite Layers are typically greater than 30cm thick..
chromium	The element chromium (Cr) is classified as a metal and is situated between other metals such as vanadium (V), manganese (Mn) and molybdenum (Mo) in the Periodic Chart of Elements.
Chromite	a hard, black, refractory chromium-spinel mineral consisting of varying proportions of the oxides of iron chromium, aluminium and magnesium.
Chrome mass yield	Chrome mass yield is calculated by dividing the chrome concentrate tonnes by the total feed tonnes and expressed as a percentage
Coffey	Coffey Mining SA (Pty) Ltd, a company registered and incorporated in South Africa.
Composite	A weighted accumulation of the intersection value to a specific length or over a specific stratigraphic unit
CPI	Consumer Price Index
MER	Mineral Expert Report
Critical Zone	A stratigraphic zone within the Bushveld Complex where a wide variety of different igneous rock types occur which host the bulk of the significant PGM and chrome mineralization i.e. Merensky Reef and UG2 Chromitite Layer.
DME	Department of Minerals and Energy – in 2009 the DME was split into the Department of Mineral Resources (DMR) and the Department of Energy (DoE)
DMR	Department of Mineral Resources
DTM	Digital Terrain Model
dyke	A wall-like body of igneous rock that is intruded (usually vertically) into the surrounding rock in such a way that it cuts across the stratification (layering) of this rock.

Term	Description
DWA	Department of Water Affairs
Eskom	South African electrical utility company
fault	A fractured surface in the earth's crust along which rocks have moved relative to each other.
Feasibility Study	The original feasibility study conducted by Coffey on the Tharisa Mine, which was concluded in October 2008
EIA	Environmental Impact Assessment
EMP	Environmental Management Programme
EPCM	Engineering, Procurement and Construction Management
FOB	Free on board
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
geostatistics	A branch of statistics focusing on the understanding of spatial data
GPS	Global Positioning system
HDSA	Historically Disadvantaged South Africans
highwall	The unexcavated face of exposed overburden of an opencast mine
HIV	Human immunodeficiency virus
IAPs	Interested and Affected Parties
ICP Fusion D/OES	Analytical technique to measure the concentration of trace elements
Indicated Mineral Resource (SAMREC)	An 'Indicated Mineral Resource' is that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on information from exploration, sampling and testing of material gathered from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological or grade continuity but are spaced closely enough for continuity to be assumed.
Inferred Mineral Resource (SAMREC)	An 'Inferred Mineral Resource' is that part of a Mineral Resource for which volume or tonnage, grade and mineral content can be estimated with only a low level of confidence. It is inferred from geological evidence and sampling and assumed but not verified geologically or through analysis of grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that may be limited in scope or of uncertain quality and reliability.
IRUP	Iron-Rich Ultramafic Pegmatite – a type of rock which typically intruded into the Rustenburg Layered Suite of the Bushveld Complex, generally after the main mineralized layers were formed. IRUPs can replace the normal stratigraphic sequence over extensive areas, and can have a greater or lesser effect on the mineralized layers. They occur as pipes, dykes and sheets.
JSE	Johannesburg Stock Exchange South Africa. JSE Limited, a licensed exchange under the Securities Services Act, 2004
Farm 342JQ	The Farm 342JQ, registration division JQ, located in the Bojanala Municipal District in the North West Province, South Africa.
LG Chromitite Layer	Lower Group Chromitite Layer
LSE	London Stock Exchange
Lower Zone	Stratigraphic unit of the Bushveld Complex
mafic pegmatites	a suite of coarse-grained rocks that form discordant bodies within the layered sequence of the Bushveld Complex.
mamsl	metres above mean sea level
MCC	MCC (Pty) Ltd, a company registered and incorporated in South Africa. MCC is the appointed open pit mining contractor at the Tharisa Mine.
MDM Engineering	MDM Engineering (Pty) Ltd, a company registered and incorporated in South Africa. MDM is the appointed engineering contractor responsible for the construction of the new 300,000 tonne per month concentrator at the Tharisa Mine.
Measured Mineral	A 'Measured Mineral Resource' is that part of a Mineral Resource for which tonnage, densities,

Term	Description
Resource (SAMREC)	shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable information from exploration, sampling and testing of material from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity.
Metago	Metago Environmental Engineers (Pty) Ltd (now trading as SLR Consulting (Africa) (Proprietary) Limited), a company registered and incorporated in South Africa.
Merensky Reef	A pyroxenitic tabular layer or band within the Bushveld Complex containing economic concentrations of PGMs. The Merensky Reef is one of the principle PGM ore bodies within the Bushveld Complex and is mined extensively.
MG	Middle Group with reference to MG Chromitite Layers
MG Chromitite Layers	Group of five chromitite layers that are known in the lower and upper Critical Zone of the Bushveld Complex
MG0 Chromitite Layer	Specific chromitite layer contained within the MG Chromitite Layer package
MG1 Chromitite Layer	Specific chromitite layer contained within the MG Chromitite Layer package
MG2 Chromitite Layer	Specific chromitite layer contained within the MG Chromitite Layer package
MG3 Chromitite Layer	Specific chromitite layer contained within the MG Chromitite Layer package
MG4 Chromitite Layer	Specific chromitite layer contained within the MG Chromitite Layer package
MG4A Chromitite Layer	Specific chromitite layer contained within the MG Chromitite Layer package
MHSA	Mine Health and Safety Act, Act 29 of 1996
Mineral Expert Report	A Mineral Expert Report (MER) is a Techno-Economic Report. It represents the opinions on a deposit of a registered professional, independent of the client and its subsidiaries. By reason of his/her education, professional associations and past relevant work experience, the person is deemed as qualified to form an opinion of the deposit.
Mineral Reserve (SAMREC)	A 'Mineral Reserve' is the economically mineable material derived from a Measured or Indicated Mineral Resource or both. It includes diluting and contaminating materials and allows for losses that are expected to occur when the material is mined. Appropriate assessments to a minimum of a Pre-Feasibility Study for a project and a Life of Mine Plan for an operation must have been completed, including consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors (the modifying factors). Such modifying factors must be disclosed.
Mineral Resources (SAMREC)	A 'Mineral Resource' is a concentration or occurrence of material of economic interest in or on the earth's crust in such form, quality and quantity that there are reasonable and realistic prospects for eventual economic extraction. The location, quantity, grade, continuity and other geological characteristics of a Mineral Resource are known, or estimated from specific geological evidence, sampling and knowledge interpreted from an appropriately constrained and portrayed geological model. Mineral Resources are subdivided, and must be so reported, in order of increasing confidence in respect of geoscientific evidence, into Inferred, Indicated or Measured categories
Mining Right	A mining right is the permission granted by the State through the Department of Mineral Resources which gives you the authority to mine minerals within a certain area. A mining right may not exceed a period of 30 years.
MPRDA	The Mineral and Petroleum Resources Development Act 28 of 2002 of South Africa
MRMR	mining rock mass rating system
Mt	million tonnes
MVA	megavolt – ampere – a measure of required electrical power
NiS/MS	Specialist analytical technique used to determine the concentration of PGMs
norite	A coarse-grained, basic igneous rock consisting of essential plagioclase feldspar, orthopyroxene (hypersthene or bronzite), and clinopyroxene (augite), often with accessory ilmenite.
oz	fine ounce or troy ounce (31.1035g), used as a measure for the mass of precious metals
PGM	Platinum Group Metals, being platinum, palladium, rhodium, ruthenium, iridium, osmium, and, for the purposes of this report and in accordance with industry practice, gold.
pillar	Natural underground support system using unmined parts of the ore body
potholes	A geological feature frequently occurring in the Bushveld Complex in which one layer of the

Term	Description
	Bushveld Complex transgresses its footwall and forms a basin-shaped depression.
Pr.Sci.Nat.	Professional Natural Scientist in accordance with the rules of the South African Council for Natural Scientific Professionals which identifies him/her as a highly skilled professional with technical knowledge and competence.
Probable Mineral Reserve (SAMREC)	A 'Probable Mineral Reserve' is the economically mineable material derived from a Measured or Indicated Mineral Resource or both. It is estimated with a lower level of confidence than a Proved Mineral Reserve. It includes diluting and contaminating materials and allows for losses that are expected to occur when the material is mined. Appropriate assessments to a minimum of a Pre-Feasibility Study for a project or a Life of Mine Plan for an operation must have been carried out, including consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. Such modifying factors must be disclosed.
Prospecting Right	A prospecting right is a permit which allows a company or an individual to survey or investigate an area of land for the purpose of identifying an actual or probable mineral deposit.
Proved Mineral Reserve (SAMREC)	A 'Proved Mineral Reserve' is the economically mineable material derived from a Measured Mineral Resource. It is estimated with a high level of confidence. It includes diluting and contaminating materials and allows for losses that are expected to occur when the material is mined. Appropriate assessments to a minimum of a Pre-Feasibility Study for a project or a Life of Mine Plan for an operation must have been carried out, including consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. Such modifying factors must be disclosed.
Pyroxenite	refers to a relatively uncommon dark-coloured rock consisting chiefly of pyroxene; pyroxene is a type of rock containing sodium, calcium, magnesium, iron, titanium and 215luminium combined with oxygen.
QA/QC programme	A programme of testing, used particularly for assays, to assist to confirm that the data used in a mineral resource estimation is reliable and comparable
RMR	The rock mass rating (RMR) system is a geomechanical classification system for rocks, developed by Z. T. Bieniawski between 1972 and 1973. <sup>[1]</sup>
RoM	Run of Mine
Rooikoppies 297JQ	The farm Rooikoppies 297, registration division JQ, located in the Bojanala Municipal District in the North West Province, South Africa.
Royalty Act	Mineral and Petroleum Resources Royalty Act, Act 28 of 2008.
RQD	Rock quality designation which is a description using geotechnical engineering principles which that determines the quality of rock that was recovered when taking a core sample.
SAG mill	Semi autogenous grinding mill
SAMREC	The South African Code for the Reporting of Exploration Results, Mineral Resources And Mineral Reserves (The SAMREC Code) (2007 Edition as amended July 2009) (prepared by The South African Mineral Resource Committee (SAMREC) Working Group)
Sponsor	Macquarie Capital Securities Limited
tailings	that portion of the ore from which most of the valuable material has been removed by concentration and which is therefore low in value and rejected.
Tharisa	Tharisa plc formerly Tharisa Limited, a company registered and incorporated in the Republic of Cyprus.
Tharisa Mine	The existing chrome and PGM mine and processing operations, owned by Tharisa Minerals, located in the Bushveld Complex, which is situated in the Magisterial District of Rustenburg, North West Province, South Africa
Tharisa Minerals	Tharisa Minerals (Pty) Ltd, a company registered and incorporated in the Republic of South Africa, the developer and operator of the Tharisa Mine, held 74% by Tharisa.
The Company	Tharisa plc, formerly Tharisa Limited, a company registered and incorporated in the Republic of Cyprus.
tpa	tonnes per annum
tph	tonnes per hour
tpm	tonnes per month
TSF	Tailings Storage Facility

Term	Description
UCS	Uniaxial Compressive strength
UG2 Chromitite Layer	Upper Group 2 Chromitite Layer of the Bushveld Complex that is well known and typically contains PGMs in a concentration that is sufficient for economic extraction
Uniaxial Compressive Strength	Measure of the capacity of a material to withstand pushing forces
Ukwazi	Ukwazi Mining Solutions (Pty) Ltd, a company registered and incorporated in South Africa. Ukwazi is the appointed mine design and scheduling contractor at the Tharisa Mine.
US\$	United States Dollar (currency)
variogram	The variogram is the key mathematical and graphical function in geostatistics as it is used to describe or fit a model of the spatial correlation of the observed phenomenon.
VAT	Value added tax
WTO	World Trade Organisation
ZAR	South African Rand (currency)

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**18 Date and Signature Page**

This report titled Independent Mineral Expert Report entitled "**Tharisa Chrome and PGM Mine, South Africa Mineral Expert Report**" with an effective date of 31 December 2015 was prepared on behalf of Tharisa plc by Kenneth Lomborg, who takes overall responsibility for this report.

I have some 28 years experience in the minerals industry (especially platinum and gold). I have been involved in exploration and mine geology and have had the privilege of assisting in bringing a mine to full production. My expertise is especially in project management, mineral reserve and resource estimation.

I have undertaken mineral resource and reserve estimations and reviews for platinum, gold, copper, uranium and fluorite projects. I have assisted with the reviews or estimation of diamond and coal projects and assisted or compiled Competent Persons Reports/NI 43-101 for various projects that have been listed on the TSX, JSE and AIM stock exchanges

I am also Chairman of the SAMREC Working Group which is responsible for the SAMREC Code and I represent SAMREC on the CRIRSCO Executive.

I have practiced my profession continuously since 1985. I have over 5 years of relevant experience having completed mineral resource estimations on various properties located on the Bushveld Complex hosting Magmatic Layered Intrusive style mineralization.

I consider the Executive Summary to be a true reflection of this Competent Persons Report.

Dated at Johannesburg, this 31 December 2015

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**Mr Kenneth Lomborg**

Senior Principal

B.Sc. (Hons) Geology, B.Com., M.Eng.

(Pr.Sci.Nat. Membership No (400038/1))

604 Kudu Avenue, Allens Nek,

Roodepoort, Gauteng

The Competent Valuator for the purposes of this report is Johannes Jurgens Bornman. He is a registered Professional Engineer (Pr.Eng.) in terms of the Engineering Profession Act, 46 of 2000 (:the EPA") and is a "Competent Valuator" as defined in the SAMVAL Code 2008 as amended July 2009. He is also a Fellow of the SAIMM. He has 30 years' experience in hard and soft rock mining with more than 9 years experience in the valuation of platinum, chrome, gold, copper, coal, diamond, bauxite and uranium mines.

All the facts presented in this report are correct to the best knowledge of the Competent Valuator. This is a forward looking document and the analyses and conclusions are limited only by the reported forecasts and conditions. Neither Coffey, nor the Competent Valuator, has any material interest in Tharisa Mine, its Parent Companies, subsidiaries or projects. The work, and any other work done by the Competent Valuator for Tharisa, is strictly in return for professional fees. Payment for the work is not in any way dependent on the outcome of the work or on the success or otherwise of Tharisa's own business dealings. As such there is no conflict of interest in the Competent Valuator undertaking the independent mine valuation as contained in this document.

Johannes Jurgens Bornman is a full-time employee of Coffey and has sufficient experience which is relevant to the style of mineralization and type of mining under consideration and to the valuation which he is undertaking to qualify as a Competent Valuator as defined in the South African Code for the Reporting of Mineral Asset Valuation (The SAMVAL Code) of 2008 as amended July 2009. Hannes Bornman has visited the property under valuation and consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

I consider the Executive Summary to be a true reflection of this Competent Valuator's Report.

Dated at Johannesburg, this 31 December 2015.

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**Mr Johannes Jurgens Bornman**

Principal Mining Engineer

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