HASTINGS
Technology Metals Limited

29 January 2021

Hastings Technology Metals Limited

ABN 43 122 911 399

ASX Code: Shares - HAS

Address:

Level 8, Westralia Plaza
167 St Georges Terrace
Perth WA 6000

PO Box 6 Westralia Plaza
167 St Georges Terrace
Perth WA 6000

info@hastingstechmetals.com

www.hastingstechmetals.com

DECEMBER 2020 QUARTERLY REPORT

Yangibana's Mineral Resource Development

- Simon's Find drilling results confirm a major 2km long zone of economic mineralisation, significantly expanding the existing resource base.
- The Fraser's-Simon's Find-Bald Hill trend now forms an immense 8km-long corridor of rare earth mineralisation.
- Simon's Find confirmed to contain extremely high quantities of neodymium (Nd_2O_3) and praseodymium (Pr_6O_{11}) and, when combined, total 52% of the TREO (total rare earth oxides) values.

Yangibana's Project Development

- Focus on site optimisation designs including relocation of Tailings Storage Facility.
- Good progress with decision on hydrometallurgical plant site location and relevant agreements and approvals processes.
- Strong interest in commercial debt process as part of Yangibana project financing options lead managed by KPMG Corporate Finance.

Corporate

- Appointment of highly experienced mining executive Bruce McFadzean as a Non-executive Director.
- Appointment of Mr Matt Allen as Chief Financial Officer with effect from 1 February 2021.
- Hastings had $20 million in cash and equivalents as at December 31 2020.

Australia's next rare earths producer Hastings Technology Metals Ltd (**ASX: HAS**) ("**Hastings**" or the "**Company**") is pleased to report on exploration and development activities for the three-month period to December 31 2020. Most of the activity focused on the Company's world-class Yangibana Rare Earths Project ("**Yangibana**") in the Gascoyne region of Western Australia.

During the quarter under review, zero lost time injuries were recorded with the Company-wide lost time injury (LTI) free status being 880 days.

Yangibana's Mineral Resource Development

During the quarter, Hastings successfully completed the 2020 Exploration Drilling program at Yangibana and the remaining personnel on site have since been demobilised. The drilling program was successful in respect to health and safety, with no reportable incidents occurring.

The program delineated approximately 2km of mineralisation, forming the Simon's Find resource area through the completion of close-spaced reverse circulation (RC) drilling.

Drilling targeting ironstone rocks hosting rare earths returned consistent grades and widths of mineralisation over a 2km-long zone (see Figure 1 below), which remains open along strike and down dip. Results have also confirmed that Simon's Find includes exceptionally high quantities of neodymium and praseodymium, widely recognised as the two most important rare earths elements required over the next decades to satisfy global demand for electric vehicles, renewable energy projects and industrial automation.

Assays returned from drilling at Simon's Find[1] included high-grade intersections at shallow depths, including:

- 2m @ 2.78% TREO from 46m
- 6m @ 1.20% TREO from 43m,
    - including 4m @ 1.61% TREO
- 4m @ 1.21% TREO from 46m,
- 15m @ 0.72% TREO from 37m
    - including 6m @ 1.11% TREO
- 2m @ 1.38% TREO from 67m,
- 7m @ 0.89% TREO from 31m,
    - including 2m @ 1.76% TREO
- 3m @ 1.40% TREO from 11m
- 6m @ 0.75% TREO from 39m,
    - including 2m @ 1.51% TREO

[1] See ASX announcement 16 November 2020

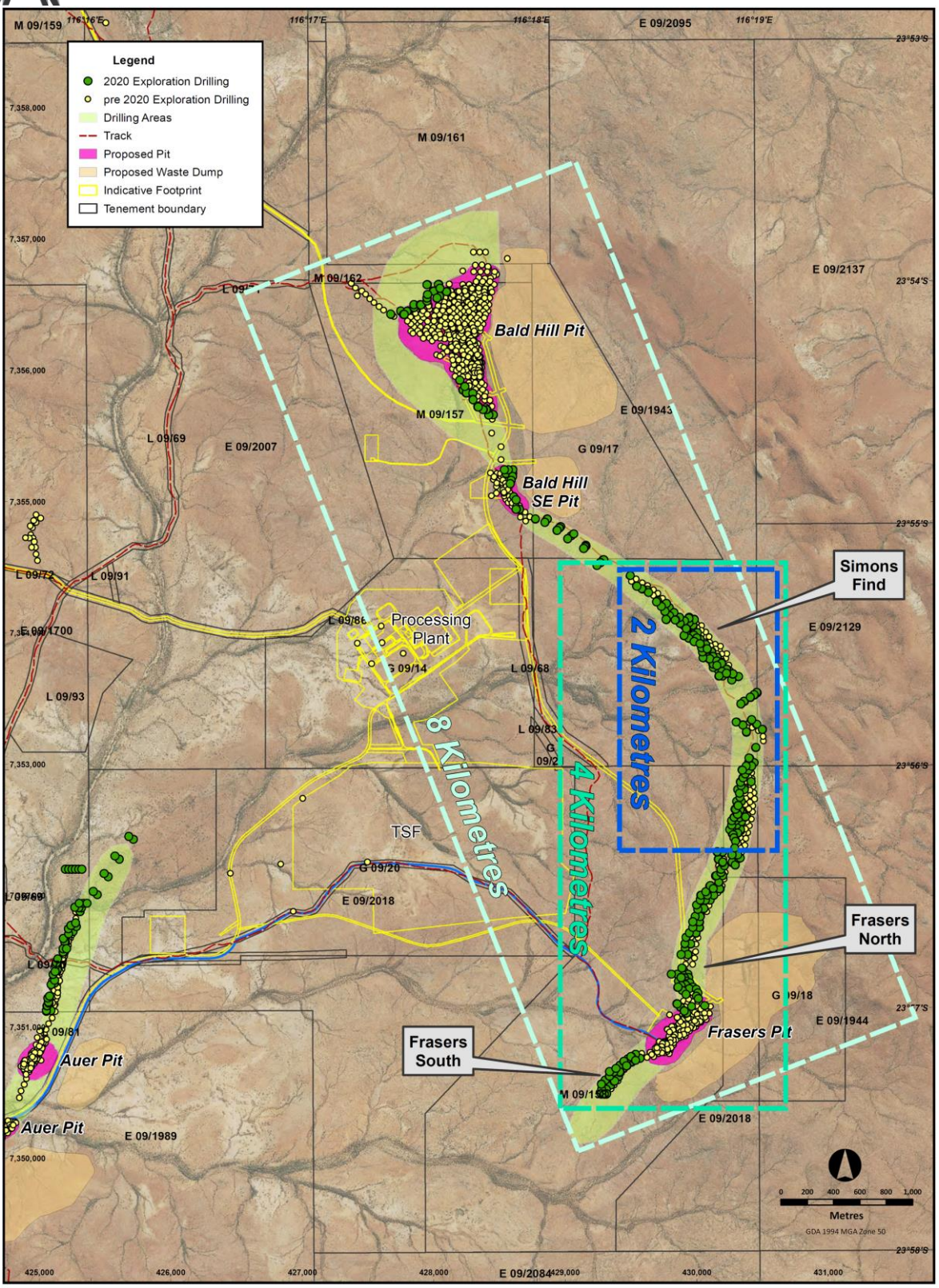

Figure 1: The 8km-long corridor of confirmed rare earths mineralisation, including the newly defined 2km-long Simon's Find zone.

The ratio of neodymium and praseodymium (together, "**NdPr**") at Simon's Find represents approximately 52% of the total rare earths content. This is at least 25% higher than existing results from the nearby Bald Hill and Frasers deposits, which have industry-high NdPr:TREO ratios of approximately 40-41% of total rare earths, to further underpin Yangibana's world-class geological advantage.

A NdPr:TREO ratio of 40-41% is widely acknowledged as world leading when compared to other known rare earths deposits, which typically have ratios in the 15-25% range.

Simon's Find is located close to the site of Yangibana's proposed processing plant. The nature of Simon's Find's softer geological host rocks means this deposit is expected to play an important role during the production start-up phase of Yangibana.

Hastings has now defined a single, largely coherent zone of mineralisation commencing at Fraser's South and finishing at Bald Hill (the largest of Yangibana's rare earths deposits) that is approximately 8km in length (see Figure 1 above).

Substantial potential exists for continued exploration success throughout this zone, which has demonstrated significant capacity to host rare earths, while also opening up enormous opportunities for mineral resource expansions and extensions to Yangibana's mine life within close proximity of the proposed processing plant location.

Based on the favourable outcomes of the drilling program, Hastings has quickly advanced land tenure applications for mining leases and general-purpose leases to accommodate pit expansions and additional waste rock landforms (Yangibana Expansion 1). Hastings referred the Yangibana Expansion 1 project to the Western Australian Environmental Protection Authority for assessment under Part IV of the *Environmental Protection Act 1986*. This will enable the mine schedule to be optimised for the operations phase of Yangibana.

Yangibana Project Development

Following the decoupling of the beneficiation plant from the Hydrometallurgy plant, it was apparent that there are strategic and operational benefits to relocate the tailings storage facility (TSF) and the accommodation camp closer to the beneficiation plant. Accordingly, design and engineering progressed on multiple work fronts to continue to support the process plant decoupling strategy.

At Yangibana, the parameters for the site optimisation review are now largely defined and work will now progress at a detailed level.

This includes work in the following areas:

- TSF relocation – conceptual layouts were completed in the quarter for the revised location. Detailed work has started with the development of a geotechnical program to inform final designs.
- Beneficiation plant relocation – site layouts for the revised location have been developed by DRA. The new location has several benefits including reduced haulage distances to the ROM pad and cheaper construction costs by moving off outcropping granites.

- Camp relocation – a conceptual site layout has been completed and reviewed. Next steps involve detailed engineering.
- Shire roads – a consultant has been engaged to undertake a road quality assessment of the transport route from site to the North West Coastal Highway. The assessment will provide the base level detail for road access agreement discussions.
- Access road realignment – a revised alignment has been approved to progress to the detailed engineering phase. Final estimates for this work are being reviewed.
- Airstrip relocation – aerodrome engineering group Tonkin has been engaged to undertake an analysis of the two new location options along with associated engineering.
- Information and communications technology – internet rack space at the Winning Pool exchange was secured. The Winning Pool link, via a series of overland towers, will provide the data and communications requirements for the Yangibana hub.
- Mining OPEX pricing – to support the impending Mineral Resource and Reserve updates in the March 2021 Quarter, a request for updated pricing from local mining contractors is being compiled with a target to receive quotations due back during the current quarter.

Land tenure applications for proposed site layout revisions have been submitted to the Western Australian Department of Mines, Industry Regulation and Safety.

In relation to the hydrometallurgical relocation study, work progressed on a suitable site selection, required services and associated engineered packages and included:

- Site selection – discussions continue with DevelopmentWA and the Western Australian Department of Jobs, Tourism, Science and Innovation (JTSI) around two possible locations – Onslow and Port Hedland – where conditional approval has been granted.
- Site layouts for the options have been developed and will be refined when a final location is selected. This includes work undertaken by Knight Piesold (KP) for the initial hydromet evaporation pond sizing and conceptual design work.
- Water – discussions continue with Water Corporation around access to a suitable water supply. Water is available as either a direct potable supply or from paleo aquifers, which require further reverse osmosis treatment to upgrade the water to a quality suitable for the hydromet plant.

A baseline radiation survey was conducted at a site just outside of Onslow, one of two being considered by Hastings for the location of Yangibana's hydrometallurgy plant. Results received indicated normal background levels across the location. This survey forms part of the overall radiation impact assessment. JTSI has given the green light to progressing approvals and allowing other investigative studies at Onslow to proceed.

Metallurgy

Hastings continued to make metallurgical improvements with its continuous research program. This enabled the Company to gain further understanding of flotation chemistry by investigating the effect of soluble gypsum and saponification of collector on reagents consumption and flotation performance.

Flotation Cells

Progress continued on the rougher flotation and cleaner test work. Initial results were higher in both rare earth oxides (REO) grade and recovery compared with the benchmark adopted in the Definitive Feasibility Study (DFS). The test work is ongoing and targeting to be completed in the March 2021 Quarter.

Reserve Upgrading

During the quarter Hastings completed test work with the first group of 11 variability samples from Simon's Find, a key component to developing an Ore Reserve estimate. These 11 samples delivered good selectivity and high upgrading on rare earth minerals with fast kinetics and promising REO recovery. The test work is ongoing and targeting to complete in the March 2021 Quarter.

Ore Sorting

The Company completed the development of process design criteria and collected variability samples from the 2020 exploration drilling program. Sample preparation is underway and the test work is targeted for completion during this quarter.

Acid Bake

Several acid bake/leach tests were completed with an optimised temperature profile, achieving more than 98% leach recovery – a significant improvement compared to the baseline of 94% adopted in the DFS.

Offtake

Negotiations on further long-term (10 years or more) offtake contracts with interested high-calibre parties slowed during the quarter, in part because of the severity of the COVID-19 situation including renewed lockdowns across Europe and in Germany. Nonetheless, negotiations for an offtake contract with Thyssenkrupp Raw Materials, a German raw materials trading company, are ongoing and targeted for signing in coming months. Two other offtake contracts, with globally recognised names, are well advanced and contracts undergoing internal legal review at the respective organisations.

With our stated ambition to become the next Australian rare earth producer to come to market, Hastings has entertained discussions with potential customers in Japan and China where opportunities exist for the Company to widen its geographical customer base both in terms of offtake as well as for the spot market when in production.

The recent strength in NdPr prices comes at an opportune time for Hastings as it will flow through to the bottom line as separation costs by third parties (or Hastings' customers) are negotiated on a fixed-price basis. The Yangibana geological advantage, with its unique ore body that has one of the highest NdPr:TREO ratios in the world, is increasingly well understood by prospective offtake customers.

Project Finance

During the quarter under review, Hastings and its financial advisor KPMG Corporate Finance (**"**KPMG**"**) evaluated various commercial market borrower facilities and financing options in light of further reductions in global borrowing rates caused by the impact of the COVID-19 pandemic. KPMG conducted a market sounding exercise and engaged with leading project finance banks in Australia, Asia and Europe as well as specialist mining funds interested to commit debt funding to Hastings alongside the Northern Australia Infrastructure Facility (NAIF), Finland's Export Credit Agency (ECA) Finnvera and German untied loan guarantee scheme (UFK). Indicative offers were received from various commercial banks and funds to participate as senior and subordinated lenders to the Yangibana project. Accordingly, this has progressed to due diligence on the basis of the decoupled processing plant footprint, which is supplemental to the previous due diligence undertaken by NAIF and KfW-Ipex Bank, the German state bank.

Following completion of the 2020 exploration drilling program, a revised and extended mine schedule is being advanced with completion targeted by end of March 2021 Quarter. This new mine schedule will include an updated costs fix exercise. The purpose is to extend loan tenor, provide a more robust financial model and improve the Yangibana project's Net Present Value (NPV) and Internal Rate of Return (IRR). These revised financials and the additional long-term offtake contracts will influence the negotiations on the final terms for the debt package with lenders. Hastings is also considering various equity financing initiatives and opportunities that coincide with the debt financing package, targeted to close by middle of this calendar year. The recent strength in the Hastings share price has demonstrated long-term investor interest in the Company's stock as a sound investment in the global EV thematic.

Hastings remains focused on building on the fundamentals of the Yangibana project. Against the background of favourable EV thematics and a world-class leading NdPr:TREO ratio, the Company aims to secure an optimal debt/equity structure with the objective of delivering long-term value to all stakeholders.

Other Projects – Brockman

During the quarter the Company completed a Mineral Resource re-estimate to support the application and documentation required as part of the retention licence approval process for the Brockman Heavy Rare Earths Project ("**Brockman**"), near Halls Creek in the Kimberley region of Western Australia).

A new Mineral Resource estimate was required because previous Mineral Resources were prepared and first disclosed under JORC Code 2004 for the Brockman Main deposit. These estimates have not been updated since to comply with JORC Code 2012 on the basis that the information used to prepare these estimates had not materially changed since they were last reported (refer 8 September 2011 announcements SIGNIFICANT UPGRADE IN JORC RESOURCES AT HASTINGS RARE METAL – HEAVY RARE EARTH DEPOSIT and 29 January 2016 announcement DECEMBER 2015 QUARTERLY ACTIVITIES REPORT).

Inferred	M tonnes	TREO %	HREO %	NB_2O_5 %	TA_2O_5 %	Y_2O_3 %	ZrO_2 %
Total	41.6	0.20	0.17	0.35	0.02	0.11	0.86

Table 1. Updated JORC 2012 Brockman Mineral Resource. Lower cut-off grade is 700ppm Nb_2O_5.

The resource also hosts other valuable rare earths and metals including europium (Eu), gadolinium (Gd), terbium (Tb), dysprosium (Dy), holmium (Ho), erbium (Er), thulium (Tm), ytterbium (Yb), and lutetium (Lu).

For a detailed analysis see Sections 1, 2 & 3 of JORC 2012 tables hereunder.

Corporate

During the quarter under review, Hastings announced the appointment of Mr Bruce McFadzean to the board as a Non-executive Director. Mr McFadzean brings with him a wealth of mining sector development and operations experience. We are delighted someone of his calibre has agreed to join the Hastings board as the Company prepares to commence Yangibana's construction.

The Company has recently announced on 27 January 2021 the appointment of Mr Matt Allen as the Chief Financial Officer. Mr Allen is a qualified chartered accountant and finance professional with more than 25 years' experience in the resources sector. It marks an expansion of Hastings' senior leadership team as the Company finalises offtake, project financing and approvals processes for the world-class Yangibana Rare Earths Project in Western Australia's Gascoyne region. Hastings is targeting a start of construction in Q2 2021 and first production of mixed rare earths carbonate from 2023.

As at December 31 2020, Hastings had $20 million in cash and equivalents.

Salaries and fees paid to Directors during the quarter amounted to $227,000.

The Company spent $2.8 million on exploration during the quarter substantially related to the drilling programmes referred to above.

This announcement was authorised for release by the Company's Board of Directors.

For further information, please contact:

Charles Lew, Executive Chairman: +65 6220 9220
Andrew Reid, Chief Operations Officer: +61 432 740 975

For investor and media queries, please contact:

Peter Klinger, Cannings Purple: +61 411 251 540
Peter Kermode, Cannings Purple: +61 411 209 459

About Hastings Technology Metals Limited

Hastings Technology Metals Limited is positioned to become Australia's next pure rare earths producer and is advancing its flagship Yangibana Rare Earths Project in the Upper Gascoyne Region of Western Australia towards production. The proposed beneficiation and hydrometallurgy processing plant will treat rare earths deposits, predominantly monazite that host high neodymium and praseodymium contents, to produce a mixed rare earths carbonate that will be further refined into individual rare earth oxides at processing plants overseas.

Neodymium and praseodymium are vital components in the manufacture of permanent magnets, which are used in a wide and expanding range of advanced and high-tech products including electric vehicles, wind turbines, robotics and medical applications. Hastings aims to become the next significant producer of neodymium and praseodymium outside of China.

Hastings also operates the Brockman Heavy Rare Earths Project near Halls Creek in the Kimberley region of Western Australia. The deposits at Brockman contain high quantities of heavy rare earths, niobium pentoxide and zirconium oxide as well as rare metals tantalum, hafnium and gallium.

For further information on the Company and its projects visit www.hastingstechmetals.com

Competent Person Statements

The information in this announcement that relates to Exploration Results in relation to the Yangibana Project is based on information compiled by Mr. Andrew Reid BSc (Hons) MSc FAusIMM, a Competent Person, who is a Fellow of the Australian Institute of Mining ad Metallurgy. Mr. Reid is a full-time employee of the company and has sufficient experience that is relevant to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. The Qualified Person has verified the data disclosed in this release, including sampling, analytical and test data underlying the information contained in this release. Mr. Reid consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

The information in this announcement that relates to Mineral Resources is based on information compiled by David Princep. Mr Princep is an independent consultant to the Company and is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Princep has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this announcement and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code").

YANGIBANA PROJECT 31.12.2020	
All tenements are in Western Australia	
Gascoyne Metals Pty Ltd (100% subsidiary)	
Tenement	**Holder/s**
E09/2403	Gascoyne Metals Pty Ltd
E09/2404	Gascoyne Metals Pty Ltd
E09/1989	Gascoyne Metals Pty Ltd
E09/2007	Gascoyne Metals Pty Ltd
E09/2084	Gascoyne Metals Pty Ltd
E09/2086	Gascoyne Metals Pty Ltd
E09/2095	Gascoyne Metals Pty Ltd
E09/2129	Gascoyne Metals Pty Ltd
E09/2137	Gascoyne Metals Pty Ltd
E09/2334	Gascoyne Metals Pty Ltd
E09/2364	Gascoyne Metals Pty Ltd
G09/10	Gascoyne Metals Pty Ltd
G09/14	Gascoyne Metals Pty Ltd
G09/23 (application)	Gascoyne Metals Pty Ltd
G09/24 (application)	Gascoyne Metals Pty Ltd
G09/25 (application)	Gascoyne Metals Pty Ltd
L09/66	Gascoyne Metals Pty Ltd
L09/67	Gascoyne Metals Pty Ltd
L09/68	Gascoyne Metals Pty Ltd
L09/69	Gascoyne Metals Pty Ltd
L09/70	Gascoyne Metals Pty Ltd
L09/71	Gascoyne Metals Pty Ltd
L09/72	Gascoyne Metals Pty Ltd
L09/74	Gascoyne Metals Pty Ltd
L09/75	Gascoyne Metals Pty Ltd
L09/80	Gascoyne Metals Pty Ltd
L09/81	Gascoyne Metals Pty Ltd
L09/82	Gascoyne Metals Pty Ltd
L09/83	Gascoyne Metals Pty Ltd
L09/85	Gascoyne Metals Pty Ltd
L09/86	Gascoyne Metals Pty Ltd
L09/87	Gascoyne Metals Pty Ltd
L09/89	Gascoyne Metals Pty Ltd
L09/91	Gascoyne Metals Pty Ltd

Tenement	Holder/s
M09/157	Gascoyne Metals Pty Ltd
M09/160	Gascoyne Metals Pty Ltd
M09/164	Gascoyne Metals Pty Ltd
M09/165	Gascoyne Metals Pty Ltd
M09/177 (application)	Gascoyne Metals Pty Ltd
M09/179 (application)	Gascoyne Metals Pty Ltd
P09/482	Gascoyne Metals Pty Ltd
P09/489	Gascoyne Metals Pty Ltd

Gascoyne Metals Pty Ltd (70%) Joint Venture **All tenements are in Western Australia**	
E09/1703	Gascoyne Metals Pty Ltd (70%) Mojito Resources Limited (30%)
E09/1704	Gascoyne Metals Pty Ltd (70%) Mojito Resources Limited (30%)
E09/1705	Gascoyne Metals Pty Ltd (70%) Mojito Resources Limited (30%)
E09/1706	Gascoyne Metals Pty Ltd (70%) Mojito Resources Limited (30%)
E09/2296	Gascoyne Metals Pty Ltd (70%) Mojito Resources Limited (30%)
E09/2298	Gascoyne Metals Pty Ltd (70%) Mojito Resources Limited (30%)
E09/2333	Gascoyne Metals Pty Ltd (70%) Mojito Resources Limited (30%)
G09/11	Gascoyne Metals Pty Ltd (70%) Mojito Resources Limited (30%)
G09/13	Gascoyne Metals Pty Ltd (70%) Mojito Resources Limited (30%)
M09/159	Gascoyne Metals Pty Ltd (70%) Mojito Resources Limited (30%)
M09/161	Gascoyne Metals Pty Ltd (70%) Mojito Resources Limited (30%)
M09/163	Gascoyne Metals Pty Ltd (70%) Mojito Resources Limited (30%)

Yangibana Pty Ltd (100% subsidiary)	
All tenements are in Western Australia	
L09/93	Yangibana Pty Ltd
L09/95 (application)	Yangibana Pty Ltd
L09/96 (application)	Yangibana Pty Ltd
L09/97 (application)	Yangibana Pty Ltd
E09/1700	Yangibana Pty Ltd

Tenement	Holder/s
E09/1943	Yangibana Pty Ltd
E09/1944	Yangibana Pty Ltd
E09/2018	Yangibana Pty Ltd
G09/17	Yangibana Pty Ltd
G09/18	Yangibana Pty Ltd
G09/20	Yangibana Pty Ltd
G09/21	Yangibana Pty Ltd
G09/22 (application)	Yangibana Pty Ltd
G09/26 (application	Yangibana Pty Ltd
G09/27 (application)	Yangibana Pty Ltd
G09/28 (application)	Yangibana Pty Ltd
M09/158	Yangibana Pty Ltd
M09/162	Yangibana Pty Ltd
M09/176 (application)	Yangibana Pty Ltd
M09/178 (application)	Yangibana Pty Ltd

BROCKMAN PROJECT	
Brockman Project Holdings Pty Ltd (100% subsidiary)	
All tenements are in Western Australia	
E80/5248 (application)	Brockman Project Holdings Pty Limited
M80/636 9application)	Brockman Project Holdings Pty Limited
P80/1626	Brockman Project Holdings Pty Limited
P80/1627	Brockman Project Holdings Pty Limited
P80/1628	Brockman Project Holdings Pty Limited
P80/1629	Brockman Project Holdings Pty Limited
P80/1630	Brockman Project Holdings Pty Limited
P80/1631	Brockman Project Holdings Pty Limited
P80/1632	Brockman Project Holdings Pty Limited
P80/1633	Brockman Project Holdings Pty Limited
P80/1634	Brockman Project Holdings Pty Limited
P80/1635	Brockman Project Holdings Pty Limited

JORC Code, 2012 Edition – Brockman Rare Earth – Rare Metal project deposits

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	• Samples used to assess the Main and Southern Extension Prospects of the Brockman Rare Earth Project have been derived from both reverse circulation (RC) drilling and diamond drilling tails with RC pre-collars. • Samples from Reverse Circulation drilling were collected from each metre from a rig mounted cyclone and split using a 3-level riffle splitter from which 2-4kg samples were sent for analysis. Field duplicates and Certified Reference Material (CRM) standards were inserted at a rate of approximately 1 in 40. • Diamond Drill core is logged and marked for sampling. Prospective zones are sawn into half along the length of the drill core. One half is then further sawn in half. One quarter of the drill core is sent for analysis. Assayed intervals are based on 1m sampling. • Samples are prepared by drying, crushing, weighing splitting and pulverising the split samples to produce a representative sample for sodium peroxide fusion and ICP-MS, ICP-OES analysis.
Drilling techniques	• Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	• Reverse Circulation drilling at the various targets utilised a nominal 5 ¼-inch diameter face-sampling hammer. • Diamond drilling was undertaken using HQ3 sized core.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed.	• Recoveries are recorded by the geologist in the field at the time of drilling/logging. • If poor sample recovery is encountered during drilling, the geologist and driller have endeavoured to rectify the problem to ensure maximum sample

Criteria	JORC Code explanation	Commentary
	• Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	recovery. Visual assessment is made for moisture and contamination. A cyclone and splitter were used to ensure representative samples and were routinely cleaned. • Sample recoveries to date have generally been reasonable, and moisture in samples minimal. Insufficient data is available at present to determine if a relationship exists between recovery and grade. This will be assessed once a statistically valid amount of data is available to make a determination. • Diamond core recoveries were reasonable with most runs being between 0.3 – 1m with occasional full 3m runs.
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. The total length and percentage of the relevant intersections logged.	• All drill chip samples are geologically logged at 1m intervals from surface to the bottom of each individual hole to a level that supports appropriate future Mineral Resource studies. • Logging (geological) is considered to be semi-quantitative given the nature of reverse circulation drill chips and the inability to obtain detailed geological information. • All RC drill holes in the previous programmes were logged in full. • Diamond drill core is marked up using the drillers reported measurements of each coring run. Lengths of core are measured and compared to reported and where any loss has occurred. All diamond core is logged in full and logging is considered to be quantitative.
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.	• The RC drilling rig is equipped with an in-built cyclone and triple tier riffle splitting system, which provided one bulk sample of approximately 20kg, and a sub-sample of 2-4kg per metre drilled. • All samples were split using the system described above to maximise and maintain consistent representivity. Most samples were dry. For wet samples the cleanliness of the cyclone and splitter was constantly monitored by the geologist and maintained to avoid contamination. • Bulk samples were placed in green plastic bags, with the sub-samples collected placed in calico sample bags. • Field duplicates were collected directly from the splitter as drilling proceeded through a secondary sample chute. These duplicates were designed for lab checks as well as lab umpire analysis.

Criteria	JORC Code explanation	Commentary
	• Whether sample sizes are appropriate to the grain size of the material being sampled.	• A sample size of 2-4kg was collected and considered appropriate and representative for the grain size and style of mineralisation. • Diamond core was transported to the main office in Halls Creek prior to being sawn with quarter core being dispatched for analysis.
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	• Genalysis (Perth) was used for all analysis work carried out on the 1m drill chip samples, the core samples and the rock chip samples. The laboratory techniques below are for all samples submitted to Genalysis and are considered appropriate for the style of mineralisation defined at the Brockman Rare Earth – Rare Metal Project: FP6/MS • Blind field duplicates were collected at a rate of approximately 1 duplicate for every 40 samples that are to be submitted to Genalysis for laboratory analysis. Field duplicates were split directly from the splitter as drilling proceeded at the request of the supervising geologist.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• At least two company personnel verify all significant intersections. • All geological logging and sampling information is completed firstly on to paper logs before being transferred to Microsoft Excel spreadsheets and subsequently a Microsoft Access database. Physical logs and sampling data are returned to the Hastings head office for scanning and storage. Electronic copies of all information are backed up daily. • No adjustments of assay data are considered necessary.
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	• A Garmin GPS 60 hand-held GPS is used to define the location of the drill hole collars. Collar locations are considered to be accurate to within 5m. Collars have been picked up by DGPS by Whelans Surveys. • Topographic control is obtained from detailed 1m topography acquired by Hastings in 2012. Survey control points have been created by Whelans in order to facilitate more accurate survey control. • Down hole surveys are conducted by the drill contractors using a Reflex electronic single-shot camera

Criteria	JORC Code explanation	Commentary
		with readings for dip and magnetic azimuth nominally taken every 30m down hole, except in holes of less than 30m. The instrument is positioned within a stainless-steel drill rod so as not to affect the magnetic azimuth. • Grid system used is MGA 94 (Zone 52)
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	• Drill holes were located at optimal locations to provide intersections as required. • The drill hole spacing at both the Main and Southern Extension is considered to be reasonable to enable geological continuity to be interpreted. As such, it is sufficient to enable estimation of a Mineral Resource. • Samples from portions of HSE5 at Southern Extension were composited over 4m intervals due to the homogeneity of the mineralisation. All other samples were analysed over 1m intervals.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Most drill holes are planned to intersect the interpreted mineralised structures/lodes as near to a perpendicular angle as possible (subject to access to the preferred collar position).
Sample security	• The measures taken to ensure sample security.	• The chain of custody is managed by the project geologist who places calico sample bags in polyweave sacks. Up to 10 calico sample bags are placed in each sack. Each sack is clearly labelled with: • Hastings Technology Metals Ltd • Address of laboratory • Sample range • Samples were delivered by Hastings personnel to the Nexus Logistics base in order to be loaded on the next available truck for delivery to Genalysis • The freight provider delivers the samples directly to the laboratory. Detailed records are kept of all samples that are dispatched, including details of chain of custody.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• No audit of sampling data has been completed to date but a review has been conducted once all data from Genalysis (Perth) was received. Data is validated when

Criteria	JORC Code explanation	Commentary
		loading into the database and is validated again prior to any Resource estimation studies.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• The RC drilling at the Main and Southern Extension is within P80/1626, P80/1628, P80/1629 and P80/1630 – all 100% held by Brockman Project Holdings Pty Limited. • The tenements are in good standing and no known impediments exist. Hastings is currently pursuing conversion of the tenements to Retention Licenses.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• A number of RC holes were drilled by Union Oil into the Main and Southern Extension in the early 1980s. • Union Oil carried out regional geochemistry and mapping that identified additional prospects, Levon and Haig as hosting anomalous rare metals (Nb). One rock chip sampling traverse at Levon identified anomalous Y, but no further work was undertaken.
Geology	• Deposit type, geological setting and style of mineralisation.	• The Brockman Rare Earth-Metals deposit is hosted by a fine-grained silica-sericite, fluorite-bearing, tuffaceous rhyolitic volcaniclastic unit informally termed the Niobium Tuff. This volcaniclastic unit is interpreted to be the lowermost unit of a sequence of trachyte-to-rhyolite lavas, trachyandesite subvolcanic rocks, and volcaniclastic units of the Brockman Volcanics located within the Halls Creek Group, a thick, early Proterozoic volcano-sedimentary sequence. • The Southern Extension was considered to be the distal portion of the Niobium Tuff unit that was explored and drilled in the 1980s by Union Oil and West Coast Holdings Limited. Mineralisation was thought to be confined to a narrow, tightly folded portion of the Niobium Tuff. The recent drilling has indicated mineralisation is also associated with an alkaline (trachytic) lava unit in the hanging wall of the Niobium Tuff.

Criteria	JORC Code explanation	Commentary
Drill hole Information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: ▪ easting and northing of the drill hole collar ▪ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar ▪ dip and azimuth of the hole of down hole length and ▪ hole depth • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	• Reported previously refer 8 September 2011 announcement SIGNIFICANT UPGRADE IN JORC RESOURCES AT HASTINGS RARE METAL – HEAVY RARE EARTH DEPOSIT.
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• Reported previously refer 8 September 2011 announcement SIGNIFICANT UPGRADE IN JORC RESOURCES AT HASTINGS RARE METAL – HEAVY RARE EARTH DEPOSIT.
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect	• While interpretation of the results is still in the early stages, a better understanding of the geometry of the deposit will be achieved, and true widths reported. It is expected that true widths will be less than down hole widths, due to the apparent steep nature of the mineralisation.

Criteria	JORC Code explanation	Commentary
	(eg 'down hole length, true width not known').	
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional view.	• Reported previously refer 8 September 2011 announcement SIGNIFICANT UPGRADE IN JORC RESOURCES AT HASTINGS RARE METAL – HEAVY RARE EARTH DEPOSIT.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• Reported previously refer 8 September 2011 announcement SIGNIFICANT UPGRADE IN JORC RESOURCES AT HASTINGS RARE METAL – HEAVY RARE EARTH DEPOSIT.
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• Not applicable as no exploration results are reported
Further work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Further work will include infill, step out and twin-hole drilling. This work will be designed to improve confidence in and test potential extensions to the current resource estimates and to provide necessary sample material for additional and ongoing metallurgical studies. • It is expected that the additional work will be carried out in the future to remove the reliance on historical drilling and sampling from the 1980's and allow for an improvement in the Mineral Resource classification.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used.	• Data was provided as a validated Access Database and was digitally imported into Micromine Mining software. Micromine validation routines were run to confirm validity of all data. • Analytical results have all been electronically merged to avoid any transcription errors.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case.	• Site visits have been undertaken by the previous Competent person (for the 2011 and 2014 Mineral Resource estimates) who assessed drilling techniques and methods, reviewed RC holes and verified diamond core holes with adjacent RC drill intersections.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	• Confidence in the geological interpretation is considered to be high. • Detailed geological logging and surface mapping allows extrapolation of drill intersections between adjacent sections. • Alternative interpretations would be expected to result in similar tonnage and grade estimation techniques. • Geological boundaries are determined by the spatial locations of the various mineralised structures. • Continuous “niobium tuff” units, locally folded and obvious based on logging and scintillometer readings (+200 cps) are the key factors providing continuity of geology and grade.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• The Brockman deposit, Main and Southern Extension – dips steeply (80o) but variably to the southeast as shown in diagrams in the body of this release, and ranges from 5m to 60m thick. • The deposit extends over approximately 2,800 metres of north south extent and down dip by 400 metres.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	• Grade estimation using Inverse Distance Squared (ID2) methodology has been applied to all Mineral Resources. Two wireframes have been used to subset and constrain the data points used in the interpolation and only individual grades from individual wireframes were used. • The block models were constructed using a 10m by 10m by 10m parent block size with 2m by 2m by 2m minimum sub-blocks, constrained by both individual wireframes.

Criteria	JORC Code explanation	Commentary
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	• Three interpolation passes were made with searches ranging from 100m x 40m x 100m to 400m x 100m x 400m (Y, X and Z) oriented parallel to the azimuth and dip of the mineralised zones (no plunge component has been defined) to ensure all portions of the wireframe were filled. • Geological interpretation of consistent, generally moderately dipping mineralised structures with an average 30m true thickness. • Visual validation comparing bock grades with drillhole assay values via cross sections, plans and long sections was completed.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages are estimated on a dry basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	• A nominal downhole cut-off of 2,000ppm Nb2O5 has been used to establish the target mineralised zones. The cut-off corresponds well with an anomalous (+200 cps) and with the visually distinct Niobium Tuff host. Scintillometer readings are taken of all samples and these also effectively map the mineralised zones.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the	• The Inferred Main and Southern Extension at Brockman includes internal and edge dilution and is considered effectively a diluted mineable resource. The resources defined to date would potentially be amenable to simple open pit mining. • The deposit forms continuous zone from the Brockman Main area to the Southern Extension.

Criteria	JORC Code explanation	Commentary
	assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	Additional metallurgical testwork is required to quantify metallurgical recoveries and costs. • In order to satisfy the requirement of 'Reasonable Prospects for Eventual Economic Extraction" basic pit optimisation studies were carried out using nominal mining and processing costs, processing recoveries and Nb prices and the Mineral Resource estimate has been limited to the optimisation shell. It should be noted that the deposit optimised to a single shell with a continuous floor.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	• Preliminary and limited hydrometallurgical test work has been carried out on samples from the Main and Southern Extension areas and a theoretical process has been designed at scoping study level. Further work to develop a viable metallurgical recovery and process is required to optimise and allow cost optimisation for the extraction of the rare earth elements.
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• Preliminary environmental studies have been carried out on site. No environmental issues have been identified during the surveys completed to date.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	• Bulk density/specific gravity have been measured by the Company on core from the Main zone and extrapolated to the south for this estimate. Samples have been taken from each of oxidised, partially oxidised and fresh mineralisation with results feeding into the Mineral Resource estimations. Bulk

Criteria	JORC Code explanation	Commentary
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	density/specific gravity measurements have also been carried out at an independent laboratory on samples of oxidised, partially oxidised and fresh host rock. A mean ISBD of 2.6 tonnes per cubic metre has been adopted for fresh material and 1.8 tonnes per cubic metre for oxidised material in this estimate.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit.	• The Mineral Resources have been classified as Inferred based on the drill spacings, the use of historical data, quantity of bulk density determinations and geological continuity of the deposit. • The results of the Mineral resource Estimation reflect the views of the Competent Person.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	• No audits or reviews of the Mineral Resource estimate have been undertaken.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be	• The relative accuracy of the various resource estimates is reflected in the JORC resource categories. • Inferred Resources are considered global in nature. • Based on the current understanding of the deposit it is believed that the Mineral Resource estimate reasonably reflects the accuracy and confidence levels within the deposit. Due to the nature and style of the mineralisation it is expected that additional, detailed, infill drilling will locally modify grades and thicknesses however the global tonnages and grades are expected to remain consistent.

Criteria	JORC Code explanation	Commentary
	compared with production data, where available.	