HASTINGS
Technology Metals Limited

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Hastings Technology Metals Limited

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YANGIBANA PROJECT RESOURCES NOW EXCEED 20.5 MILLION TONNES

HIGHLIGHTS

- Updated JORC Resources defined for the Yangibana Project now exceed 20.5 million tonnes.
- This provides a further significant increase in tonnes of contained TREO (+12.5%) and of contained Nd_2O_3+Pr_6O_{11} (+19.4%).
- New Resources at Yangibana Deposit of 2.17 million tonnes at 0.84%TREO including 0.40%Nd_2O_3+Pr_6O_{11}
- New Resources at Simon's Find Deposit of 1.31 million tonnes at 0.66%TREO including 0.35%Nd_2O_3+Pr_6O_{11}
- First JORC Measured Resource at Yangibana North Deposit

INTRODUCTION

Hastings Technology Metals Limited (ASX:HAS) advises that the Yangibana JORC Resources now exceed 20.5 million tonnes. The updated resources include recent results from the Company's 2017 drilling programme, including reverse circulation (RC) drilling at two new targets, Yangibana and Simon's Find (100% owned, Figure 1). These deposits were not included in the Company's July 2017 JORC Resource estimate.

Both Yangibana and Simon's Find host mineralisation with very high ratios of Nd_2O_3+Pr_6O_{11}:TREO, ranging from 44 to 57%. They are potentially important sources of feed to the Company's planned production of mixed rare earths carbonate concentrate, as they are enriched in neodymium (Nd) and praseodymium (Pr), for sale into the high growth rare earths magnets industry.

The first JORC Measured Resource has been estimated for the Yangibana North deposit (70% owned) following infill drilling results.

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September 2017 Total JORC Resources

JORC Resource estimation was completed by independent consultant Mr. Lynn Widenbar, principal of Widenbar and Associates Pty Limited, to take account of the recent drill results reported in the ASX Release dated 9th October titled "High Neodymium (Nd) And Praseodymium (Pr) Ore Grade Content Confirmed At New Targets". The new estimation provides the first resources for the recently discovered Yangibana and Simon's Find deposits, and include the first Measured Resources at Yangibana North. The updated total JORC Resources for the Yangibana Project are shown in Table 1.

Category	Tonnes	$Nd_2O_3+Pr_6O_{11}$	TREO	Nd_2O_3	Pr_6O_{11}
		%	%	ppm	ppm
Measured	3,792,000	0.42	1.18	3,350	840
Indicated	8,240,000	0.43	1.27	3,410	870
Inferred	8,527,000	0.37	1.11	2,900	760
TOTAL	**20,559,000**	**0.40**	**1.18**	**3,190**	**820**

Table 1 – Yangibana Project, Total JORC Resources, September 2017

These resources represent a further significant increase in contained tonnes of TREO from 216,000 tonnes in the July estimate to 243,000 tonnes now (+12.5%), and in contained tonnes of $Nd_2O_3+Pr_6O_{11}$ from 68,900 tonnes to 84,240 tonnes (+19.4%). The location of all deposits with JORC Resources are shown in green in Figure 1.

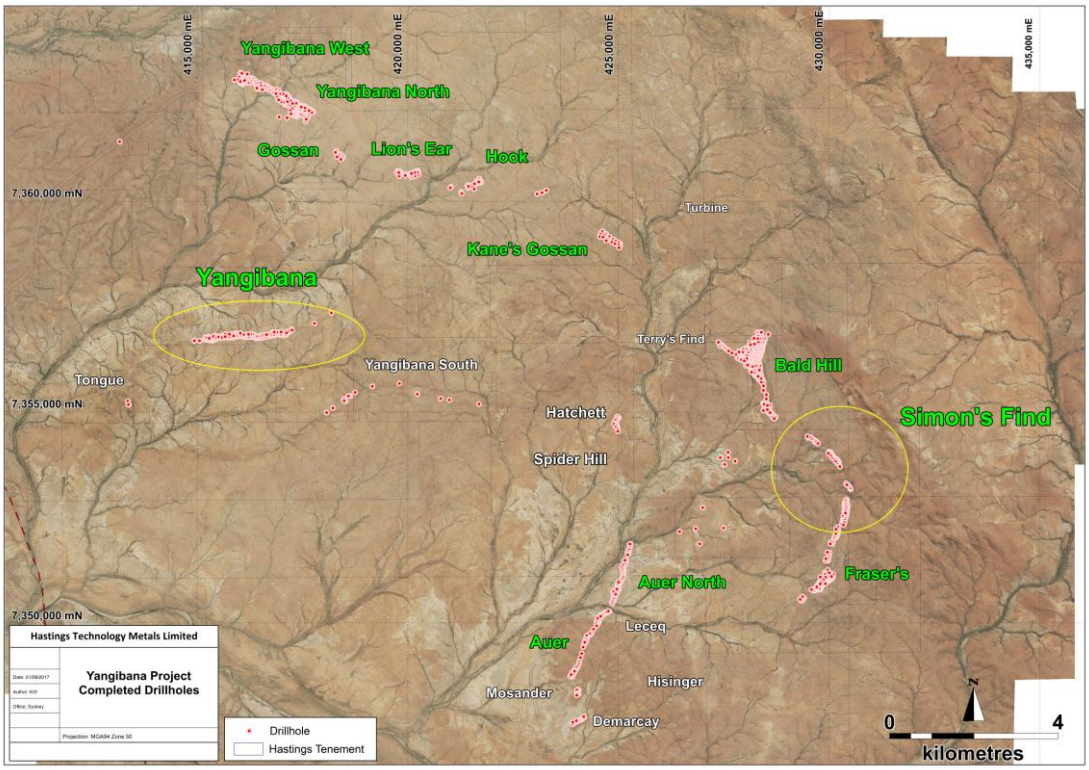

Figure 1 – Yangibana Project, Deposit Location Plan

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Yangibana Prospect

The new resource report includes the first estimation for the Yangibana deposit as shown in Table 2. The Yangibana deposit as drilled lies within Mining Lease M09/165 (100% owned).

Category	Tonnes	$Nd_2O_3+Pr_6O_{11}$	TREO	Nd_2O_3	Pr_6O_{11}
		%	%	ppm	ppm
Indicated	1,318,000	0.41	0.86	3,470	610
Inferred	851,000	0.39	0.81	3,280	570
TOTAL	**2,169,000**	**0.40**	**0.84**	**3,400**	**590**

Table 2 – Yangibana Project, Yangibana Deposit, September 2017 JORC Resources

Simon's Find Prospect

The first resource estimation for the Simon's Find deposit is shown in Table 3. The Simon's Find deposit covers a discontinuously outcropping ironstone unit within Exploration Licences E09/2018, E09/2129 and E09/1943 (100% owned).

Category	Tonnes	$Nd_2O_3+Pr_6O_{11}$	TREO	Nd_2O_3	Pr_6O_{11}
		%	%	ppm	ppm
Indicated	454,000	0.35	0.64	2,960	520
Inferred	855,000	0.35	0.67	2,950	530
TOTAL	**1,309,000**	**0.35**	**0.66**	**2,950**	**530**

Table 3 – Yangibana Project, Simon's Find Deposit, September 2017 JORC Resources

Yangibana North

Recent infill drilling has upgraded a significant portion of the Yangibana North deposit (70% owned) from Indicated to Measured Resource category as shown in Table 4.

Category	Tonnes	$Nd_2O_3+Pr_6O_{11}$	TREO	Nd_2O_3	Pr_6O_{11}
		%	%	ppm	ppm
Measured	871,000	0.43	1.64	3,260	1,000
Indicated	1,925,000	0.47	1.84	3,590	1,110
Inferred	632,000	0.47	1.85	3,550	1,110
TOTAL	**3,428,000**	**0.46**	**1.79**	**3,500**	**1,080**

Table 4 – Yangibana Project, Yangibana North Deposit, September 2017 JORC Resources

TERMINOLOGY USED IN THIS REPORT

TREO is the sum of the oxides of the light rare earth elements lanthanum (La), cerium (Ce), praseodymium (Pr), neodymium (Nd), and samarium (Sm) and the heavy rare earth elements europium (Eu), gadolinium (Gd), terbium (Tb), dysprosium (Dy), holmium (Ho), erbium (Er), thulium (Tm), ytterbium (Yb), lutetium (Lu), and yttrium (Y).

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About Hastings Technology Metals

- Hastings Technology Metals is a leading Australian rare earths company, with two rare earths projects hosting JORC-compliant resources in Western Australia.
- The Yangibana Project hosts JORC Resources totalling 20.56 million tonnes at 1.18% TREO (comprising Measured Resources of 3.79 million tonnes at 1.18% TREO, Indicated Resources of 8.24 million tonnes at 1.27% TREO and Inferred Resources of 8.53 million tonnes at 1.11% TREO), including 0.40% Nd_2O_3+Pr_6O_{11}.
- The Brockman deposit contains JORC Indicated and Inferred Resources totalling 41.4 million tonnes (comprising 32.3mt Indicated Resources and 9.1mt Inferred Resources) at 0.21% TREO, including 0.18% HREO, plus 0.36% Nb_2O_5 and 0.90% ZrO_2.
- Rare earths are critical to a wide variety of current and new technologies, including smart phones, electric vehicles, wind turbines and energy efficient light bulbs.
- The Company aims to capitalise on the strong demand for rare earths permanent magnets created by expanding new technologies.

Competent Persons' Statement

The information in this announcement that relates to Resources is based on information compiled by Lynn Widenbar. Mr Widenbar is a consultant to the Company and a member of the Australasian Institute of Mining and Metallurgy. The information in this announcement that relates to Exploration Results is based on information compiled by Andy Border, an employee of the Company and a member of the Australasian Institute of Mining and Metallurgy.

Each 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"). Each consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

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JORC Code, 2012 Edition – Table 1

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 (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*	• Assay results reported in this announcement relate to reverse circulation drilling that tested new targets at Yangibana, within M09/165: at Simon's Find, within Es09/2018, 2129 and 1943; and at deposits with JORC Resources at Yangibana North within M09/159; Auer within E09/1989; and Bald Hill within M09/157. The aim is to extend the overall JORC resources within the Yangibana Project, particularly within tenements held 100% by the Company, and to provide material for metallurgical testwork as required • Samples from each metre were collected in a cyclone and split using a 3-level riffle splitter. Field duplicates, blanks and Reference Standards were inserted at a rate of approximately 1 in 20. • The area tested by this drilling programme includes new targets at Yangibana and Simon's Find.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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 1/4 inch diameter face-sampling hammer.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *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.*	• 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 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 high, and moisture in samples minimal. Insufficient data is available at present to determine if a relationship exists between recovery and grade.
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.*	• All drill chip samples are geologically logged at 1m intervals from surface to the bottom of each individual hole to a level that will support appropriate future Mineral Resource studies. • Logging is considered to be semi-quantitative

Criteria	JORC Code explanation	Commentary
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	given the nature of reverse circulation drill chips. • All RC drill holes in the current programme are logged in full.
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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The RC drilling rig is equipped with an in-built cyclone and triple tier riffle splitting system, which provided one bulk sample of approximately 25kg, 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. • A sample size of 2-4kg was collected and considered appropriate and representative for the grain size and style of mineralisation.
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Genalysis (Perth) was used for all analysis work carried out on the 1m drill chip 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 Yangibana REE Project: FP6/MS • Blind field duplicates were collected at a rate of approximately 1 duplicate for every 20 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. 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.

Criteria	JORC Code explanation	Commentary
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 GPSMap62 hand-held GPS is used to define the location of the drill hole collars. Standard practice is for the GPS to be left at the site of the collar for a period of 5 minutes to obtain a steady reading. Collar locations are considered to be accurate to within 5m. Collars will be picked up by DGPS in the future. Down hole surveys are conducted by the drill contractors using a Reflex electronic single-shot camera 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 50) • Topographic control is based on the detailed 1m topographic survey undertaken by Hyvista Corporation in 2016.
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.*	• Hole collars were initially laid out at 50m beyond the previous drill coverage in areas considered to have potential to increase the Measured plus Indicated resources of the deposit. Collar locations were varied slightly dependent on access at a given site. • Further details are provided in the collar co-ordinate table contained elsewhere in this report. • No sample compositing is used in this report, all results detailed are the product of 1m downhole sample 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 in the current programme are vertical (subject to access to the preferred collar position) and as such intersected widths do not represent true thickness.

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.

Criteria	JORC Code explanation	Commentary
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 will be conducted once all data from Genalysis (Perth) has been received. Data is validated when loading into the database and will be 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 Yangibana prospect was carried out within M09/165; at Simon's Find within Es09/2018, 2129 and 1943; at Yangibana North within M09/159; at Auer within E09/1989; and at Bald Hill within M09/157. • All Yangibana tenements are in good standing and no known impediments exist.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The Yangibana prospect was previously drilled to a limited extent by Hurlston Pty Limited in joint venture with Challenger Pty Limited in the late 1980s. No previous exploration has been carried out on the Simon's Find prospect. Auer was first drilled by Hastings. Both Yangibana North and Bald Hill received limited RC drilling by Hurlston in the 1980s.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Yangibana ironstones within the Yangibana Project are part of an extensive REE-mineralised system associated with the Gifford Creek Carbonatite Complex. The lenses have a total strike length of at least 12km. • These ironstone lenses have been explored previously for base metals, manganese, uranium, diamonds and rare earths. • The ironstones are considered by GSWA to be coeval with the numerous carbonatite sills that occur within Hastings tenements, or at least part of the same magmatic/hydrothermal system.

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*
	  ○ *down hole length and interception depth*
		• Refer to details of drilling in table in the body of this report and the appendices.

Criteria	JORC Code explanation	Commentary
	○ *hole length.* • *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.*	
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.*	• All intervals reported are composed of 1m downhole intervals and as such are length weighted. A lower cut-off grade of 0.20%Nd_2O_3+Pr_6O_{11} has been used for assessing significant intercepts, and no upper cut-off grade was applied. • Maximum internal dilution of 1m was incorporated in reported significant intercepts. • The basis for the metal equivalents used for reporting are provided in the body of the ASX announcement. .
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 (eg 'down hole length, true width not known').*	• True widths for mineralisation have not been calculated and as such only downhole lengths have been reported. • It is expected that true widths will be less than downhole widths, due to the apparent dip of the mineralisation.
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 views.*	• Appropriate maps and sections are available in the body of this ASX announcement.
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.*	• Reporting of results in this report is considered balanced.
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.*	• Geological mapping has continued in the vicinity of the drilling as the programme proceeds.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions, depth extensions or large-scale step-out drilling).*	• The current drilling programme is primarily designed to expand the JORC Resources at the Yangibana Project, specifically at Yangibana and

Criteria	JORC Code explanation	Commentary
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Simon's Find prospects and to provide metallurgical testwork samples as required.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

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. • Individual drill logs from site have been checked with the electronic database on a random basis to check for validity. • 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.*	• The Competent Person visited site from 15-16th December 2016 and reviewed geology, drilling etc.
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 result in similar tonnage and grade estimation techniques. • Geological boundaries are determined by the spatial locations of the various mineralised structures. • Continuous ironstone units comprising iron oxides and hydroxides, minor quartz rich zones, and locally carbonate and apatite host the rare earths mineralisation and are the key factors providing continuity of geology and grade. The mineralised zones may be described as visually distinctive anastomosing iron rich veins with excellent strike and down dip continuity.
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.*	• Bald Hill mineralisation dips shallowly (maximum 30º) but variably to the southwest and ranges from 1m to 10m thick. Maximum depth of the resource is to a vertical depth of 80 metres below surface. • Fraser's mineralisation dips steeply (70-80º) in the western portion becoming more shallow (to 30º) in the east and ranges from 1m to 6m thick. Maximum depth of the resource is to a vertical depth of 140 metres below surface. • Yangibana West mineralisation dips shallowly (maximum 30º) but variably to the south and ranges from 1m to 5m thick. Maximum depth of the resource is to a vertical depth of 100 metres below surface. • Auer has three discontinuous, steeply dipping zones of mineralisation extending North-South over a total strike length of approximately 3.5 km and to a depth of 150m below surface. • Yangibana North mineralisation dips shallowly (maximum 30º) but variably to the south and ranges from 1m to 5m

Criteria	JORC Code explanation	Commentary
		thick. Maximum depth of the resource is to a vertical depth of 140 metres below surface. • Gossan – the Inferred Resources at Gossan are based on limited drilling that has identified mineralisation over 300m of strike length, 100m down dip and ranging from 1-4m wide. Maximum depth of the resource is to a vertical depth of 80 metres below surface. • Lion's Ear - the Inferred Resources at Lion's Ear are based on limited drilling that has identified mineralisation over 520m of strike length, 80m down dip and ranging from 1-4m wide. Maximum depth of the resource is to a vertical depth of 140 metres below surface. • Hook - the Inferred Resources at Hook are based on limited drilling that has identified mineralisation over 380m of strike length, 100m down dip and ranging from 1-4m wide. Maximum depth of the resource is to a vertical depth of 130 metres below surface. • Kane's Gossan - the Inferred Resources at Kane's Gossan are based on limited drilling that has identified mineralisation over 550m of strike length, 100m down dip and ranging from 1-4m wide. Maximum depth of the resource is to a vertical depth of 130 metres below surface. • Yangibana mineralisation strikes east-west over a length of approximately 2 km, dipping at 40 to 45° to the north. The zone extends to a depth of approximately 150m. The zone is relatively thin, typically 2 to 3m. • Simon's Find consists of 3 separate mineralisation zones over a total strike length of 2 km. The zones vary in dip from 40 to 80° to the south and west, and extend approximately 100m below surface. The zones are relatively thin, typically 2 to 5m.
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.* • *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.*	• Due to the variable dip and strike of the various deposits, an "unfolding" technique has been used to simplify setup of search ellipse and modelling parameters • Statistical analysis and variography has been carried out in unfolded coordinates to define parameters for an Ordinary Kriging estimation. • All analysis and estimation has been constrained by the geological interpretation of the ironstone units. Separate estimation has been carried out for 0.5m thick dilution skins on the hangingwall and footwall of the mineralisation. • Kriging Neighbourhood Analysis was carried out for each deposit to determine optimal search and kriging parameters • All estimation was carried out using Micromine software (MM 2016.1) • Kriging parameters were defined using Nd_2O_3 and Pr_6O_{11} as the primary variables. • Estimation has been carried out for the following variables : • CeO_2_ppm, Dy_2O_3_ppm, Er_2O_3_ppm, Eu_2O_3_ppm, Gd_2O_3_ppm, Ho_2O_3_ppm, La_2O_3_ppm, Lu_2O_3_ppm, Nd_2O_3_ppm, Pr_6O_{11}_ppm, Sm_2O_3_ppm, Tb_4O_7_ppm, Tm_2O_3_ppm, Y_2O_3_ppm, Yb_2O_3_ppm, ThO_2_ppm, U_3O_8_ppm, Al_per, Ca_per, Fe_per, Mg_per, Nb_ppm, P_per, S_per, Si_per, Sr_ppm, Ta_ppm, Zr_ppm • Drill hole spacing is variable, and the block sizes were chosen to reflect the best compromise between spacing and the necessity to define the geological detail of each deposit. In general, block sizes are 12.5 m along strike, 10m down dip and 2.5 across strike. • As there are no extreme values no capping has been

Criteria	JORC Code explanation	Commentary

	• *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.*
		applied.
		• Block model validation has been carried out by several methods, including:
		  ○ Drill Hole Plan and Section Review
		  ○ Model versus Data Statistics by Domain
		  ○ Easting, Northing and RL swathe plots
		• All validation methods have produced acceptable results.

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 0.20% Nd_2O_3+Pr_6O_{11} has been used in conjunction with logging of ironstone to define mineralised intersections.
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 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.*	• Mining is assumed to be by conventional open pit mining methods • Based on previous and on-going mining studies by Snowden, a 0.5m dilution skin has been added to both the footwall and hangingwall contacts of the mineralisation. • The dilution material is independently interpolated and is subsequently added to the mineralised domain to produce a diluted resource.
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.*	• Beneficiation and hydrometallurgical test work has been carried out on samples from the Eastern Belt (comprising Bald Hill, Bald Hill Southeast and Fraser's deposits) and from Yangibana North with very encouraging results. A bulk sample (12 tonnes) combining RC samples from Hastings' 2015 drilling at Bald Hill, Bald Hill Southeast and Fraser's was prepared as the Eastern Belt Master Composite (EBMC) that represents mineralisation that Hastings believes will be mined over the first 4-5 years of any operation. In 2016, Hastings undertook infill drilling at Bald Hill, Bald Hill Southeast and Fraser's deposits in order to produce a bulk (17 tonnes) sample for pilot plant testing. • Test work to date has shown that the rare earths mineralisation (largely monazite) can be upgraded readily using standard froth flotation techniques and readily available reagents. Tests are ongoing to decrease the apatite, carbonate and iron content of these concentrates as these can affect hydrometallurgical recoveries. Detailed hydrometallurgical test work has commenced and the intention is to commence pilot plant test work early in 2017.
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*	• Environmental studies have been carried out on site with Stage 1 Flora and Fauna surveys and Stage 2 Flora and Fauna surveys completed. No environmental issues have been identified. • Subterranean fauna studies have located both troglofauna and stygofauna but no unique or endangered species have been encountered.

Criteria	JORC Code explanation	Commentary
	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.	
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.* • *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.*	• Bulk density/specific gravity have been measured by the Company on core from Yangibana North, and at independent laboratories on core from Bald Hill South, Fraser's and Yangibana West. Samples have been taken from each of oxidised, partially oxidised and fresh mineralisation with results feeding into the resource estimations. • Bulk density/specific gravity measurements have also been carried out at an independent laboratory on samples of oxidised, partially oxidised and fresh host rock, granite. • In situ bulk densities for the individual deposits have ranged from 2.30 to 2.80 tonnes per cubic metre and have been assigned into the models based on weathering surfaces and assigned rock types.

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 Resource has been classified in the Measured, Indicated and Inferred categories, in accordance with the 2012 Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC Code). A range of criteria has been considered in determining this classification including:
		  ○ Geological and grade continuity
		  ○ Data quality.
		  ○ Drill hole spacing.
		  ○ Modelling technique and kriging output parameters.
		• The Competent Person is in agreement with this classification of the resource.

Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No audit of the current resources has been carried out at this time.
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.*	• The relative accuracy of the various resource estimates is reflected in the JORC resource categories. • At the Measured and Indicated Resource classification level, the resources represent local estimates that can be used for further mining studies. • Inferred Resources are considered global in nature.

Criteria	JORC Code explanation	Commentary
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	