

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

Board

Charles Lew (Executive Chairman)

Jean Claude Steinmetz (Non-Exec Director)

Guy Robertson (Finance Director and Joint Company Secretary)

Neil Hackett (Joint Company Secretary)

www.hastingstechmetals.com

UPDATED 28 November 2018 INCREASE IN MEASURED AND INDICATED RESOURCES AT YANGIBANA PROJECT

- Measured plus Indicated Resources increased by 6.7% to 13.38 million tonnes
- Total Resources increased to 21.67 million tonnes
- Contained neodymium and praseodymium oxide exceeds 80,000 tonnes in total resources
- Programmes in place for next drilling phase in 2019

Introduction

The Directors of Hastings Technology Metals Limited (ASX:HAS) are pleased to announce a 6.7% increase in Measured plus Indicated Resources at the Yangibana Project compared to the most recent JORC Mineral Resource estimate in November 2017 (*ASX release titled "Final 2017 JORC Resource Update including Auer and Auer North Results" 22nd November 2017*). Measured plus Indicated Resources now stand at 13.38 million tonnes within a total resource of 21.67 million tonnes. The total resource now hosts more than 80,000 tonnes of neodymium and praseodymium oxide, the Company's main economic driver.

JORC Mineral Resources

An updated JORC Mineral Resource estimation has been completed by independent consultant Lynn Widenbar and Associates incorporating the recent drilling results from Bald Hill, Fraser's, Auer and Auer North deposits.

The bulk of the near surface mineralisation (at least to 100m vertical depth) throughout the Yangibana Project is hosted by iron oxides and hydroxides termed ironstone, being the alteration products of the primary hosts - ferrocarbonatite and phoscorite intrusive veins. The main rare earths-bearing mineral is monazite which has locally undergone alteration at shallow depths (to 25m depth) to its hydrous equivalent rhabdophane and to rare earths-bearing Al-phosphates such as florencite.



The deposits occur as narrow but strike extensive veins that have a range of dips from almost horizontal (10-20°) to sub-vertical. The Fraser's deposit has the most extreme range from 5° in portions towards its northeastern end to 65° at its southwestern end. Average true thickness varies from 2.2m to 3.5m throughout the Yangibana deposits although locally true thicknesses in excess of 20m occur.

Hastings has completed eight drilling programmes comprising both reverse circulation (RC) and diamond drilling totalling more than 1,500 holes for 80,000m. Of these 127 holes for 7,485m are diamond holes.

Holes were initially drilled at 50m spacings along strike and down dip. Infill drilling in areas with resource potential has been undertaken at 37.5m spacing, although this has been constrained by access in places and drill spacing is often less than that figure.

RC holes have been drilled using a nominal 5¼ inch diameter face-sampling bit. Samples have been collected through a built-in cyclone with a triple-tier riffle-splitting system providing a large sample of approximately 25kg and a sub-sample of 2-4kg of which selected samples were sent for analysis, from each metre drilled. Field duplicates, blanks and Reference Standards were inserted at a rate of approximately 1 in 20.

Diamond core has been drilled at HQ size. The core is logged and prospective zones are sawn into half and one half is then quartered with one quarter sent for analysis. Assayed intervals are based on geology with a minimum length of 0.2m.

Samples were routinely sent to Genalysis in Perth for analysis using techniques considered appropriate for the style of mineralisation. Samples were analysed for the range of rare earths, rare metals (Nb, Ta, Zr), thorium and uranium and a range of common rock-forming elements (Al, Ca, Fe, Mg, Mn, P, S, Si, Sr). Duplicate samples have been sent to SGS Laboratories for cross-checking.

Most drillholes were vertical, subject to access availability, with holes into the steeper mineralised zones (Auer, Auer North, the southeastern portion of Fraser's) being at -60° or -70°. Internal surveys were carried out at 30m intervals downhole by the drilling contractors using a Reflex electronic single-shot camera within a stainless-steel drill rod.

Collar surveys were carried out by the Company using a Trimble RTX R1 GNSS receiver, with accuracies of approximately 50cm. The high-resolution DTM commissioned by the Company has been used as the topographic control for all drillholes. A Relative Level (RL) was assigned to each drillhole collar based on the high-resolution DTM using Mapinfo Discover 3D.

Once assay data were returned, the elemental values were converted to oxides using standard factors. Interpretations were carried out initially on sections using logged geology and then a nominal $0.2\%Nd_2O_3+Pr_6O_{11}$ cut-off to define the mineralisation of interest. With current commodity prices of US\$59/kg for praseodymium oxide and US\$48/kg for neodymium oxide (BAIINFO Rare Earth Weekly, Nov 15 2018) and predicted to increase over



the coming years (Adamas Intelligence, July 2018), this cut-off is considered reasonable for both downhole intersections and resource estimation.

This cut-off correlates extremely well with the visual estimation based on geology. At a later stage, flitch plans and footwall and hangingwall contour plans were prepared to confirm interpretation. There is, therefore, a high confidence in the geological interpretation.

Following validation of the database all information was imported into Micromine Mining software where validation routines were run to check validity of all data.

The Micromine models were sent to the resource consultant (Lynn Widenbar) and statistical analysis and variography was undertaken to define parameters for an Ordinary Kriging estimation. Estimations were carried out using Micromine software (MM 2016 Sp5) with Nd₂O₃ and Pr₆O₁₁ used to define kriging parameters. Estimations were carried out for all assayed variables. Each deposit was initially drilled at 50m intervals along strike and down dip, testing the areas with better outcrop and their extensions. Infill drilling was then undertaken to close the drill-spacing to around 37.5m as suggested by the variography. In certain areas drill spacing is highly variable due to access considerations. Despite this variable spacing, in general the resource blocks are 12.5m along strike by 10m down dip by 2.5m across strike. The block models have been validated by several methods.

Bulk density has been measured by either the Company or at independent laboratories on core from each of the main deposits. Samples from each of the oxidised, partially oxidised, and fresh mineralisation have been tested with results feeding into the resource estimations based on weathering surfaces as defined by the Company.

Based on previous and ongoing mining studies, a 0.5m dilution skin has been added to both the footwall and hangingwall of the interpreted mineralisation. This dilution material is independently interpolated and the results are subsequently added to the mineralised domain to provide a diluted resource as reported.

The mineral resources have 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) by the Competent Person. A range of criteria has been considered in determining the classification including geological and grade continuity, data quality, drill hole spacing, and modelling technique and kriging output parameters.

As a general rule, the following spacings characterise the resource classification.

- Infill drilling between 20m by 20m and 35m by 35m Measured
- Drill spacing 50m by 50m Indicated
- Drill spacing 100m by 50m to 100m by 100m Inferred

The shallow nature of the mineralisation tested by Hastings to date (almost all within 120m of surface) and the high potential value of the mineralisation at the selected (and geologically sensible) cut-off grade used supports the classification of the resources.



Metallurgical testwork has established a viable processing route for the majority of the deposits tested to date. Variability testwork is continuing to confirm this.

The total resources as at October 2018 are as shown in Table 1. Note that in all resource tables rounding errors may appear. The resources are based on a, with a minimum width of 1.0m. 0.5m of dilution at grade from both the hangingwall and the footwall is incorporated into the estimation.

Category	Tonnes	%TREO	%Nd ₂ O ₃ +Pr ₆ O ₁₁
Measured	4,727,000	1.17	0.42
Indicated	8,652,000	1.24	0.41
Inferred	8,294,000	1.09	0.36
TOTAL	21,673,000	1.17	0.39

Table 1 – Yangibana Project – Total JORC Mineral Resources October 2018

These figures represent a modest increase in total tonnes compared to the previous estimate from 20,996,000 (+3.2%), but a significant increase in Measured plus Indicated Resources (+6.7%), particularly in the Measured category that has increased by 21.1%.

Resources from the deposits that are planned for early development – Bald Hill and Fraser's – are shown in Tables 2 and 3. Both deposits are within granted Mining Leases held 100% by Hastings.

Category	Tonnes	%TREO	$%Nd_2O_3+Pr_6O_{11}$
Measured	3,345,000	0.99	0.40
Indicated	1,419,000	1.05	0.41
Inferred	1,487,000	0.90	0.34
TOTAL	6,251,000	0.98	0.39

Table 2 – Yangibana Project – Bald Hill JORC Mineral Resources October 2018

Category	Tonnes	%TREO	%Nd ₂ O ₃ +Pr ₆ O ₁₁
Measured	398,000	1.55	0.66
Indicated	407,000	1.53	0.65
Inferred	670,000	0.71	0.30
TOTAL	1,475,000	1.17	0.49

Table 3 – Yangibana Project – Fraser's JORC Mineral Resources October 2018



Following the recent drilling at Auer and Auer North (*ASX Release titled "Successful Infill and Extension Drilling at Auer, Auer North"* 5th October2018), the main increases in total resources are at these deposits as shown in Tables 4 and 5. Both deposits are within Exploration Licences held 100% by Hastings and the Company will make application for a Mining Lease in the near future.

Category	Tonnes	%TREO	$%Nd_2O_3+Pr_6O_{11}$
Indicated	1,004,000	1.09	0.39
Inferred	1,000,000	1.09	0.37
TOTAL	2,004,000	1.09	0.38
Table 4 – Y	Yangibana Project – Auer JC	RC Mineral Resources Oct	ober 2018
Category	Tonnes	%TREO	$%Nd_2O_3 + Pr_6O_{11}$
Indicated	462,000	1.09	0.37
Inferred	220,000	0.92	0.29
TOTAL	682,000	1.03	0.35

Table 5 – Yangibana Project – Auer North JORC Mineral Resources October 2018

Longitudinal sections of Auer and Auer North showing accumulation (metre $\% Nd_2O_3+Pr_6O_{11}$) are shown in Figures 1 and 3 showing good potential for additional resources particularly at depth along the length of Auer and at Auer North Zone 1. Figures 2 and 4 show the resource categorisation for the two deposits.



Figure 1 – Yangibana Project – Auer m% longitudinal section October 2018





Figure 2 – Yangibana Project – Auer Resource Categorisation October 2018



Figure 3 – Yangibana Project – Auer North m% longitudinal section October 2018





Figure 4 – Yangibana Project – Auer North Resource Categorisation October 2018

JORC Mineral Resources for Yangibana, Yangibana West, and Yangibana North are shown in Tables 6, 7 and 8 respectively.

Category	Tonnes	%TREO %Nd ₂ O ₃ +P	
Indicated	1,318,000	0.86	0.41
Inferred	851,000	0.81	0.39
TOTAL	2,169,000	0.84	0.40

Table 6 – Yangibana Project – Yangibana JORC Mineral Resources October 2018

Of the total resources at Yangibana, 1,900,000 tonnes are within Mining Lease 09/165 held 100% by Hastings and 269,000 tonnes are within Mining Lease 09/163 in which Hastings holds a 70% interest.

Category	Tonnes	%TREO	%Nd ₂ O ₃ +Pr ₆ O ₁₁
Measured	114,000	1.58	0.45
Indicated	1,665,000	1.24	0.34
Inferred	758,000	1.34	0.35
TOTAL	2,536,000	1.29	0.35

Table 7 – Yangibana Project – Yangibana West JORC Mineral Resources October 2018



Yangibana West lies within Mining Lease 09/160 held 100% by Hastings. The mineralisation is part of a continuous deposits that extends into Mining Lease 09/159, in which Hastings holds a 70% interest, as Yangibana North.

Category	Tonnes	%TREO	$\% Nd_2O_3 + Pr_6O_{11}$
Measured	871,000	1.64	0.43
Indicated	1,924,000	1.84	0.47
Inferred	632,000	1.85	0.47
TOTAL	3,427,000	1.79	0.46

Table 8 – Yangibana Project – Yangibana North JORC Mineral Resources October 2018

JORC Mineral Resources at Simon's Find are shown in Table 9. These resources are located within Mining Lease 09/158 and Exploration Licence 09/1943, both held 100% by Hastings. Additional drilling and metallurgical testwork will be undertaken prior to the application for a second Mining Lease.

Category	Tonnes	%TREO	$%Nd_2O_3+Pr_6O_{11}$
Indicated	454,000	0.64	0.35
Inferred	855,000	0.67	0.35
TOTAL	1,309,000	0.66	0.35

Table 9 – Yangibana Project – Simon's Find JORC Mineral Resources October 2018

JORC Inferred Mineral Resources at Gossan, Lion's Ear, Hook and Kane's Gossan are shown in Table 10. These deposits are all within Mining Lease 09/159 in which Hastings holds a 70% interest.

Inferred	Tonnes	%TREO	$\% Nd_2O_3 + Pr_6O_{11}$
Gossan	289,000	1.52	0.33
Lion's Ear	710,000	1.54	0.39
Hook	289,000	1.52	0.33
Kane's Gossan	574,000	1.04	0.29

Table 10 – Yangibana Project – Gossan, Lion's Ear, Hook and Kane's Gossan JORC Inferred Resources October 2018

A proposed drilling programme for 2019 has been established and will commence with holes testing the large aeromagnetic anomaly reported recently (*ASX Release titled "Major Aeromagnetic Target Identified at Yangibana"* 8th August 2018).



TERMINOLOGY USED IN THIS REPORT

Total Rare Earths Oxides, 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).

For further information please contact:

Andrew Reid, Chief Operating Officer, +61 8 6117 6118 Andy Border, General Manager Exploration, +61 2 9078 7674

Competent Person Statements

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. Consent to include statements in this announcement are provided below. 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").

Forward looking statements and important notice:

This report contains forecasts, projections and forward-looking information. Although the Company believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions it can give no assurance that these will be achieved. Expectations, estimates and projections and information provided by the Company are not a guarantee of future performance and involve unknown risks and uncertainties, many of which are out of Hastings' control. Actual results and developments will almost certainly differ materially from those expressed or implied. Hastings has not audited or investigated the accuracy or completeness of the information, statements and opinions contained in this presentation. To the maximum extent permitted by applicable laws, Hastings makes no representation and can give no assurance, guarantee or warranty, express or implied, as to, and takes no responsibility and assumes no liability for (1) the authenticity, validity, accuracy, suitability or completeness of, or any errors in or omission from, any information, statement or opinion contained in this report and (2) without prejudice to the generality of the foregoing, the achievement or accuracy of any forecasts, projections or other forward looking information contained or referred to in this report.

Investors should make and rely upon their own enquiries before deciding to acquire or deal in the Company's securities.



About Hastings Technology Metals

Yangibana Project

Hastings Technology Metals (ASX:HAS, the Company) is advancing the Yangibana Rare Earths Project towards production following the completion of a positive Definitive Feasibility Study in November 2017. The Yangibana Project hosts rare earths deposits rich in neodymium and praseodymium, elements vital to permanent magnets that provide many critical components of wide-ranging high-tech products, including electric vehicles, renewable energy wind turbines, robotics, medical applications and others. The Company aims to be the next significant producer of neodymium and praseodymium outside of China.

The established Yangibana reserves and resources are predominantly within tenements held 100% by Hastings, with the majority in granted Mining Leases. Lesser resources are held in a joint venture in which Hastings holds a 70% interest and has management control.

The November 2017 Yangibana Project DFS established JORC Probable Ore Reserves of 5.15 million tonnes at 1.12% total rare earths oxides (TREO) including 0.41% neodymium and praseodymium oxides ($Nd_2O_3+Pr_6O_{11}$). This Ore Reserve was the basis of the initial operation at a planned production rate of up to 15,000 tonnes per annum (tpa.) MREC including 3,400 tpa. of $Nd_2O_3+Pr_6O_{11}$. The July 2018 Yangibana Probable Ore Reserve has increased to 7.74 million tonnes at 1.13%TREO including 0.43%Nd₂O₃+Pr₆O₁₁. The increase in Probable Ore Reserves is demonstrated by additional Pre-Feasibility Study work that supports extension of production over the full eight-year period considered in the Company's November 2017 DFS.

Including the above Ore Reserves, the Project hosts JORC Mineral Resources totalling of 21.7 million tonnes at 1.17% TREO including $0.39\%Nd_2O_3+Pr_6O_{11}$ comprising Measured Resources of 4.7 million tonnes at 1.17% TREO including $0.42\%Nd_2O_3+Pr_6O_{11}$ Indicated Resources of 8.7 million tonnes at 1.24% TREO including $0.41\%Nd_2O_3+Pr_6O_{11}$.

and Inferred Resources of 8.3 million tonnes at 1.09% TREO including 0.36%Nd₂O₃+Pr6O11.

Many more areas of the Company's deposits have the potential for additional resources and exploration programmes are in place to evaluate these areas in future plus the numerous other targets identified to date.

Brockman Project

The Company is also progressing a Mining Lease application over the Brockman Rare Earths and Rare Metals Project.

The Brockman deposit, near Halls Creek in Western Australia, contains JORC Indicated and Inferred Mineral Resources, estimated using the guidelines of JORC Code (2012 Edition, totalling 41.4 million tonnes (comprising 32.3 million tonnes Indicated Mineral Resources and 9.1 million tonnes Inferred Mineral Resources) at 0.21% TREO, including 0.18% HREO, plus 0.36% Nb₂O₅ and 0.90% ZrO₂.

The Company aims to capitalise on the strong demand for critical rare earths created by the expanding demand for new technology products.



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. 	 Samples used to assess the numerous deposits of the Yangibana Project have been derived from both reverse circulation (RC) and diamond drilling. Eight drilling programmes have been completed to date with more than 1,500 holes drilled for 80,000m. 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. RC and diamond drilling leading to the establishment of JORC Resources has been carried out at Bald Hill, Frasers's, Yangibana West, Auer, Auer North, Yangibana, and Simon's Find within tenements held 100% by Hastings, and at Yangibana North, Gossan, Lion's Ear, Hook and Kane's Gossan in tenements in which Hastings has a 70% interest. In addition, drilling has been carried out at Hatchett, Demarcay, Mosander Terry's Find and Yangibana South prospects.
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. Diamond drilling at the various targets has been HQ diameter.
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 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 subsampling 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.
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys),	 Final drillhole collars completed during 2014 were collected by MHR Surveyors using DGPS utilising a locally established control



Criteria	JORC Code explanation	Commentary
	trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	 point. Accuracies of the drillhole collar locations collected by MHR Surveyors is less than 0.1m. Drillhole collar positions from 2015 onwards were collected using a Trimble RTX R1 GNSS receiver, with accuracy of approximately 50cm. Elevation data was recorded by both MHR Surveyors and the Trimble receiver, but the topographic control for all drillholes is based on the high-resolution DTM undertaken by the Company, with Relative Level (RL) assigned to each borehole based on the DTM using Mapinfo Discover 3D. 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)
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. 	 Substantial areas of the main Bald Hill deposit have been infill drilled at a staggered 50m x 50m pattern, giving an effective 35m x 35 spacing, with some areas infilled to 20m x 20m and 20m x 10m in the recent 2018 drilling prorgamme. In general, and where allowed by the kriging parameters this allows portions of the deposit to be classified in the Measured category. Areas of 50m x 50m spacing are generally classified as Indicated, while zones with wider spacing or where blocks are extrapolated are generally classified as Indicated (a mixture of 50m x 50m and 50m x 25m spacing) and an Inferred area in the south and west with wider spacing The main part of the Fraser's deposit has some areas of Measured where there is infill drilling at nominally 25m x 25m, with much of the rest being Indicated, where spacing is typically 50m x 50m. Down-dip zones of extrapolated blocks with higher variances are supported by a number of deep intersections and have been classified as Inferred. Yangibana West and North drill spacing is typically 50m x 50m with some new infill areas in the east. Down dip extrapolation has been limited due to the smaller ranges down dip compared to along strike. Due to the new infill, and improved variography, some Measured material has been added.



Criteria	JORC Code explanation	Commentary
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 	 At the Yangibana deposit drill spacing is nominally on 50m sections, and the upper part of the resource is generally classified as Indicated while the lower, extrapolated areas are Inferred. Section spacing at Auer is predominantly 50m with some areas of 25m spacing and others at 100m; down dip spacing is typically 50m. Closer spaced areas have been assigned an Indicated classification, though the majority of the Auer deposit has only two or three holes per section, resulting in these areas being classified as Inferred. A significant amount of infill drilling at Auer North in 2017-2018 has increased confidence in what was previously Inferred material; a reasonably large proportion of Auer North is now in the Indicated category, with drill spacing typically on 25 to 50m sections with the remainder being Inferred, at depth and where section spacing is greater than 50m. Simon's Find spacing is variable, typically 50m x 50m with some areas on a staggered 50m x 50m pattern, giving an effective 35m x 35m spacing. There is limited down dip drilling, however, and these area are generally classified as Indicated rather than Measured. Remaining areas are classified as Inferred. The Gossan, Lion's Ear, Kane's Gossan and Hook deposits all have relatively widely spaced drilling (>100m) and have all been classified in the Inferred category. No sample compositing is used in this report, all results detailed are the product of 1m downhole sample intervals. Most drill holes in the current programme are vertical (subject to access to the preferred collar position) or collared at -60° or -70° in steeper mineralised areas such as Auer and Auer North.
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.



Criteria	JORC Code explanation	Commentary
		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 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. 	 Drilling has been undertaken on numerous tenements within the Yangibana Project. 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. 	• Ten of the Yangibana prospects were previously drilled to a limited extent by Hurlston Pty Limited in joint venture with Challenger Pty Limited in the late 1980s. Auer and Auer North were first drilled by Hastings in 2016. Simon's Find was first drilled by Hastings in 2017.
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 	• N/A



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%Nd₂O₃+Pr₆O₁₁ 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.
rurtner work	Ine nature and scale of planned further work	 Numerous targets exist for expansion of the



Criteria	JORC Code explanation	Commentary
	 (eg tests for lateral extensions, 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. 	current JORC Resources within the Yangibana Project, as extensions to defined deposits, new targets identified from the Company's various remote sensing surveys, and conceptual as yet untested targets at depth.

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 30°) 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 (70-80°) in the western portion becoming more shallow (to 30°) 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 30°) but variably to the south and ranges from 1m to 5m thick. Maximum depth of the resource is to a vertical depth of 140 metres below surface. Yangibana West mineralisation dips shallowly (maximum 30°) 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



Criteria	JORC Code explanation	Commentary
		 below surface, and a fourth zone that strikes northeasterly. Auer North comprises three steeply dipping zones over a combined strikelength of 700m and has been tested to 120m below surface at the better mineralized Zone 1. The Simon's Find mineralisation occurs in two separate zones, the southern one extending over m on a north-south trend and the northern zone extending over m on a north-south trend and the northern zone extending over m on a northwesterly trend. Mineralisation has been tested to m below surface. Yangibana North mineralisation dips shallowly (maximum 30°) but variably to the south and ranges from 1m to 5m 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 360m of strike length of 140 metres. Kane's Gossan - the Inferred Resources at Kane's Gossan are based on limited drilling that has identified mineralised mineralised mineralised mineralised mineralised on limited mineralised on limited drilling that has identified mineralised the field mineralised mineralised over 550m of strike length,
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 	 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 Sp5) Kriging parameters were defined using Nd₂O₃ and Pr₆O₁₁ as the primary variables. Estimation has been carried out for the following variables : CeO₂_ppm, Dy₂O₃_ppm, Er₂O₃_ppm, Eu₂O₃_ppm, Nd₂O₃_ppm, Yb₂O₃_ppm, Th₂O₃_ppm, Tm₂O₃_ppm, Yb₂O₃_ppm, Th₂O₃_ppm, Tm₂O₃_ppm, Pr₆O₁₁_ppm, Sm₂O₃_ppm, Th₂O₂ppm, U₃O₈_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



Criteria	JORC Code explanation	Commentary
	 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. 	 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 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% Nd₂O₃+Pr₆O₁₁ 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 testwork has been carried out on samples from the Eastern Belt (comprising Bald Hill, Bald Hill Southeast, Fraser's, Auer and Auer North deposits) and from Yangibana West and 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. A second composite sample for metallurgical recoveries and Fraser's has been collected during 2018 and is being prepared for further pilot plant-level testwork.



Criteria	JORC Code explanation	Commentary
Environment al 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. 	 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.
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, Bald Hill South, Fraser's, Yangibana, Auer, Auer North 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.
Classificatio n	 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 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
	 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 compared with production data, where available. 	



Widenbar and Associates

ABN 15 009 450 097

59 Dunkley Avenue Applecross WA 6153 Telephone 0418 950 237 <u>www.widenbar.com.au</u> <u>lynn@widenbar.com.au</u>

Competent Person's Consent Form

Pursuant to the requirements of ASX Listing Rule 5.6, 5.22 and 5.24 and clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

Report Name

Yangibana Resource Updated Resource Estimate

("Report")

Released by: Hastings Technology Metals Ltd ("Hastings")

Deposit: Yangibana

Date: October 2018



STATEMENT

I, Lynn Widenbar confirm that:

I am the competent person

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("2012 JORC Code").
- I am a Competent Person as defined by the 2012 JORC Code, having five years experience which is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of *The Australasian Institute of Mining and Metallurgy*.
- I have reviewed the Report to which this Consent Statement applies.

I am a consultant working for Widenbar & Associates Pty Ltd and have been engaged by Hastings to prepare documentation for the Yangibana Project on which this report is based, for the period ended October 2018.

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Mineral Resources.

CONSENT

I consent to the release of the Report and this Consent Statement by the directors of:

Hastings Technology Metals Ltd

Signature of Competent Person

L Widenbar MAusIMM - Membership Number 201213

October 2018

Signature of Witness

A Border MAusIMM – Membership Number