



30 January 2020

Hastings Technology Metals Limited

ABN 43 122 911 399

ASX Code: Shares - HAS

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Board

Charles Lew (Executive Chairman)

Guy Robertson (Finance Director)

Jean Claude Steinmetz (Non-Exec Director)

Neil Hackett (Non-Exec Director and Company Secretary)

Mal Randall (Non-Exec Director)

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DECEMBER 2019 QUARTERLY REPORT

- **18% increase in Ore Reserves, mine life extended by 2 years to 13 years**
- **13% increase in Measured and Indicated Mineral Resources**
- **Increase in Total Rare Earths Oxide (TREO) of 8,200t or 5% to 171Kt in the Measured and Indicated Mineral Resource Categories.**
- **Increase in Neodymium and Praseodymium Oxide ($\text{Nd}_2\text{O}_3+\text{Pr}_6\text{O}_{11}$) of 4,000t or 7% to 59Kt in the Measured and Indicated Mineral Resource Categories.**
- **Probable Ore Reserve tonnes increased 18% to 12.20 million tonnes at 1.13%TREO including 0.40% $\text{Nd}_2\text{O}_3+\text{Pr}_6\text{O}_{11}$**
- **Project NPV increased by 6% to A\$549 million confirming outstanding project economics.**
- **Capital raising of A\$12m was successfully undertaken during the quarter to sophisticated investors and shareholders.**
- **95% Recovery of Ore and 52% improvement in head grade from bulk ore sorting trial**

Health and Safety

Zero lost time injuries were recorded during the December quarter. Company-wide lost time injury (LTI) free status now 544 days.

Safety systems continue to be developed in anticipation of construction activities with a focus on the prevention of incidents and principal hazard management. Programs to assist in managing and developing the safety culture and the management of risk for both employees and contractors is a key aim.

The Radiation Waste Management Plan was submitted to Department Mine Industry Regulation and Safety (DMIRS) for information.

Environment

Land tenure was granted for outstanding infrastructure areas (borefield, water pipeline, and Tailings Storage Facility area).

The Mining Proposal, a key secondary permit, has been submitted to DMIRS.

Flora and fauna surveys along the 114km gas pipeline route were completed.

Aboriginal heritage survey of the western project areas incorporating mining areas for years 8-13 of the project mine life were completed.

As announced on 31 October 2019 (13% Increase in Measured and Indicated Mineral Resources), a Mineral Resource re-estimation was completed as part of the financial due diligence process currently being completed by Hastings. The re-estimation audit check and validation process was completed on only those deposits which form the basis of the economic analysis included in the Definitive Feasibility Study released in November 2017.

The total Mineral Resources as at October 2019 are shown in Table 1. The new Mineral Resources included;

- Measured and Indicated Tonnes increased by 13% or 1.7Mt
- Measured and Indicated Nd₂O₃+Pr₆O₁₁ tonnes increased by 7% or 4,000t

Reporting of the following Minerals Resources, for all deposits, is at 0.2% Nd₂O₃+Pr₆O₁₁

Table 1: Total JORC (2012) Mineral Resources October 2019

Category	M* Tonnes	%TREO	%Nd ₂ O ₃ +Pr ₆ O ₁₁
Measured	4.15	1.15	0.43
Indicated	10.92	1.13	0.38
sub-total	15.07	1.13	0.39
Inferred	6.18	1.09	0.35
TOTAL	21.25	1.12	0.38

- Denotes million; numbers may not add up due to rounding. Includes JV tenement contributions.

Mining Reserves

As announced on 4 November 2019 (18% Increase in Ore Reserves, Mine Life extended to 13 years) Hastings completed an updated mining reserve estimate based on Measured and Indicated Mineral Resources at each of Bald Hill, Fraser's, Auer, Auer North, Yangibana, Yangibana West and Yangibana North deposits. This mining reserve estimate used Whittle pit optimisation software to create economic pit designs utilising conventional drill and blast, load and haul mining methods.

The total Project Ore Reserve estimate as at 4 November 2019, is set out in Table 2 below:

Table 2: Total JORC (2012) Ore Reserves November 2019

Deposit	M Tonnes	%TREO	%Nd ₂ O ₃ +Pr ₆ O ₁₁	Nd ₂ O ₃ +Pr ₆ O ₁₁ as % of TREO
Bald Hill	4.97	1.03	0.41	40
Fraser's	0.90	1.51	0.64	42
Auer	1.50	0.95	0.33	35
Yangibana	1.36	0.91	0.44	48
Yangibana North	3.46	1.39	0.37	26
TOTAL	12.20	1.13	0.40	37

The updated Ore Reserve of 12.20 million tonnes represents;

- an 18% tonnage increase compared to the previously announced mining reserve;
- an extended mine life from 11 years to 13 years.

The Bald Hill pit alone represents over 40% of the Total Ore Reserves, and supplies feed to the processing plant for almost 9 of the 13 years of mine life.

Ore Sorting

Bulk ore sorting test results from a 1.8 tonne sample resulted in 37.1% of the sample mass being rejected at a grade of 0.09% $\text{Nd}_2\text{O}_3+\text{Pr}_6\text{O}_{11}$, representing a loss in $\text{Nd}_2\text{O}_3+\text{Pr}_6\text{O}_{11}$ of just 4.9% or an overall recovery of 95.1% $\text{Nd}_2\text{O}_3+\text{Pr}_6\text{O}_{11}$ in the Ore. A corresponding 52% increase or upgrade in the ore head grade was achieved from 0.71% to 1.08% $\text{Nd}_2\text{O}_3+\text{Pr}_6\text{O}_{11}$.

In an additional sample diluted with 60% waste material, the ore sorting test work program achieved an upgrade factor of 2.16 taking the feed grade from 0.43% $\text{Nd}_2\text{O}_3+\text{Pr}_6\text{O}_{11}$ to 0.93% $\text{Nd}_2\text{O}_3+\text{Pr}_6\text{O}_{11}$, whilst recovering 90.6% of the $\text{Nd}_2\text{O}_3+\text{Pr}_6\text{O}_{11}$. Refer to announcement dated 25 November 2019 (95% RECOVERY of ORE and 52% IMPROVEMENT IN HEAD GRADE FROM BULK ORE SORTING TRIAL).

Project Development Update

Hastings continued to progress development activities during the quarter with key accomplishments including the following;

The Engineering, Procurement, Construction Management (EPCM) contract with DRA was signed on the 18 October 2019 with work including finalising the EPCM services specification, EPCM scope of work and EPCM performance guarantee for the EPCM contract.

The gas pipeline engineering development continues with OSD Pipelines managing the Front-End Engineering Design (FEED) portion of the study. This will allow the design to be refined to the point where it is ready for permit application purposes and competitive tender pricing. Progress included:

- Completion of the ground survey and alignment review.
- Cathodic protection survey was undertaken by pipeline corrosion experts.
- Constructability review was undertaken by pipeline construction experts. This included consideration for road access, staging areas for pipe laydown yards, temporary accommodation village and water access.

The Dampier to Bunbury (DBP) customer requirements form was submitted to Australian Gas Infrastructure Group (AGIG) to initiate the process to engineer the off take/metering station. Next steps include finalising heritage and flora/fauna surveys prior to Hastings submitting the required pipeline permits.

The Power-station tender package has been developed and has gone out to market with submissions for the construction and operation and maintenance packages due back in late February 2020. The tender package calls for an EPC pricing submission for the construction of the gas fired PowerStation and waste heat recovery system, and for the operation and maintenance of the facility.

Hastings has formally nominated preferred construction contractors for structural, mechanical and piping and electrical and instrumentation packages.

A civil/concrete package was distributed to selected Contractors for pricing and submissions are due for return in January 2020.

Engineering and designs have been completed for the Gifford creek airstrip upgrade requirements including increasing the runway length and key required infrastructure to gain accreditation for 30 seat aircraft operations.

Preliminary Ore sorting engineering development commenced.

Exploration Update

A reverse-circulation drilling program was completed over three weeks in late October-early November 2019 along the Auer and Yangibana deposit trends. The completed program comprised 3,060 metres in 80 holes. Holes were typically 30-40 metres in depth. The primary purpose of the holes was to facilitate ongoing surveys of subterranean invertebrate fauna within and surrounding planned mining areas at Auer and Yangibana.

Ironstones potentially associated with REE mineralisation were intersected in some holes that were drilled within known resource areas. Several holes drilled along strike of defined resource areas also intersected ironstones that have the potential to contain additional REE mineralisation. The ironstone intersections are consistent in appearance and geological context with the ironstones that host REE mineralisation at Auer and Yangibana.

Results are expected in Q1 2020.

Project Finance

Since obtaining in principle eligibility in April last year for the German government sponsored untied loan guarantee scheme (“UFG”) for up to US\$140m (~A\$200m) from Euler Hermes, progress on due diligence on the technical, economic, environmental, legal and social aspects of the Yangibana Project has practically completed. A parallel process was initiated with NAIF in mid-2019 and discussions are at an advanced stage for NAIF to fund the infrastructure component of the Yangibana project. This is estimated to be up to A\$200m. Accordingly, Hastings has progressed its project financing to term sheet negotiations for its loan terms with both lenders. These negotiations have been complex and lengthy in dealing with multiple issues on risk mitigation for the lenders along with the need for the offtake contracts being committed prior to credit approval for the loan terms.

Commercial

The media continues to speculate on the future availability of supply of rare earth as a critical raw material to western countries for military and advanced technologies. Whilst new potential sources of rare earth supply are being identified and developed, Hastings’ Yangibana project remains the next most likely source of supply of significance outside of China to come to market expected in 2022. Having obtained its EPA approval from the West Australian government, the mixed rare earth carbonate from Hastings complies with global ESG standards (ie. Environmental, Social and Governance) which has become a common requirement of many global institutional investors and industrial Tier 1 customers.

Ongoing negotiations for offtake contracts with Schaeffler, Thyssenkrupp and other potential German customers continue as they form the basis of the project finance loan for the UFK scheme, the KFW commercial facilities and the NAIF infrastructure loan. These offtake contracts are intricate in nature as they span a 10-year period. The mixed rare earth carbonate (MREC) that Hastings produces is required to be further separated by customers into individual oxides, such as neodymium and praseodymium prior to conversion into metals for alloying and finally being made into permanent magnets. As part of the service it provides in its offtake contracts, Hastings is currently working with its potential customers in determining the economic viability of a supply chain with downstream processing outside of China. Negotiations with our customers on the long-term offtake contracts require that Hastings' MREC be integrated into a complete value chain from mine to magnets. These offtake contracts form the pillar of the project loan from its project finance lenders.

Capital Raise - A\$12m Placement

In December 2019, the Company successfully completed a capital raise of A\$12m by way of the issue of 83,916,084 new ordinary Shares at a price of 14.3 cents per share, and 41,958,042 free attaching options under LR7.1 on the basis of one option for every two new shares subscribed.

The capital raising was well supported by long term shareholders, including the Chairman, Mr Charles Lew, who will participate for 3,183,000 shares, subject to shareholder approval at the next shareholders' general meeting. Funds raised will be used to further the development of the Yangibana Rare Earths Project as it progresses to construction and for working capital.

Brockman Project

The Company continues the process of preparing documentation to support the application of a Mining Lease on the Brockman Project.

Competent Person Statements

The information in this report that relates to Resources and Reserves is based on information compiled by Mr David Princep and Mr Stephen O'Grady. Mr Princep and Mr O'Grady are consultants to the Company and members of the Australasian Institute of Mining and Metallurgy. Consent to include statements in this report are provided below. Both have sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this report 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").

The information in this report that relates to Exploration Results is based on information compiled by Mr Benjamin Nicolson, an employee of the Company and a member of the Australian Institute of Geoscientists. Mr Nicolson has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this report 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"). Mr Nicolson consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

About Hastings Technology Metals Limited

Yangibana Project

Hastings Technology Metals Limited (ASX:HAS, Hastings or the Company) is advancing its Yangibana Rare Earths Project in the Upper Gascoyne Region of Western Australia towards production. The proposed beneficiation and hydro metallurgy processing plant will treat rare earths deposits, predominantly monazite, hosting high neodymium and praseodymium contents to produce a mixed rare earths carbonate that will be further refined into individual rare earth oxides at processing plants overseas.

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

Hastings holds 100% interest in the most significant deposits within the overall project, and 70% interest in additional deposits that will be developed at a later date, all held under Mining Leases. Numerous prospects have been identified warranting detailed exploration to further extend the life of the project.

Brockman 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).

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

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

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

For further information please contact:

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Andrew Reid, Chief Operations Officer, +61 432 740 975

Authorised by the Board

TENEMENT SCHEDULE

as at 31 December 2019 (All tenements are in Western Australia)

YANGIBANA PROJECT

Gascoyne Metals Pty Limited (100% subsidiary)

Es09/1989, 2007, 2084, 2086, 2095, 2129, 2137, - 100%

Es09/1703, 1704, 1705, 1706, 2296, 2298, 2333 (application) - 70%

E09/2333 – 70% (application)

Es09/2334, 2364 – 100% (application)

Ms09/157, 160, 164, 165 - 100%

Ms09/159, 161, 163 - 70%

Ps09/482, 489 - 100%

G09/10, 14 - 100%

G09/11, 13 - 70%

G09/21 (application)

L09/66-72, 74, 75, 80-83, 85, 86-87, 89 - 100%

L09/91 – 100% (application)

Yangibana Pty Limited (100% subsidiary)

Es09/1700, 1943, 1944, 2018, 2334 (application) - 100%

Ms09/158, 162 -100%

Gs09/17-18, 20 – 100%

BROCKMAN PROJECT

Brockman Project Holdings Pty Limited (100% subsidiary)

M80/636 (application)

E80/5248 (application)

P80/1626 to 1635 - 100%