

29 January 2018

DECEMBER 2017 QUARTERLY REPORT

Hastings Technology Metals Limited

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Board

Charles Lew (Executive Chairman)

Jean Claude Steinmetz (Non-Exec
Director)

Guy Robertson
(Finance Director
and Company Secretary)

Aris Stamoulis (Executive Director)

- **Definitive Feasibility Study completed for the Yangibana Rare Earths Project**
- **Initial operating life of 8 years provides NPV of \$466m, IRR of 78% and a payback period of 2.3 years**
- **First Probable Reserves estimated at 5.16mt at 1.12% TREO including 0.45% Nd₂O₃+Pr₆O₁₁**
- **Latest JORC Resources total 21.00mt at 1.17% TREO including 0.40% Nd₂O₃+Pr₆O₁₁**
- **Plan to produce up to 15,000 tons per annum of Mixed Rare Earths Carbonate on site at Yangibana**
- **Pre-production capital expenditure of A\$335 million and operating costs of A\$17.06/kg TREO (US\$12.8/kg)**
- **Native Title Agreement signed for the entire tenement area of 650sqkm covering all rare earths minerals mined and sold**

Yangibana Project

JORC Resources

Following the completion of the 2017 exploration drilling programme at the Yangibana Project, an updated JORC Resource estimate was completed by independent consultants Widenbar and Associates Pty Limited. Total Resources now stand at 21.00mt as shown in Table 1. Note that resource tonnes in the following tables are rounded to the nearest 100,000 tonnes and rounding errors may appear.

These resources include those within tenements held 100% by Hastings (Table 2) and those held in joint venture with Hastings holding 70% interest (Table 3).

Category	Tonnes	Nd ₂ O ₃ +Pr ₆ O ₁₁	TREO	Nd ₂ O ₃	Pr ₆ O ₁₁	Dy ₂ O ₃	Tb ₄ O ₇
		%	%	ppm	ppm	ppm	ppm
Measured	3,900,000	0.42	1.19	3,372	851	58.7	19.07
Indicated	8,600,000	0.42	1.25	3,368	858	47.7	16.31
Meas + Ind	12,500,000	0.42	1.23	3,369	856	51.1	17.17
Inferred	8,400,000	0.36	1.09	2,829	740	40.5	13.26
TOTAL	21,000,000	0.40	1.17	3,152	809	46.8	15.59

Note: Rounding errors may occur

Table 1 – Yangibana Project, November 2017 JORC Resources

Total Resource in Tenements 100% held by Hastings							
Category	Tonnes	Nd ₂ O ₃ +Pr ₆ O ₁₁	TREO	Nd ₂ O ₃	Pr ₆ O ₁₁	Dy ₂ O ₃	Tb ₄ O ₇
		%	%	ppm	ppm	ppm	ppm
Measured	3,000,000	0.42	1.06	3,404	809	63.3	19.50
Indicated	6,600,000	0.41	1.09	3,324	794	48.5	15.97
Meas + Ind	9,600,000	0.41	1.08	3,349	799	53.1	17.08
Inferred	5,800,000	0.35	0.93	2,840	684	40.9	12.83
TOTAL	15,400,000	0.39	1.03	3,158	756	48.5	15.49

Note: Rounding errors may occur

Table 2 – Yangibana Project, November 2017 JORC Resources in tenements 100% held by Hastings

Total Resource in Tenements 70% held by Hastings							
Category	Tonnes	Nd ₂ O ₃ +Pr ₆ O ₁₁	TREO	Nd ₂ O ₃	Pr ₆ O ₁₁	Dy ₂ O ₃	Tb ₄ O ₇
		%	%	ppm	ppm	ppm	ppm
Measured	900,000	0.43	1.64	3,258	997	42.8	17.55
Indicated	2,100,000	0.46	1.76	3,507	1,061	45.1	17.39
Meas + Ind	2,900,000	0.45	1.72	3,433	1,042	44.4	17.44
Inferred	2,700,000	0.37	1.42	2,806	860	39.6	14.17
TOTAL	5,600,000	0.41	1.58	3,134	955	42.1	15.88

Note: Rounding errors may occur

Table 3 – Yangibana Project, November 2017 JORC Resources in tenements 70% held by Hastings

Definitive Feasibility Study

During the quarter the Company released the Definitive Feasibility Study (DFS) for the Yangibana Rare Earths Project. The Project will produce a Mixed Rare Earths Carbonate (MREC) rich in Neodymium (Nd) and Praseodymium (Pr), critical materials used in the manufacture of permanent magnets, which are found in electrical components of many new technology products, from electric vehicles, renewable energy wind turbines and electronic consumer products.

The DFS demonstrates attractive economics using conservative price projections for the key rare earths of Nd-Pr which the company anticipates will have solid demand based on the strong trending growth of electric vehicles and wind turbines in particular, as well as other technological innovations. The DFS furthermore demonstrated the technical viability of the Yangibana flow sheet.

The DFS calculations are based on the Maiden JORC Ore Reserves of 5.15 million tonnes at 1.12% Total Rare Earths Oxide (TREO) for the first six years of operations, along with a Production Target for years 7 and 8 based on additional JORC Measured and Indicated Resources. All the Ore Reserves and Mineral Resources included in the DFS lie within tenements owned 100% by Hastings.

The Probable Ore Reserves at Bald Hill and Fraser's deposits are based on the JORC Resources shown in Tables 4 and 5, that form part of the total resources of 21.00 million tonnes. Apparent discrepancies might appear due to rounding.

Tenement	Category	Tonnes	%Nd ₂ O ₃ +Pr ₆ O ₁₁	%TREO
M09/157	Measured	2,700,000	0.40	1.00
	Indicated	1,890,000	0.40	1.01
	Inferred	1,110,000	0.33	0.88
	TOTAL	5,700,000	0.39	0.98
M09/162	Indicated	160,000	0.44	1.04
	Inferred	230,000	0.42	1.06
	TOTAL	400,000	0.43	1.05

Table 4 – JORC Resources at Bald Hill Deposit, November 2017

Tenement	Category	Tonnes	%Nd ₂ O ₃ +Pr ₆ O ₁₁	%TREO
M09/158	Measured	220,000	0.68	1.60
	Indicated	650,000	0.65	1.52
	Inferred	660,000	0.31	0.74
	TOTAL	1,530,000	0.51	1.20
E09/2018	Inferred	40,000	0.18	0.39
	TOTAL	40,000	0.18	0.39

Table 5 – JORC Resources at Fraser’s Deposit, November 2017

Mining by open pits will use conventional drill and blasting methods and it is planned to provide 1.0 million tonnes per annum of ore to the processing plant.

The ore dips at between 10 and 45 degrees and varies in thickness between 1m and 20m at Fraser’s and 1m and 30m at Bald Hill, with an average thickness of 4m. The ore zone (ironstone) is visually distinct from the host rock, providing some control for ore identification.

RC grade control drilling will be done on a 10m x 10m grid to control ore delineation.

Selective blasting and mining around the ore zones are designed to remove the hanging-wall as cleanly as possible to expose the ore.

The ore is then mined to the footwall contact using selective mining. Due to the high value of the ore, a high ore recovery is the focus of mining. As such, a 50cm skin of dilution is added to the ore mined to enable a 98% ore recovery assumption.

Pits will be dewatered ahead of mining using bores to provide a dewatered rock mass, with a maximum 8 litres per second pumped from each pit. Stormwater will be managed in pit using sumps and with capacity for pumping up to 10 litres per second in each pit.

Waste from each pit will be stored in adjacent waste dumps. Some of the Bald Hill pit is backfilled to minimise haulage distances. Mineralised material will be transferred directly to the Run-Of-Mine (ROM) pad or to a low-grade stockpile with the mining trucks (as the distance travelled is reasonably low).

Pit optimisations were completed to determine the economic mining limits for each deposit. Only Measured and Indicated Resources were considered for processing. Pits were then designed in stages to enable higher grades to be targeted and waste extraction to be deferred. Both Bald Hill and Fraser’s pits are approximately 125m deep. The main Bald Hill pit is approximately 1,100m long and 600m wide. The Fraser’s pit is approximately 600 m long and 250m wide. The waste dumps are located to minimise haulage distances and were

constrained by lease boundaries (Bald Hill) and water courses. The Bald Hill dump covers an area of 100 hectares (ha), and the Fraser's dump covers 86ha.

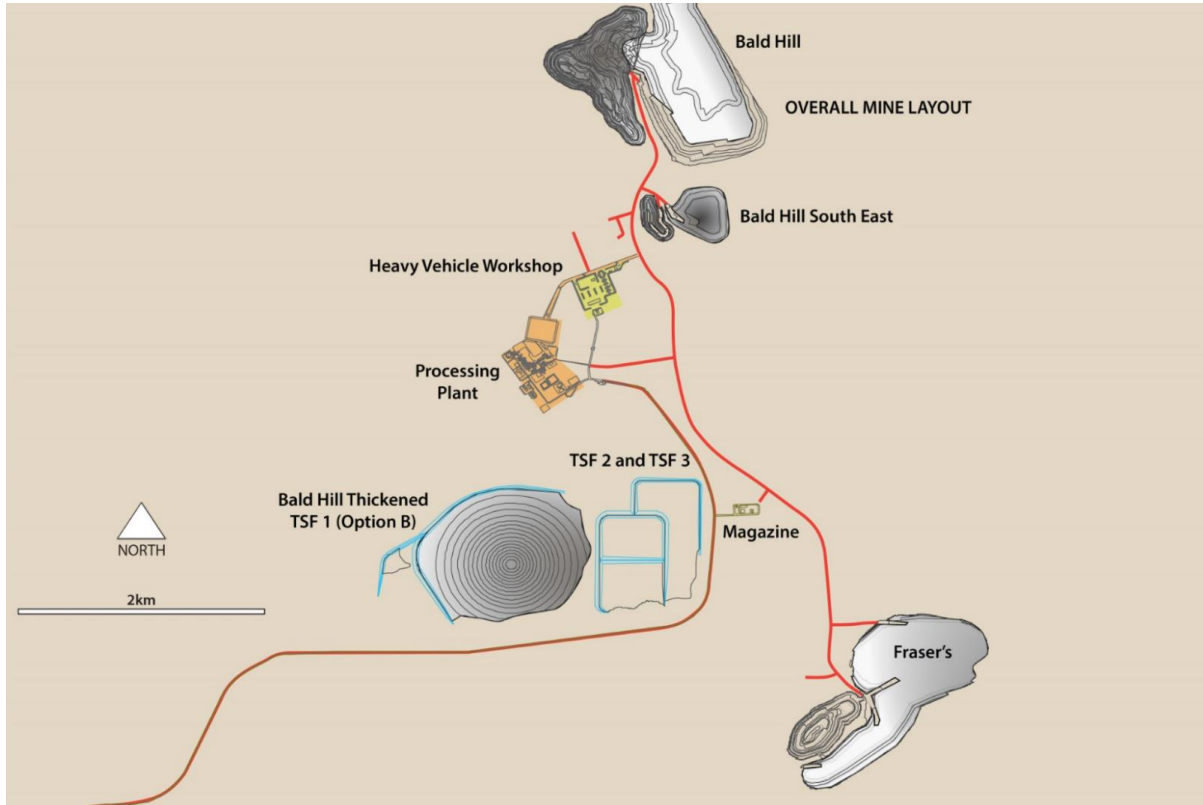


Figure 1 – Pit and Waste Dump Designs for Bald Hill and Fraser's, and Plant and Tailings Dam Layouts

The Company has completed extensive metallurgical testwork culminating in pilot plant tests on a composite sample of material from Bald Hill and Fraser's. This testwork has defined a route comprising crush, grind, flotation, acid bake with water leach and precipitation of a Mixed Rare Earths Concentrate. The key parameters are shown in Table 6.

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Definitive Feasibility Study Parameters	
Bald Hill and Fraser's JORC Resources	Measured and Indicated
Mining Method	Open Pits
Mining Dilution – 0.5m skin on HW and FW incorporated in resource estimation	variable
Mining Recovery	98%
Processing Route	Flotation, Acid Bake – Water Leach and MREC Precipitation
Overall Processing Recovery (TREC) – Ore to MREC	74.9%
Target Production Rate (MREC)	15,000 tpa
Target Contained Nd ₂ O ₃ +Pr ₆ O ₁₁	3,400 tpa
Pre-Production Capital Costs	A\$335.3m
Production Capital Costs	A\$13.1m
Operating Costs	A\$17/kg
Basket Value	Bald Hill US\$31.70/kg Fraser's US\$32.15/kg
Exchange Rate US\$:A\$	0.75
Discount Rate	8%

Table 6 – Summary of Key Parameters Used To Establish Probable Ore Reserves

All environmental studies and approvals processing are progressing as required. Based on the resources in Tables 1 and 2 and the Modifying Factors, Snowden has estimated the Probable Ore Reserves as shown in Table 7.

Item	Bald Hill	Fraser's	Total
Tonnes (kt)	4,380	780	5,160
TREO (%)	1.04	1.58	1.12
Nd ₂ O ₃ (ppm)	3,330	5,320	3,630
Pr ₆ O ₁₁ (ppm)	783	1,380	873
Eu ₂ O ₃ (ppm)	79	83	79
Gd ₂ O ₃ (ppm)	189	197	190
Sm ₂ O ₃ (ppm)	376	436	385
CeO ₂ (ppm)	4,150	6,900	4,560
La ₂ O ₃ (ppm)	1,200	1,200	1,200
Dy ₂ O ₃ (ppm)	62	68	63
Tb ₄ O ₇ (ppm)	19	21	19
Ho ₂ O ₃ (ppm)	7	7	7
Er ₂ O ₃ (ppm)	10	11	10
Tm ₂ O ₃ (ppm)	1	1	1
Yb ₂ O ₃ (ppm)	5	5	5
Lu ₂ O ₃ (ppm)	1	1	1
Y ₂ O ₃ (ppm)	158	169	160

Table 7 – Bald Hill and Fraser's Ore Reserves, November 2017

68% of the initial 8-year operating life is underpinned by these Ore Reserves. An Additional Production Target of 2.64 million tonnes of plant feed based on Measured and Indicated Resources from Auer, Auer North, Yangibana West and Yangibana deposits is included for the financial evaluation. These deposits were selected as the Mineral Resources in these deposits have been demonstrated, through variability testwork programmes, to be compatible with the process flowsheet developed in the DFS. Preliminary modifying factors were applied during a pit optimisation of the Mineral Resources to develop the Additional Production Target tonnage and subsequently, a mining schedule was developed from the optimised pits and used in the financial evaluation of the project.

The processing route commences with comminution and beneficiation, resulting in a beneficiated concentrate upgrade by 20 times from the ROM ore, as demonstrated through the DFS, to a 25% TREO concentrate.

This concentrate is further processed downstream through a hydrometallurgical process that involves acid bake, water leaching, impurity removal and precipitation to produce up to 15,000 tpa of MREC. The MREC will contain up to 3,400 tpa of neodymium oxide (Nd₂O₃)+praseodymium oxide (Pr₆O₁₁). Hastings will sell this Nd₂O₃+Pr₆O₁₁ rich MREC to rare earths oxides separators or other customers further along the rare earths supply chain.

The Project is estimated to generate annual sales revenue of A\$379 million, a nominal after tax NPV of A\$466 million (discount rate of 8%), an Internal Rate of Return (IRR) of 78% and a 2.3-year payback (average over the 8 years from first draw down) as shown in Table 8.

Operating Life	8 years
Net Present Value (NPV)	A\$466m
Internal Rate of Return (IRR)	78%
Payback Period	2.3 years

Table 8 – Yangibana Project Definitive Feasibility Study Key Economics

Revenue streams are highly dependent on Nd-Pr prices as these account for 85-90% of projected revenue.

The Company will continue to work on identifying areas where capital expenditure can be further reduced. Significant gains have been achieved on operating expenses, with a reduction of 30% achieved from the PFS. With estimated annual operating expenses at A\$142 million per year, the average operating cost for the project is A\$17.0/kg TREO (US\$12.8/kg), including all fixed and variable costs.

The DFS financial model assumes an average long-term US\$/A\$ exchange rate of US\$0.75 and price forecasts from 2017 to 2027 for rare earths prices from Argus Media, an independent provider of price information, market data and business intelligence for the global resource industry. Hastings anticipates an increase in some of the key rare earths prices, especially Nd-Pr over the next decade due to the strong demand for permanent magnets arising from the growth in electric vehicles. The price rises seen in 2017 demonstrate that the Chinese authorities are having a degree of success in shutting down illegal production in China and Hastings expects the emphasis on sustainable production to continue in China and be supportive of Nd-Pr prices.

Native Title Agreement

Also during the quarter, the Company was pleased to announce that it has signed a Native Title Agreement (NTA) with the Thiin-Mah Warriyangka, Tharrkari and Jiwarli People (TMWTJ People) in respect of the Yangibana Project.

BROCKMAN PROJECT

No work was carried out on the Brockman Project during the quarter.

Compliance Statement

Forward Looking Statements

This announcement and the DFS contain certain statements with respect to future matters and which may constitute “forward looking statements”. Such statements are only predictions and are subject to inherent risks and uncertainties which could cause actual values, results, performance or outcomes to differ materially from those expressed, implied or projected. Investors are cautioned that such statements are not guarantees of future performance and accordingly not to put undue reliance on forward-looking statements due to the inherent uncertainty therein.

Competent Person Statements

The information in this announcement and DFS 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 and DFS that relates to Exploration Results is based on information compiled through 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 DFS 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 consent to the inclusion in this announcement and DFS of the matters based on his information in the form and context in which it appears.

The information in this announcement and DFS that relates to the Fraser’s and Bald Hill Ore Reserve is based on information reviewed or work undertaken by Mr Frank Blanchfield, FAusIMM, and an employee of Snowden Mining Industry Consultants. Mr Blanchfield has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the preparation of mining studies to qualify as a Competent Person as defined by the JORC Code 2012. Mr Blanchfield consents to the inclusion in this announcement and DFS of the matters based on his information in the form and context in which it appears.

The scientific and technical information in this announcement and DFS that relates to process metallurgy is based on information reviewed by Mr Dale Harrison MAusIMM, who is a metallurgical consultant and employee of Wave International. Mr Harrison has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined by the JORC Code 2012. Mr Harrison consents to the inclusion in this announcement and DFS of the matters based on his information in the form and context in which it appears.

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. The Yangibana Project hosts rare earths deposits rich in neodymium and praseodymium, elements vital in the production of 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 Definitive Feasibility Study has established JORC Probable Reserves of 5.15 million tonnes at 1.12% total rare earths oxides (TREO) including 0.45% neodymium and praseodymium oxides ($\text{Nd}_2\text{O}_3 + \text{Pr}_6\text{O}_{11}$). This reserve is the basis of the initial operation at a planned production rate of up to 15,000 tonnes per annum (t.p.a.) MREC including 3,400 t.p.a. of $\text{Nd}_2\text{O}_3 + \text{Pr}_6\text{O}_{11}$.

Including the above Reserves, the Company has JORC Measured, Indicated and Inferred Resources of 21.00 million tonnes at 1.17% TREO including 0.40% $\text{Nd}_2\text{O}_3 + \text{Pr}_6\text{O}_{11}$. From this Resource, an Additional Production Target (APT) of a further 2.64 million tonnes from 100% owned ground, from Measured and Indicated Resources, will add to feed for the production plant in later years.

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 the future, plus the numerous other targets identified to date.

Brockman Project

The Company is 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 Resources totalling 41.4 million tonnes (comprising 32.3 million tonnes Indicated Resources and 9.1 million tonnes Inferred Resources) at 0.21% TREO, including 0.18% HREO, plus 0.36% Nb_2O_5 and 0.90% ZrO_2 .

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

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:

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TENEMENT SCHEDULE

as at 31 December 2017 (All tenements are in Western Australia)

YANGIBANA PROJECT

Hastings Technology Metals Ltd

Es09/2084, 2086, 2095, 2129 - 100%

P09/482 - 100%

M09/157 - 100%

Gascoyne Metals Pty Limited (100% subsidiary)

Es09/1989, 2007, 2137, - 100%

Es09/1043, 1703, 1704, 1705, 1706 - 70%

Ms09/159, 161, 163 - 70%

Ms09/160, 164, 165 - 100%

G09/10 - 100%

G09/11, 13, 14 - 70%

L09/66-72, 74, 75, 80-83 - 100%

Yangibana Pty Limited (100% subsidiary)

Es09/1700, 1943, 1944, 2018 - 100%

Ms09/158, 162 - 100%

Gs09/16-18 – 100%

BROCKMAN PROJECT

Brockman Project Holdings Pty Limited (100% subsidiary)

P80/1626 to 1635 - 100%

E80/4555 - 100%