



ASX Announcement

29 January 2021

Second Quarter Activities Report Ending 31 December 2020

Highlights

- Oversubscribed Rights Issue completed raising \$5.95 million¹
- Accelerated PFS and development program progressed and on-track²
- PFS Update selective mining options and team defined for the PFS²
- Rothsay Royalty Agreement - Company anticipates royalty payments up to \$595,000³
- Ore Sorting technology agreement to purchase magnetic resonance sensor for bulk trial testing⁴
- Aggressive marketing strategy ongoing

RAZORBACK IRON PROJECT – PREFEASIBILITY STUDY

During the quarter, Magnetite Mines Limited (ASX:MGT) (the Company) made several key advancements on the Razorback Iron Project (Project) Prefeasibility studies (PFS)². In particular, infrastructure and permitting studies were progressed in tandem with technical studies focussed on processing flowsheet and geological modelling. The PFS aims to narrow the scope of a potential mine development towards a single optimised go-forward case. To that end, several studies exploring the optionality of key components of a potential mine development have been initiated during the reporting period.

Geological Modelling

During the quarter McElroy Bryan Geological Services Pty Ltd (MBGS) successfully completed the geological modelling of the Razorback geology using the Minex, seam modelling software. This model which will serve as the basis for mining and pit optimisation was able to model the discrete banding of mineralisation as given by down hole geophysical logging as well as geochemical analysis. The modelling together with a suite of high resolution Davis Tube Recovery (DTR) testwork was able to demonstrate the nature of banded, stratabound mineralisation demonstrated in many lithological units at the Project. By resolving the bands of mineralisation, a more selective approach to mining may be utilised to minimise internal dilution where possible resulting in higher ore grades compared to a typical bulk mining scenario. Refinement of the model is ongoing with further high resolution DTR's which seek to replicate mining widths planned for the following quarter.

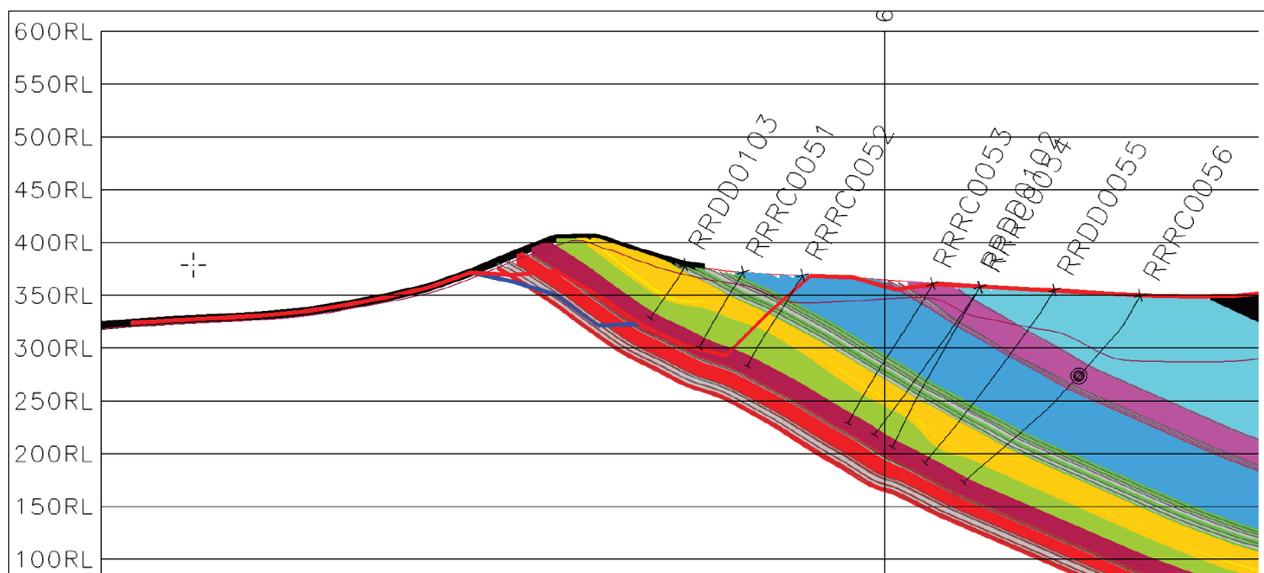


Figure 1. Minex seam model cross-section at the Razorback Iron Project

Mining Studies

Mining studies were initiated during the reporting period. This work focussed on the first pass pit optimisation which reported grades and tonnes of material available for a number of mining scenarios. These scenarios included options for stockpiling of lower grade ore with grades falling between the overall economic cutoff for the resource and an initial plant feed cutoff. The work was facilitated by both in-house and consultant mining engineers employed during the reporting period. Work is ongoing with further geotechnical, mining methodology and pit design refinements being made to the model.

Ore Sorting

As previously announced, testwork undertaken by CSIRO during the quarter confirmed the accurate response of the ore body to magnetic resonance grade determination, the first step in demonstrating and proving the application of the NextOre technology to the Razorback development plan.

Processing and Metallurgical Testwork

Flow sheet optimisation was initiated through a comprehensive metallurgical testwork program. The testwork aims to further refine the processing flow sheet with respect to the first 5 years of mining, a critical period related to development capital payback. The study will also appraise the potential recovery of hematite in addition to magnetite as an additional beneficiated product. The outcomes of the study will provide an optimised flowsheets and capital and operational cost estimates.

Infrastructure

Several important studies have been initiated to assess key infrastructure components such as roads, rail, ports and power. These studies follow the outcomes of the 2019 Scoping Study⁵ which identified the availability of high voltage power ~100km from the Project area, local gazetted roads, Federal rail and several port options. Work during the PFS includes an assessment of offtake, capacity and capital requirements of these options and studies are well underway to examine the most economic options towards a scalable low-cost small scale start-up mining development.

Permitting and Environmental Studies

Ecological Australia Pty Ltd (ELA) completed a permitting pathway and gap analysis study as part of ongoing permitting and environmental studies.⁶ The report details the expected timing of Federal and State government permitting and forms the basis for a mining lease and associated permit preparation. In addition, ELA completed a Spring flora and fauna survey in late 2020, the results of which are expected in the following reporting period. An additional further flora and fauna survey is expected during 2021 to further inform and de-risk permitting and environmental studies.

Financial Modelling

A new financial model was developed and validated. A series of mining and processing options using different pit shells, mining rates and low grade stockpile cutoffs were evaluated. This work informs the work on mining schedules which is currently underway.

PFS Team

The Company is close to completing recruitment of its PFS Team for the study work. As announced on 17 December 2020, Stephen Weir was appointed to the role of Chief Development officer, working alongside Trevor Thomas as General Manager Geology.² Mr Matthew Paul joined the Company as Senior Geologist and Mr Jack Masi has recently been appointed as Senior Mining Engineer. Work continued with McElroy Bryan Geological Services and their team of specialist geologists and Hatch Limited were appointed during the period to undertake metallurgical test work, confirm the process flow sheet and generate cost estimates. In addition, significant progress was made during the quarter towards finalising the engagement of external specialists in relation to the mining, power, port and logistics and stakeholder engagement aspects of the PFS.

CORPORATE

Renounceable Rights Issue

On 2 October 2020, the Company announced that the renounceable pro-rata rights issue to eligible shareholders announced to the ASX on Friday 4 September 2020 (Rights Issue) closed on Tuesday 29 September 2020 significantly oversubscribed and raised \$5.95 million (before costs).

The funds raised will be used by the company to accelerate the pre-feasibility study activities at the Razorback Iron Project, strategic partner promotion, negotiations and associated expenses, general corporate expenses, for working capital and the costs of the Rights Issue.

Rothsay Royalty Agreement

On 13 October 2020 the Company announced an update on the Royalty Agreement between Silverlake Resources Limited (Silver Lake) and the Company, dated June 2007³ to the Rothsay gold operation owned by Silver Lake. The Company anticipates the revenue from the royalty to commence in the second half of 2021, when ore from the Rothsay gold operation located in Western Australia is expected to be processed and sold.

Under the Royalty Agreement, the Company is entitled to a royalty of A\$10 per ounce of gold extracted from Rothsay tenements commencing once Silver Lake has sold 10,000 ounces. The royalty payable to the Company will cease after the cumulative royalty payments reach an amount of A\$595,000.

Ore Sorting Technology Agreement

The Company entered into an agreement with NextOre Pty Ltd (NextOre) to supply a mobile bulk ore sorting plant using a Magnetic Resonance (MR) sensor for a trial of the technology on the Razorback Project⁴. The equipment is intended for use in bulk testing at the Project site. The NextOre Agreement included the non-refundable deposit of \$100,000 and further staged payments of \$700,000.

The scope of the agreement covers supply of a full-scale mobile ore sorting plant to site at the Razorback Project for sorting magnetite ore using MR technology during the trial period for the purpose of mine feasibility analysis. The agreement includes milestone dates, with the equipment despatch from the CSIRO Lucas Heights facility in 2021.

The NextOre Agreement grants the Company exclusive use of NextOre's leading edge Magnetic Resonance ore sorting technology for any magnetite processing applications Australia-wide and all iron ore applications in the Braemar (including NSW) for a period of 4 years.

Razorback BMD Farm-in will not proceed

Following the announcement of 15 June 2020 in relation to a non-binding, conditional term sheet for a proposed farm-in transaction by Braemar Mining Developments (BMD) into the Razorback Iron Project, the Company announced on 29 October 2020 that the parties had agreed that the proposed farm-in transaction will not proceed.⁸

Mr. Peter Schubert, Chairman said:

In this last quarter, your company has made substantial progress towards delivery of a high grade iron ore business. We have strengthened our team with outstanding employees supported by well recognised technical specialist consulting firms. The PFS work is fundamentally and systematically assessing and optimising options, with a new geological model, detailed metallurgical testwork and a new financial model. The Magnetite Mines team has a clear vision and commitment to deliver value by building an iron ore business based on the globally significant Razorback high grade iron ore resource in the most capital efficient and timely manner possible. It is pleasing to see this value proposition is increasingly recognised by the investment community, with a substantial appreciation in both the Company's volume of shares traded and market valuation. The Company continues to aggressively market and pursue all opportunities on behalf of shareholders that make good commercial sense and we thank shareholders for their continued support and encouragement and look forward to further updating the market as we continue the accelerated PFS work.

This report has been authorised for release to the market by the board.

For further information contact:

Peter Schubert
Executive Chairman
+61 416 375 346



Figure 2. Razorback Iron Project – Razorback Ridge outcropping with distinctive dark iron ore banding at surface (looking south west)

ABOUT THE RAZORBACK IRON PROJECT

The Razorback Iron Project (Project) is a magnetite iron ore deposit capable of producing a high grade iron ore concentrate product for use in steel production. The Project is 100% owned and operated by the ASX listed Magnetite Mines Limited (ASX: MGT).

With a defined 2012 JORC resource of 3.9Bt Iron Ore^{9,10}, the Razorback Iron Project consists of two very large magnetite iron ore deposits, the Razorback and the Ironback Hill deposits hosted in the Braemar Iron Formation. It is located 240 NE of Adelaide, South Australia, near the regional town of Yunta in arid, low intensity pastoral country.

The large resource base is held within five 100% owned and operated tenements totalling 1,690 square kilometres. The Project is situated 45km from open-user rail, 100km from the power grid and 200km to existing deep water ports.⁵

Magnetite Mines has completed a scoping study into a low cost, staged development using existing infrastructure and simple magnetic processing to produce a high grade concentrate at competitive capital and operating cost. The Company has commenced planning a Pre-feasibility Study(PFS) in 2020 to progress the low cost development.²

In parallel, the Company has exclusivity over a new technology developed by CSIRO in Australia for magnetic resonance ore sorting.⁴ This technology has the potential to substantially enhance the project's competitiveness and efficiency and will be investigated as part of the PFS.²

ABOUT MAGNETITE MINES LIMITED

Magnetite Mines Limited is a development stage mineral exploration company advancing the Razorback Iron Project located in the Braemar Iron Province of north-east South Australia.

Directors

Peter Schubert	Executive Chairman
Mark Eames	Non-Executive Director
Malcom Randall	Non-Executive Director

References:

1. ASX Announcement – 02/10/20 – Results of Renounceable Rights Issue
2. ASX Announcement – 17/12/20 – Pre Feasibility Study Update
3. ASX Announcement – 13/10/20 – Rothsay Royalty Agreement Update
4. ASX Announcement – 07/10/20 – Ore Sorting Technology Agreement Update
5. ASX Announcement – 07/11/19 – Positive Razorback Scoping Study Results
6. ASX Announcement – 14/09/20 – Permitting and Environmental Studies Initiated
7. ASX Announcement – 04/09/20 – Rights Issue to Raise %5.65M, Underwritten to \$4M
8. ASX Announcement – 29/10/20 – Razorback Farm-in will not proceed
9. ASX Announcement – 12/11/18 – Razorback Iron Project – JORC 2012 Resource Update
10. ASX Announcement – 20/11/18 – Ironback Hill Deposit – JORC 2012 Resource Update

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

MAGNETITE MINES LIMITED

ABN

34 108 102 432

Quarter ended ("current quarter")

31 December 2020

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation (if expensed)	(6)	(6)
(b) development	-	-
(c) production	-	-
(d) staff costs	(152)	(254)
(e) administration and corporate costs	(163)	(264)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	1	2
1.5 Interest and other costs of finance paid	-	(102)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other – COVID-19 Cashflow boost	12	37
1.9 Net cash from / (used in) operating activities	(308)	(587)
2. Cash flows from investing activities		
2.1 Payments to acquire:		
(a) entities	-	-
(b) tenements	-	-
(c) property, plant and equipment	(9)	(9)
(d) exploration & evaluation (if capitalised)	(529)	(706)
(e) investments	-	-
(f) other non-current assets	-	-

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	3	3
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	(535)	(712)
3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	5,948	5,953
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	2	47
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(519)	(524)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	(100)
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details)	-	-
3.10	Net cash from / (used in) financing activities	5,431	5,376
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	320	831
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(308)	(587)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(535)	(712)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	5,431	5,376

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	4,908	4,908

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	103	320
5.2	Call deposits	4,805	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	4,908	320

6. Payments to related parties of the entity and their associates

- 6.1 Aggregate amount of payments to related parties and their associates included in item 1
- 6.2 Aggregate amount of payments to related parties and their associates included in item 2

**Current quarter
\$A'000**

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Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

7. Financing facilities	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>		
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 Total financing facilities	-	-
7.5 Unused financing facilities available at quarter end		-
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.	

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (Item 1.9)	(308)
8.2 Capitalised exploration & evaluation (Item 2.1(d))	(535)
8.3 Total relevant outgoings (Item 8.1 + Item 8.2)	(843)
8.4 Cash and cash equivalents at quarter end (Item 4.6)	4,908
8.5 Unused finance facilities available at quarter end (Item 7.5)	-
8.6 Total available funding (Item 8.4 + Item 8.5)	4,908
8.7 Estimated quarters of funding available (Item 8.6 divided by Item 8.3)	5.82
8.8	If Item 8.7 is less than 2 quarters, please provide answers to the following questions:
1.	Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?
	Answer:
2.	Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?
	Answer:
3.	Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?
	Answer:

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 29 January 2021

This report has been authorised for release to the market by the board.

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.

The following tenements held by Magnetite Mines Limited (and its controlled entities) as at 31 December 2020

Tenement/ Project Name	Tenement Number	Interest at Beginning of Quarter	Interest at End of Quarter	Acquired during the Quarter	Disposed during the Quarter	Joint Venture Partner/Farm -In Party
SOUTH AUSTRALIA						
PUALCO	EL6126	100%	100%	-	-	-
RED DRAGON	EL6127	100%	100%	-	-	-
RAZORBACK RIDGE	EL6353	100%	100%	-	-	-
DRAGON'S TAIL	EL5902	100%	100%	-	-	-
SISTER'S DAM	EL6037	100%	100%	-	-	-