

ASX ANNOUNCEMENT

29 OCTOBER 2021

FIRST QUARTER ACTIVITIES REPORT

ENDING 30 SEPTEMBER 2021

Highlights

- Pre-Feasibility Study (PFS) completed and Definitive Feasibility Study (DFS) underway
- GHD appointed to deliver critical Power Supply and Non Process Infrastructure elements of the DFS
- Key Company Personnel appointed for the management of the DFS work programs
- Environmental Baseline Studies Ongoing data collection supporting permitting and approvals
- Data Collection Drilling commences for groundwater and metallurgical sample acquisition

Magnetite Mines' Executive Chairman and CEO, Peter Schubert, commented:

"During the quarter, the Magnetite Mines team continued our process of steady, meticulous attention to detail, with the delivery of a successful PFS and now the DFS work currently underway on the Razorback Iron Ore Project.

The PFS was a significant milestone for the Company which demonstrated the robustness of our high-grade iron ore project across a range of iron ore pricing scenarios and validated our staged, low capital development pathway.

We have continued our practice of securing best-in-class contractors to support our expanded team with the appointment of Hatch and GHD. We will work to industry best practice to ensure the study phases accurately estimate the parameters of the project we will build and meet the standards of potential financial partners.

The Razorback Iron Ore Project is based on a very large, long-life resource that will produce a high-grade, low impurity iron ore concentrate. Razorback is uniquely located in a tier 1 mining jurisdiction, near existing open access infrastructure with ready connectivity to low cost, largely renewable electricity.

We have observed a heightened focus and interest in pathways to low emissions steel this year and as a high grade project, we believe that the Razorback product will be well suited to lower emissions steelmaking. During the quarter, we have further advanced discussions with potential partners and financiers and ESG attributes are a critical factor for many industry participants."



RAZORBACK IRON ORE PROJECT

During the quarter, Magnetite Mines Limited (ASX:MGT) (Company) announced the results of the PFS for development of its 100% owned Razorback Iron Ore Project (Project) and is now proceeding with the DFS.

The PFS confirmed the opportunity for a high-return, long-life, initial development of the large Razorback resource which leverages the advantages of resource scale, low stripping ratio, available infrastructure, low cost sustainable power and leading product quality.

The PFS reviewed a range of options based on the inherent advantages of the Project's resource to develop an optimised, go-forward scope:

Mining and geology

Extensive mining studies have confirmed feasible schedules close to average resource grade underpinning the 473Mt Probable Ore Reserve. A gridded geological model confirmed the potential grade and recovery uplift from selective mining, which will be the focus of DFS geological and geo-metallurgical investigations.

Metallurgy and process plant estimates

The Company has generated a preferred flowsheet and plant layout which has significant advantages in efficiency and separation over the conventional configuration used in the scoping study estimates. The inclusion of fine grinding and flotation allows efficient production of high product quality concentrate. The final scale of the preferred go-forward option is plant feed of approximately 15.5Mtpa with ability to process up to 20% DTR with a capacity of up to 3.1Mtpa concentrate.

Power

The Company has looked at a range of power supply arrangements, investigating a range of generating sources and possible transmission mechanisms. The go-forward scope is based on a 132KV line connecting to the existing South Australian power grid at Robertstown (about 130Km South of the Project), with further work to be undertaken around sourcing of the electricity during DFS as we work towards a low emissions footprint for the project.

Transport

A range of transport options were reviewed, confirming that there are a range of low capital and operating cost options available using existing transport networks.

The table below summarises the results of the PFS work. All cases are based entirely on Reserves, and demonstrate the Project is technically robust and has the potential to generate strong financial returns. The 'Reference Case' is based on a 12.8Mtpa feed concentrator (for which capital estimates have been developed to AACE Class 4 standard) for approximately 2Mtpa of high-grade concentrate. The 'Plant Optimisation Case' uses operating and capital estimates for an optimised concentrator layout with a feed of 15.5Mtpa (for which capital estimates have been developed by Hatch to AACE Class 5 standard). The 'Head Grade Improvement Case' is based on higher mining rates with a head grade upgrade from selective mining or ore sorting (with capital estimates also to Class 5) for approximately 2.7Mtpa of high-grade concentrate and this is the selected go-forward case for DFS.



Table 1. Key Metrics - 2021 PFS at 62% iron ore reference prices of \$110 and \$150

Key Financial and Production Metrics	Unit	Referer	nce Case	-	timisation ase		Grade nent Case
Iron ore price (62% Fe)	US\$/t	110	150	110	150	110	150
LOM Ore mined (100% reserves)	Mt	472.7	472.7	461.4	461.4	472.7	472.7
LOM Concentrate produced	Mt	68.6	68.6	67.6	67.6	63.2	63.2
Strip ratio	t:t	0.16	0.16	0.10	0.10	0.16	0.16
Mining rate	Mtpa	20	20	18	18	25	25
Operation life	Years	37	37	30	30	23	23
Plant feed	Mtpa	12.8	12.8	15.5	15.5	15.5	15.5
LOM yield	%	14.5%	14.5%	14.7%	14.7%	18.2%	18.2%
Average product	Mtpa	1.9	1.9	2.2	2.2	2.7	2.7
Class of plant estimate	AACE	4	4	5	5	5	5
Capital estimate	A\$M	572	572	665	665	675	675
Post tax NPV	A\$M	296	1,005	520	1,233	669	1,544
Post tax IRR	%	14%	26%	17%	27%	20%	33%
All in breakeven 62% Fe price	US\$/t	66	66	58	58	54	54
Payback	Years	5.9	3.1	4.9	2.8	5.0	2.3
Average net cashflow (post tax)	A\$M	73	138	105	184	141	237

Note: NPVs in real terms as at 30 June 2022 using 8% post tax real discount rate, ungeared basis.

The financials are ungeared, post tax results and are attractive (see table 1). The Project has been optimised at the long run average prices for the 62% iron ore fines reference price in real terms, that is US\$110/CFRt (the average of the last 10 years is US\$98/CFRt in nominal terms or US\$110/CFRt adjusted for inflation) at an exchange rate of 75 cents. The price adjustment used for the high-grade Razorback concentrate is US\$25/CFRt based on typical historic grade and quality adjustments.

The PFS was prepared to AACE or PFS standards and included a total capital expenditure contingency averaging 23%.

A full explanation of the Positive Pre-Feasibility Study Results can be found at this link.

DEFINITIVE FEASIBILITY STUDY

Following the positive results of the Pre-Feasibility Study (PFS) released at the beginning of July 2021¹, the Company formally commenced the Definitive Feasibility Study (DFS) for the Project, with activities undertaken during the Quarter including:

Budgeting and Planning

A comprehensive Work Breakdown Structure and Schedule has been developed which will allow accurate Project cashflow forecasting and activity planning.

Appointment of Key Contractors

During the quarter, the Company announced the appointment of leading global engineering and professional services company, GHD to deliver the critical Power Supply and Non Process Infrastructure elements of the DFS for the Project.



Hatch, a global engineering, project management and professional services company were also appointed subsequent to the quarter to complete the process plant section of the DFS.

Key areas of Hatch's work will include:

- Designing a metallurgical test programme to confirm comminution and processing properties;
- Improving and defining the process flow sheet based on metallurgical results and optimisation reviews;
- Developing the mechanical, piping, electrical, structural, and civil engineering to support an AACE Class 3 Capital Cost estimate; and
- Providing Construction and Procurement input to develop the contracting strategy for execution.

Both GHD and Hatch's appointment continues the work both companies completed in the PFS and reflects Magnetite Mines' continued strategy of appointing high calibre, well recognised companies to partner with as Razorback is developed.

A full explanation of the appointment of GHD can be found at this link and for Hatch at this link.

Appointment of Key Personnel

During the quarter, several key staff and consulting appointments were made. Duncan Orchard was appointed as Commercial and Finance Manager and Rafael Orschulok was appointed as the Owner's Lead Electrical Engineer. Rafael is an electrical engineer with considerable experience gained in the South Australian power transmission and mining sectors and will provide specialist advice to Magnetite Mines owners team and assist GHD in delivering the Transmission Line component of the DFS.

DFS Data Collection

During the quarter data collection to inform DFS technical and permitting was undertaken.

Drilling Programs

A series of drilling programs to delineate metallurgical characteristics and resource definition were compiled for the Razorback Iron Ore Project. Appropriate consultation with Traditional Owners, stakeholders and government agencies were progressed with completion of formal permitting occurring in the following reporting period (second quarter). Subsequent to the quarter, drilling contractor, Foraco were engaged to deliver the initial metallurgical drilling program at the Iron Peak deposit. Permitting and consultation with stakeholders for further drilling programs including water exploration, infill drilling and resource extension 'step-out' drilling is underway.

A full explanation of the appointment of Foraco can be found at this link

Metallurgical Testwork:

During the quarter DFS metallurgical testwork as managed by global processing experts Hatch, was progressed to confirm processing plant assumptions required for engineering and design. A sighter testwork program using Vertical Roller Mills (VRM) were trialled in Adelaide to determine the applicability of the Project's iron ores to this technology and to generate samples for bulk flotation testwork as part of the broader metallurgical testwork program, which is ongoing.



Environment Assessments and Regulatory Approvals

Principal focus for the approvals program is the continuing characterisation of baseline environmental conditions within the project mining footprint. In this quarter, Magnetite Mines and Eco Logical Australia advanced a number of desktop and field studies, including the completion of initial soil, air quality and noise baseline assessments, and a targeted ecology survey. A due diligence assessment of environmental, social, cultural and planning considerations for the transport and power infrastructure corridor options was also completed.

Critically for the project approval program, Magnetite Mines formally commenced its broad engagement with South Australian regulatory agencies in support of the project approvals program. A kick-off meeting was held with representatives of five principal agencies, and addressed the project design, approvals schedule, baseline environmental assessment outcomes and early-stage project risks and opportunities.

Stakeholder Engagement:

During the quarter, stakeholder engagement for the project focussed on:

- Land access negotiations with priority landholders, and specifically those concurrent with the mine footprint; and
- Initial consultation with landholders along transport and power infrastructure corridor options, and due diligence on access and alignment priorities.

Initial discussions with those landholders within the project mining footprint were positive. Further engagement will define the preferred access and agreement structures to support project development while optimising outcomes for the respective landholders.

As a result of activities in this quarter, the Company has formed working relationships with key landholders in the transport and power infrastructure corridors. This early engagement has demonstrated the feasibility of obtaining land access for infrastructure corridors, with efforts continuing into the next quarter.

ENVIROMENTAL, SOCIAL & GOVERNANCE (ESG)

As a greenfield development, the Company is incorporating its ESG principles into relevant facets of project conceptualisation and design, operations planning, engagement and delivery of the Razorback Iron Ore Project. These environmental and social sustainability aspects are under assessment as part of the DFS program. Within the quarter, Magnetite Mines has:

- Furthered the assessment of groundwater resource and supply options and engaged with regional groundwater users on sustainable extraction;
- Continued the involvement of Ngadjuri Nation in early project activities by commencing the first broad area cultural heritage survey in support of DFS field activities and future project delivery;
- Commenced stakeholder engagement to ensure early participation in project conceptualisation and design through transparent communications and access to information;
- Emphasising local (and especially South Australian) supply inputs into the DFS program (includes consultants, field contractors and supply of goods).



CORPORATE

Finance

During the quarter, the Company continued with a series of meetings as part of a broker and broader financial roadshow undertaken in the previous quarter with presentational material released to the market⁸. We have further advanced discussion with potential partners and financiers.

It is anticipated that once travel restrictions ease, direct marketing of the project will further enhance our ability to communicate the Project's potential, both domestically and overseas.

The Company has expanded its media partnerships during the quarter and will maintain regular shareholder communication as it progresses the Definitive Feasibility Study (DFS).

MGTOD Option Conversions

During the quarter, the Company received \$11,067 in cash (before costs) from the conversion of MGTOD quoted options exercisable a \$0.05 each expiring 29 October 2021. The Company issued 221,335 new fully paid ordinary shares from the conversion of the MGTOD options and the shares issued rank equally with all existing shares from the date of issue.

Other Unquoted Option Conversion

During the quarter, the Company received \$37,500 in cash (before costs) from the conversion of other unquoted options exercisable a \$0.015 each expiring 18 March 2022. The Company issued 2,500,000 new fully paid ordinary shares from the conversion of the unquoted options and the shares issued rank equally with all existing shares from the date of issue.

MINING EXPLORATION ACTIVITIES

The cost in relation to the mining and evaluation activities during the quarter totalling \$846,000, relate to the cost incurred in relation to the completion of the PFS and also the following activities:

- DFS preparation and planning consultancy and engagement of key consultants
- General geological field work particularly stakeholder engagement, sample preparation and storage
- Progressing permits to drill (particularly around environmental and heritage signoffs) for the upcoming drill programme
- Metallurgical testwork

Due largely to the availability of historical drill samples and datasets, no drilling was required during the quarter. Drilling expenditure is anticipated in the following quarter to further advance the DFS.

Mining Production and Development activities during the Quarter:

None of the Company's projects are at a production or development stage and consequently there were no activities during the quarter relating to production or development.



TENEMENTS

Table: The following tenements held by Magnetite Mines Limited (and its controlled entities) as at 30 September 2021

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%	-	-	-

Annual General Meeting

The Annual General Meeting will be held on Monday November 29, 2021.

The Company's focus for the December 2021 quarter will be the progression of the DFS for the Project.

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

For further information contact:

Peter Schubert Executive Chairman and CEO +61 416 375 346

References

- $1. \quad \mathsf{ASX} \ \mathsf{Announcement} \mathsf{05} / \! / \mathsf{07} / \mathsf{21} \mathsf{Positive} \ \mathsf{PFS} \ \mathsf{Results} \ \mathsf{for} \ \mathsf{Razorback} \ \mathsf{Iron} \ \mathsf{Project}$
- 2. ASX Announcement 13/09/16 Metallurgical Update Positive Results
- 3. ASX Announcement 30/06/21 Maiden Ore Reserve for the Razorback Iron Project
- 4. ASX Announcement 24/05/21 Razorback Iron Project Mineral Resource Upgrade
- 5. ASX Announcement 01/03/21 Muster Dam Iron Project Tenements awarded to Magnetite Mines
- 6. ASX Announcement 07/05/21 Commitments to raise \$7 Million
- 7. ASX Announcement 07/06/21 Result of MGTOC Option Conversions
- 8. ASX Announcement 21/06/21 Broker Roadshow Presentation
- 9. ASX Announcement 20/11/18 Ironback Hill Deposit JORC 2012 Resource Update



ABOUT MAGNETITE MINES

Magnetite Mines Limited (ASX:MGT) is an Adelaide-based ASX-listed development-stage company advancing the Razorback Iron Ore Project located in the Braemar, Australia's emerging iron ore mining region.

The Razorback High Grade Iron Ore Project is the Company's flagship project in the eastern portion of the Braemar. The Project contains a 3.0 billion tonne Mineral Resource⁴ and 473 million tonne Probable Ore Reserve³, estimated as part of a Pre-Feasibility Study released in July 2021¹.

The Company has interest in a total Mineral Resource of 5.7 billion tonnes* of iron ore within the Braemar Iron Formation^{2,5,7}.

The Pre-Feasibility Study was completed using an iron ore (62% Fe) of US\$110 with the 20+ year mine life projecting a post-tax NPV of A\$669 million and a post-tax IRR of 20%. Following the positive PFS result, the Company has commissioned a Definitive Feasibility Study for the Project¹.

Details of the Pre-Feasibility Study can be found at the following link:



Figure 1. Razorback Ridge, forming prominent low-angle outcropping mineralisation (looking west)

Appendix 5B

Mining exploration entity quarterly cash flow report

Name of entity

MAGNETITE MINES LIMITED				
ABN Quarter ended ("current quarter")				
34 108 102 432	30 September 2021			

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	-	-
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(225)	(225)
	(e) administration and corporate costs	(314)	(314)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	7	7
1.5	Interest and other costs of finance paid	(98)	(98)
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other	-	-
1.9	Net cash from / (used in) operating activities	(630)	(630)

2.	Cash flows from investing activities		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	(40)	(40)
	(d) exploration & evaluation	(846)	(846)
	(e) investments	-	-
	(f) other non-current assets	-	-

ASX Listing Rules Appendix 5B (17/07/20)

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(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	(886)	(886)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	41	41
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(1)	(1)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	40	40

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	16,588	16,588
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(630)	(630)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(886)	(886)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	40	40

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	15,112	15,112

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	208	775
5.2	Call deposits	14,904	15,813
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)	15,112	16,588

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000		
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	-		
	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.

7.	Financing facilities 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.	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000		
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 qu	uarter 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)	(630)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(846)
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(1,476)
8.4	Cash and cash equivalents at quarter end (item 4.6)	15,112
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	15,112
8.7	Estimated quarters of funding available (item 8.6 divided by item 8.3)	10.24

Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.

8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:

8.8.1 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?

Answe	r:
8.8.2	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?
Answe	r:

8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer:

Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.

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 October 2021

Authorised by: 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.
- 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.