

ASX / MEDIA ANNOUNCEMENT

28/10/2022

SEPTEMBER QUARTERLY ACTIVITIES REPORT

HIGHLIGHTS

OAKOVER EXPLORATION

- Completion of 82 hole, 2,828m infill drill program subsequent to quarter end
- Program was delivered on time and under budget
- Drilling was completed at Karen and Jay-Eye, with a focus on extending the current 10-year Life-of-Mine through converting Inferred Resources to an Indicated status
- Karen and Jay-Eye host a combined 62.9Mt of Inferred Resources
- High-level of confidence in increasing Indicated Resources, following success of the 2021 infill drilling program, which converted 96% of Sixty Sixer inferred Resource to Indicated Resource
- Assays expected to be received in 8-12 weeks
- Key environmental workstreams progressing as planned

HIGH PURITY MANGANESE SULPHATE TESTWORK AND SCOPING STUDY COMMENCEMENT

- Hydrometallurgical testwork program ongoing, with initial leaching testwork delivering very positive results of up to 97% Mn extraction in 4 hours
- Following excellent results from the hydrometallurgical program, Firebird immediately commenced work on a battery grade High Purity Manganese Sulphate Scoping Study
- Importance of Manganese within battery cathodes (both NMC and LFP chemistries) continues to grow

WELL-SUPPORTED PLACEMENT TO ACCELERATE OAKOVER DEVELOPMENT

- Firm commitments received for \$3.5 million placement from sophisticated and professional investors
- Firebird Directors and management applied for \$420,000 in the Placement, subject to shareholder approval
- Company well-funded to accelerate development of Oakover
- Proceeds to fund completion of metallurgical test work, environmental surveys, ongoing exploration and relevant development studies

Firebird Metals Limited (ASX: FRB, "Firebird" or "the Company") is pleased to provide an update on its activities during the September 2022 Quarter.

OAKOVER PROJECT (100% FRB)

EXPLORATION AT OAKOVER

Firebird commenced an 82-hole, ~2,828 m program at the Karen and Jay-Eye deposits subsequent to quarter end. Drilling commenced on 13 October and following a very efficient week on site was delivered on time and under budget.



The primary objective of the program is to extend the current 10-year life-of-mine at Oakover, which was delineated in the Manganese Concentrate Scoping Study (refer ASX release 'Impressive Results from Manganese Concentrate Scoping Study dated 20/7/2022).

The Scoping Study focused solely on the Indicated and Inferred Resource at the Sixty Sixer deposit, providing Firebird with a significant opportunity to convert the 62.9Mt of Inferred Resources at Karen and Jay-Eye into an Indicated category and grow Life of Mine.

Firebird has enjoyed great success when converting Inferred Resources to Indicated. The Company's maiden 2021 drill program at Oakover was completed across Sixty-Sixer, Jay-Eye and Karen, with 233 holes completed for 10,145 and through the excellent results, 96% of the historical Sixty Sixer inferred Resource (refer ASX release "Game Changing Resource Upgrade at Oakover" dated 10/3/2022 and Brumby Resources ASX announcement 8/6/2012) was converted to an Indicated Resource category.

Assay results are expected to be received in 8-12 weeks and will be incorporated into an updated Oakover Mineral Resource Estimate in Q1 2023



Image 1: Infill drilling at Jay-eye



HIGH PURITY MANGANESE SULPHATE

Firebird completed successful leaching testwork on each ore domain from Oakover, which is the first stage of testwork required for developing and producing High Purity Manganese Sulphate Monohydrate (HPMSM) for the Battery Industry.

Multiple scouting leaching tests were completed on Oakover Mn feed, which had been crushed, screened and scrubbed, but not beneficiated further (ore sorted/DMS).

Testwork feed was generated from diamond drill core from all manganese ore domains at Sixty Sixer, Jay-Eye and Karen deposits.

This round of testwork proved very effective and delivered excellent Mn extraction results and importantly, provides to the Company with ideal stoichiometric ratios for next stage precipitation reactions and impurity removal, with a view to ultimately produce HPMSM crystals.

Key results from the program include:

- Ore amenable to reductive acidic leaching
- 93-97% Mn extraction in 4 hours
- Heat generated by the reaction
- Mn concentrations of 70-140 g/l in Pregnant Leach Solution



Image 2: Leach Test (left) and testwork setup (right)

High-Purity Manganese Sulphate Scoping Study Underway

Following positive results from the initial stage of the hydrometallurgical testwork program, Firebird immediately commenced a HPMSM Scoping Study.

Key focus areas of the Scoping Study comprise of:

• Further leaching test work



- Conducting impurity precipitation and removal test work
- Conducting HPMSM crystallization testwork on purified liquors
- Confirming hydrometallurgical flowsheet concept using testwork and simulation
- Conducting preliminary cost studies, targeting most economic process for production of HPMSM
- Combining key development aspects from the Manganese Concentrate Scoping Study
- Marketing study on the industry demand/supply and pricing

Firebird will move to the next phase of testing which is impurity removal. This is a critical step in the processing phase, with successful completion required to meet strict specifications for production of battery grade high purity manganese sulphate.

Firebird expects the timeframe for completion of the Scoping Study to be within the next 12 months

ENVIRONMENTAL WORK

Baseline environmental survey work continued to inform the referral of the Oakover Project to the West Australian Environmental Protection Authority (EPA) and Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW), as required.

Terrestrial flora surveys commenced in June 2022, with a second survey conducted in August and a third survey in September 2022. A terrestrial fauna survey, including for short range endemic species was completed in early October 2022. A desktop subterranean fauna study commenced in mid-September.

Waste material characterisation is underway and a Project greenhouse gas emissions assessment is scheduled for early 2023 in-line with project design.

Baseline surveys will be conducted in accordance with EPA and DCCEEW guideline requirements.

Consultation with the Nyiyaparli People through the Karlka Nyiyaparli Aboriginal Corporation has been positive, with several targeted heritage and ethnographic surveys completed for exploration drilling and environmental survey work. Further consultation with the Nyiyaparli People is planned, with a view to establishing an Aboriginal Production Agreement ahead of submission of a mining lease application to Department of Mining, Industry Regulation and Safety (DMIRS).

Positive communication and consultation with the Jigalong Community continues across all phases of the Project. Broader community consultation has and continues to be conducted on a regular basis to provide project updates, including completion of baseline environmental surveys to ensure community concerns and feedback is considered in project design and incorporated into the EPA referral.

SAFETY

Firebird is committed to providing a safe and healthy workplace.

Through the Company's systems, Firebird aims to continuously improve, prevent accidents, communicate effectively, train and hold all employees accountable. It is a Company requirement to identify and monitor ongoing compliance to all state and national legal and other requirements. Understanding legal and other obligations allows management to ensure that all activities comply with HSE and process safety legal



requirements. We acknowledge that having a competent workforce with appropriate training, skills, and knowledge to undertake their job tasks, is critical to maintaining a safe, healthy, and environmentally friendly workplace.

FINANCIAL AND CORPORATE

\$3.5M PLACEMENT TO ACCELERATE DEVELOPMENT OF OAKOVER

Firebird received firm commitments for a well-supported \$3.5 million (before costs) placement at an issue price of \$0.20 per Share to sophisticated and professional investors ("Placement"). One free attaching option ("Placement Options") will be issued for every two Shares issued in the Placement. The Placement Options will be issued subject to shareholder approval, exercisable at \$0.30 each and expire two years from date of issue.

Funds raised from the Placement will be used to accelerate development and exploration activities at Oakover.

Firebird Directors and related parties applied for \$420,000 in the Placement, subject to shareholder approval at a General Meeting to be held on 7 November.

Placement Details

The Placement price of \$0.20 represented a 4.8% discount to the close of price on Friday, 12 August 2022 (A\$0.21).

The issue of Shares from the Placement will be completed across two tranches, as follows:

12,900,000 Shares were issued pursuant to the Company's existing placement capacity under ASX Listing Rule 7.1 (7,442,500 Shares) and ASX Listing Rule 7.1A (5,457,500 Shares) (Tranche 1); and

4,600,000 Shares, including the Director participation Shares, will be subject to shareholder approval ("Tranche 2") to be sought at the General Meeting.

The issue of the 9,250,000 Placement Options will also be subject to Shareholder approval at the General Meeting.

Euroz Hartleys Limited was Lead Manager to the Placement.

In addition to the Placement, Firebird agreed with consulting group Increva Pty Ltd to receive payment in FRB securities on the same terms as the Placement to a maximum of \$200,000 (1,000,000 shares) for specialist technical consulting work in the ongoing studies.

FINANCIAL OVERVIEW

The Appendix 5B for the quarter ended 30 September 2022 provides an overview of the Company's financial activities.

Exploration expenditure for the quarter was \$414,000

Corporate and other expenditure for the quarter was \$275,000

The total amount paid to Directors of the Company, their associates and other related parties was \$83,000 comprising salary and directors fees.



Cash and cash equivalents at quarter end was \$2,472,000

This announcement has been authorised by the Board of Directors of the Company.

-ENDS-

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Additional Listing Rule Information

Listing Rule 5.3.3 Tenement Schedule

Project	Tenement	Ownership on Listing	Ownership at end of Quarter
Oakover	E 52/3577	100%	100%
Oakover	E 46/1392	0%	100%
Oakover	E 52/3948	0%	100%
Hill 616	E 52/3633	100%	100%
Raggard Hills	E45/5905	0%	100%
Midgengadge Manganese	E45/5906	0%	100%
Ashburton	E 09/2543	0%	100%
Disraeli	E 46/1389	100%	100%

Excludes tenements under application and ownership may relate to either direct or contractual rights.

Listing Rule 5.3.4 Use of funds

FRB was admitted to trading on ASX on 18 March 2021. The 30 September 2021 quarter is included in a period covered by a Use of Funds statement in a prospectus lodged with ASX under Listing Rule 1.1 condition 3. A comparison of the Company's expenditure since listing against the estimated Use of Funds statement is set out below as required under Listing Rule 5.3.4.



	Forecast (2	Actual (19 months) [inclusive of		
Expenditure Item	years) \$'000	GST] \$'000	Variance \$'000	Explanation
Exploration at the Projects Cash Reimbursement to FFR for historical	\$3,000	\$2,668	\$332	Timing issue (the Company listed during the March 2021 quarter and funds are budgeted for expenditure over 8 quarters).
development expenditure Cash Reimbursement to FFR for amounts payable prior to completion of the	\$500	\$500	\$0	n/a
Offers	\$77	\$77	\$0	n/a
Expenses of the Offers	\$588	\$546	\$42	Saving came mostly from printing cost.
Working capital	\$1,335	\$1,683	-\$348	Cost increases across the industry and marketing expenses to Europe was not anticipated
Total	\$5,500	\$5,474	\$26	

Summary of Material Variances

The Use of Funds statement covers a period of 24 months, whereas current period and cumulative actual expenditure covers a period of 19 months, accordingly project expenditure to date is lower than reported in the Use of Funds statement.

Oakover Mineral Resource Estimate - March 2022

Area	Mineral Resource classification	Tonnes (Mt)	Mn (%)	Fe (%)	SiO ₂ (%)	Al ₂ O ₃ (%)	P (%)	LOI (%)
Sixty Sixer	Indicated	58.7	10.4	9.2	40.2	10.1	0.10	13.2
Sixty Sixer	Inferred	50.7	9.6	8.5	38.9	9.9	0.11	15.0
Sixty Sixer	Sub-Total	109.4	10.1	8.9	39.6	10.0	0.11	14.1
Jay Eye	Inferred	22.0	9.5	8.5	40.0	9.8	0.11	14.2
Jay Eye	Sub-Total	22.0	9.5	8.5	40.0	9.8	0.11	14.2
Karen	Inferred	40.9	9.5	9.3	42.7	10.5	0.11	12.0
Karen	Sub-Total	40.9	9.5	9.3	42.7	10.5	0.11	12.0
Oakover	Indicated	58.7	10.4	9.2	40.2	10.1	0.10	13.2
Oakover	Inferred	113.6	9.6	8.8	40.4	10.1	0.11	13.8
Oakover	Grand Total	172.3	9.9	8.9	40.4	10.1	0.11	13.6

Notes:

• Mineral Resources reported at a cut-off grade of 7% Mn.

• P₂O₅ converted to P% using a factor of 0.4364 calculated from atomic mass and molecular weight.

• Due to the effects of rounding, the total may not represent the sum of all components.

Refer ASX release; "Game Changing Resource Upgrade at Oakover" dated 10/3/2022.



Competent Persons Statement

The information in this report that relates to the Oakover Mineral Resources is based on information compiled by Mr Mark Pudovskis and Mr Aaron Meakin. Mr Mark Pudovskis is a full-time employee of CSA Global Pty Ltd and is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Aaron Meakin is a full-time employee of CSA Global Pty Ltd and is a Member and Chartered Professional of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Mark Pudovskis and Mr Aaron Meakin have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Mark Pudovskis and Mr Aaron Meakin consent to the disclosure of the information in this report in the form and context in which it appears. Mr Mark Pudovskis assumes responsibility for matters related to Sections 1 and 2 of JORC Table 1, while Mr Aaron Meakin assumes responsibility for matters related to Section 3 of JORC Table 1.



Appendix 5B

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

Name of entity					
Firebird Metals Limited					
ABN Quarter ended ("current quarter")					
24 610 035 535	30 September 2022				

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	(56)	(56)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(83)	(83)
	(e) administration and corporate costs	(275)	(275)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	-	-
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (GST refunds)	55	55
1.9	Net cash from / (used in) operating activities	(359)	(359)

2.	Cash flows from investing activities	
2.1	Payments to acquire or for:	
	(a) entities	-
	(b) tenements	-
	(c) property, plant and equipment	-
	(d) exploration & evaluation	(115)
	(e) investments	-
	(f) other non-current assets	-

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	(115)	(115)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	2,580	2,580
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	(135)	(135)
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	2,445	2,445

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	501	501
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(359)	(359)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(115)	(115)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	2,445	2,445

Consolidated 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	2,472	2,472

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	2,472	501
5.2	Call deposits	-	-
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)	2,472	501

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	90		
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	n/a	n/a		
7.2	Credit standby arrangements	n/a	n/a		
7.3	Other (please specify)	n/a	n/a		
7.4	Total financing facilities				
7.5	Unused financing facilities available at quarter end n/a				
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.				
	n/a				

8.	Estim	nated cash available for future operating activities	\$A '000	
8.1	Net cash from / (used in) operating activities (item 1.9)		(359)	
8.2		nents for exploration & evaluation classified as investing es) (item 2.1(d))	(115)	
8.3	Total r	relevant outgoings (item 8.1 + item 8.2)	(474)	
8.4	Cash	and cash equivalents at quarter end (item 4.6)	2,472	
8.5	Unuse	ed finance facilities available at quarter end (item 7.5)	-	
8.6	Total a	available funding (item 8.4 + item 8.5)	2,472	
8.7	Estim item 8	ated quarters of funding available (item 8.6 divided by 8.3)	5.22	
	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 le cash flows for the time being and, if not, why not?	evel of net operating	
	Answer: n/a			
	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?			
	Answer: n/a			

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: n/a

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: 28 October 2022

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.