ASX / MEDIA ANNOUNCEMENT **31/01/2023**

DECEMBER QUARTERLY ACTIVITIES REPORT

HIGHLIGHTS

BATTERY GRADE MANGANESE SULPHATE PRODUCED FROM OAKOVER

- Following quarter end, successful completion of high-purity manganese sulphate monohydrate (HPMSM) test work program
- Outstanding results achieved including:
  - Production of >99.8% purity manganese sulphate monohydrate crystal
  - Meets battery grade specification
  - HPMSM crystals contain >32% Mn
- Success of high-purity test work program is a significant step in the development of the ongoing Oakover HPMSM Scoping Study
- Firebird will prioritise ongoing process flowsheet development and optimisation studies
- Importance and demand for battery grade manganese sulphate continues to grow rapidly, as electric vehicle and cathode manufacturers increase levels of manganese used in batteries

ACQUISITION OF WANDANYA

- Strengthened manganese project portfolio through the acquisition of the Wandanya Project, located 50km south-west of world class Woodie-Woodie Manganese Operation
- Wandanya is an advanced exploration project and provides Firebird with a near-term, high-grade, Direct Shipping Ore (DSO) opportunity
- Significant rock chip results of up to 64.9% Mn at Wandanya and 55.2% at Crossroads yet to be drilled
- Firebird to investigate a strategy at Wandanya that is focused on a crush, screen and shipping process for the DSO mineralisation

PHASE 1 OF THE OAKOVER PROJECT BASELINE ENVIRONMENTAL SURVEYS COMPLETED DURING OCTOBER TO DECEMBER 2022

- Studies included flora and vegetation, terrestrial fauna, and sub terranean fauna surveys

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

OAKOVER PROJECT (100% FRB)

HPMSM TEST WORK PROGRAM PRODUCES BATTERY GRADE MANGANESE SULPHATE

Subsequent to the quarter end, Firebird announced excellent results from a high-purity manganese sulphate monohydrate (HPMSM) test work program, completed on manganese ore from the Company's flagship Oakover Project, located 85km East of Newman in the Eastern Pilbara region of Western Australia.

The Company's maiden HPMSM metallurgical flowsheet development program delivered impressive results from hydrometallurgical test work and importantly, confirmed that Oakover manganese ore can be processed into battery grade HPMSM for the burgeoning battery industry.

Leaching test work feed material was generated from diamond drill core from all Oakover manganese ore domains of the Sixty Sixer, Jay-Eye and Karen deposits. Multiple scouting leaching tests were completed on Oakover Mn feed, which had been crushed, screened and scrubbed, but not beneficiated further (ore sorted/DMS) and then ground to below 0.5 mm prior to leaching, (refer ASX announcements Positive Hydrometallurgical test work dated 24/10/2022 and Oakover Metallurgical Test Work Update dated 17/1/2022).

The most recent scoping test program utilised combined selected pregnant leach solutions (PLS) obtained from the earlier leaching test work on Oakover ore. The PLS was subjected to a sequence of typical impurity removal steps, followed by crystallisation of crude manganese sulphate. The crude manganese sulphate was then redissolved and recrystallised and washed to produce HPMSM crystals.

High precision trace element analyses for typical impurity elements was conducted to determine impurity levels in the crystals and estimate the overall purity of >99.8% manganese sulphate monohydrate by difference.

Levels of individual impurity elements listed in the Manganese Sulphate for Battery Materials Specification (HG/T 4823-2015) were all within specified limits.

Importantly, hydrometallurgical test work success is the first major step required for developing a process for production of HPMSM for the Battery Industry.

Figure 1: HPMSM Crystals produced from Oakover ore

Key results from the hydrometallurgy program included:

- Ore amenable to initial beneficiation and preparation (crush, scrub, screen, grind)
- Ore amenable to reductive acidic leaching
- 93-97% Mn leach extraction in 4 hours
- Heat generated by the reaction
- Mn concentrations of 70-140 g/l in Pregnant Leach Solution
- Impurity removal through multistage precipitation and crystallisation
- HPMSM crystals produced at >99.8% purity
- HPMSM containing >32% manganese

Firebird will prioritise ongoing process flowsheet development and optimisation studies to further enhance process design and product quality, along with completion of a high-purity manganese sulphate scoping study.

Figure 2: Leach Test (left) and test work setup (right)

Figure 3: Pregnant Leach solution (left) and HPMSM Crystals (right)

Refer ASX announcement "Battery Grade Manganese Sulphate Produced from Oakover" dated 30/1/2023.

Manganese Importance Growing

The importance of manganese within the lithium-ion battery sector for use in electric vehicles continues to grow. Manganese is an important element within the battery cathode industry and in particular, plays a critical role in NMC (Nickel, Manganese, Cobalt) batteries. It is estimated around 90kg of Manganese is used per average electric car (CPM Group).

Electric vehicle and battery cathode manufacturers have expressed a desire to increase manganese content to improve battery and electric vehicle cost competitiveness, while maintaining energy density. The growing electrical vehicle market and battery cathode changes will lead to greater demand and growth for HPSMM.

INFILL DRILLING

82 holes for 2,828m were completed during October at Karen and Jay-Eye prospect. The Company expects to receive assays result during January / early February 2023, these results will drive an updated Mineral Resource Estimate during the March 2023 quarter.

ENVIRONMENTAL WORK

Phase 1 of the Oakover Project baseline environmental surveys were completed during the period October to December 2022. These studies included flora and vegetation, terrestrial fauna, and sub terranean fauna surveys. The technical reports are due by the end of February and will inform the next phase of targeted survey work that will be completed during 2023. All Baseline surveys have been completed in accordance with Environmental Protection Authority guideline requirements.

A preliminary desktop surface and ground water study was completed during the quarter to identify dewatering bore locations and production water target areas. The next phase of this work will be site based with installation of ground water monitoring bores in identified target locations.

Waste material characterisation is expected to be completed during 2023 with a Project greenhouse gas emissions assessment scheduled for later in the year once project design has advanced to a sufficient level of detail.

Consultation with the Nyiyaparli People through the Karlka Nyiyaparli Aboriginal Corporation has continued to be positive, with several targeted heritage surveys completed for environmental survey work. Firebird Metals will continue to work collaboratively with the Nyiyaparli People over coming months to complete baseline environmental, heritage and ethnographic surveys.

The Jigalong Community has provided valuable assistance through the provision of accommodation and amenities for environmental consultants and exploration teams.

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.

CORPORATE

ACQUISITION OF HIGH GRADE WANDANYA PROJECT

Firebird's strategic acquisition of the Wandanya Manganese Project, located 50km to the south-west of the Woodie-Woodie Manganese Operation in the Eastern Pilbara Region of Western Australia, was finalised on 29 November.

The Wandanya Project provides Firebird with a near-term Direct Shipping Ore opportunity. A large amount of historical exploration work has been completed, with 113 holes drilled for 1,975m. Drilling intersected near-surface, high-grade manganese, with mineralisation specifications in line with what is required for a DSO operation. Firebird's aim in H1 2023 is to complete further drilling and development work to delineate a DSO Mineral Resource, which can be immediately supplied into a growing end user market for manganese.

The Company has successfully progressed its growth strategy which is focused on the rapid progression of the flagship Oakover Project towards production of manganese concentrate for the steelmaking industry and high-purity sulphate manganese, which is a critical product in the production of battery cathodes for the growing electric vehicle industry.

Subsequent to the quarter end, Firebird has commenced preparatory work for Wandanya ahead of targeting its maiden drill program.

The acquisition of Wandanya has broadened Firebird's strategy and provides the Company with near-term potential DSO production and revenue upside. Refer ASX announcement "High Grade Manganese Project Acquisition" dated 29/11/2022.

FINANCIAL

FINANCIAL OVERVIEW

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

Exploration expenditure for the quarter was $623,000

Corporate and other expenditure for the quarter was $187,000

The total amount paid to Directors of the Company, their associates and other related parties was $125,000 comprising salary and directors fees.

Cash and cash equivalents at quarter end was $2,445,000

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

-ENDS-

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Previously Reported Results

Reference in this report to exploration and metallurgical results is based on the following Company's ASX announcement[s]:

- Battery Grade Manganese Sulphate Produced from Oakover dated 30/1/2023
- High Grade Manganese Project Acquisition dated 29/11/2022.
- Positive Hydrometallurgical test work dated 24/10/2022
- Oakover Metallurgical Test Work Update dated 17/1/2022

Other than as disclosed in those announcements, the Company confirms it is not aware of any new information or data that materially affect the information in those announcements.

FIREBIRD METALS LIMITED

Additional Listing Rule Information

Listing Rule 5.3.3 Tenement Schedule

Project	Tenement	Ownership at start of quarter	Ownership at end of Quarter
Oakover	E 52/3577	100%	100%
Oakover	E 46/1392	100%	100%
Oakover	E 52/3948	100%	100%
Hill 616	E 52/3633	100%	100%
Raggard Hills	E45/5905	100%	100%
Midgengadge Manganese	E45/5906	100%	100%
Ashburton	E 09/2543	100%	100%
Disraeli	E 46/1389	100%	100%
Wandanya	E 46/1456	0%	100%
Wandanya	E 46/1457	0%	100%

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 December 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.

Expenditure Item	Forecast (2 years) $'000	Actual (22 months) [inclusive of GST] $'000	Variance $'000	Explanation
Exploration at the Projects	$3,000	$3,355	-$355	The Company has raised additional funds since listing and is continuing to explore and progress the projects.
Cash Reimbursement to FFR for historical development expenditure	$500	$500	$0	n/a
Cash Reimbursement to FFR for amounts payable prior to completion of the Offers	$77	$77	$0	n/a
Expenses of the Offers	$588	$546	$42	n/a
Working capital	$1,335	$1,995	-$660	The Company has raised additional funds since listing.
Total	**$5,500**	**$6,473**	**-$973**	

Summary of Material Variances
The Company has raised additional funds since listing.

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	31 December 2022

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	(64)	(120)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(125)	(208)
	(e) administration and corporate costs	(187)	(462)
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)	70	125
1.9	**Net cash from / (used in) operating activities**	**(306)**	**(665)**

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	(623)	(738)
	(e) investments	-	-
	(f) other non-current assets	-	-

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	-	-
	(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**	**(623)**	**(738)**

3.	**Cash flows from financing activities**		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	920	3,500
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	(18)	(153)
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**	**902**	**3,347**

4.	**Net increase / (decrease) in cash and cash equivalents for the period**		
4.1	Cash and cash equivalents at beginning of period	2,472	501
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(306)	(665)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(623)	(738)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	902	3,347

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**	**2,445**	**2,445**

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	2,445	2,472
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)**	**2,445**	**2,472**

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	124
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.	**Estimated cash available for future operating activities**	**$A '000**
8.1	Net cash from / (used in) operating activities (item 1.9)	(306)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(623)
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(929)
8.4	Cash and cash equivalents at quarter end (item 4.6)	2,445
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	2,445
8.7	**Estimated quarters of funding available (item 8.6 divided by item 8.3)**	2.63

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?

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: 31 January 2023

By the Board

Authorised by: .....
(Name of body or officer authorising release – see note 4)

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.