FIREBIRD METALS LIMITED

MANGANESE: THE KEY TO POWERING TOMORROW'S BATTERIES

IMARC CONFERENCE

OCTOBER 2024

ASX:FRB

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JORC Compliance Statement

This announcement contains references to Exploration Results and Mineral Resource Estimates, which have been reported in compliance with ASX Listing Rules 5.7 and 5.8 and extracted from previous ASX announcements as referenced. The Company confirms that it is not aware of any new information or data that materially affects the information included in the said announcements, and in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

The Company confirms that the material assumptions and technical parameters underpinning the production target disclosed in the Company's announcement dated 7 May 2024 continue to apply and have not materially changed.

For full details refer to ASX announcements 10/3/22, 30/1/23, 23/3/23, 26/6/23, 30/8/23, 1/9/23, 18/10/23, 21/11/23, 13/12/23, 29/1/24, 13/3/24, 7/5/24, 14/5/24, 28/5/24, 5/6/24, 10/9/24, 12/9/24, 24/9/24, 2/10/24, 21/10/24 and 28/10/24

Oakover Resource: Indicated Resource of 105.8Mt at 10.1%; Inferred Resource of 70.9Mt at 9.6% for global Resource of 176.7 Mt at 9.9% Mn

Hill 616 Resource: Inferred Resource of 57.5 Mt at 12.2% Mn

CAUTIONARY STATEMENT – SULPHATE FEASIBILITY STUDY

The Feasibility Study referred to in this presentation is a Technical Feasibility of the establishment of the Battery Grade Manganese Sulphate Project Stage 1 Processing Plant in China (the Plant). The Feasibility Study is based on the material assumptions contained in the Feasibility Study document released to the ASX on 7 May 2024. These include assumptions about the availability of funding. While the Company considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Feasibility Study will be achieved.

Notwithstanding the developments set out in this quarterly report, Investors should note that there is no certainty that the Company will be able to raise the amount of funding to develop the Plant when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Company's existing shares.

It is also possible that the Company could pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the Plant. If it does, this could materially reduce the Company's proportionate ownership of the Plant. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Feasibility Study.

CAUTIONARY STATEMENT- DMS CONCENTRATE SCOPING STUDY

The Updated Scoping Study announced to the ASX on 30 August 2023 has been undertaken for the purpose of initial evaluation of a potential development of the Oakover Manganese Project. The Scoping Study is a preliminary technical and economic study of the potential viability of the Oakover Manganese Project as a manganese producer. The Scoping Study outcomes, production target and forecast financial information referred to in this release are based on low accuracy level technical and economic assessments that are insufficient to support estimation of Ore resources.

The Scoping Study has been completed to a level of accuracy of +/- 35% in line with a scoping level study accuracy. While each of the JORC modifying factors was considered and applied, there is no certainty of eventual conversion to Ore Reserves or that the production target itself will be realised. Further exploration and evaluation work and appropriate studies are required before the Company will be in a position to estimate any Ore Reserves or to provide any assurance of an economic development case. Accordingly, given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study. Given that the results of the Scoping Study are subject to the qualifications above (including assumptions as to accuracy), any results reported in this release should be considered as approximates and subject to variances having regard for the assumptions referred to in this release. The Company has reasonable grounds for disclosing a Production Target, given that approximately 99% of the Life-of-Mine (LOM) Production Target is in the Indicated Mineral Resource category, and 1% is in the Inferred Mineral Resource category. The production target stated in this announcement is based on Firebird's current expectations of future results or events and should not be relied upon by investors when making investment decisions. Further evaluation work and studies are required to establish sufficient confidence that the production target will be met. Firebird confirms that the financial viability of the Oakover Manganese Project is not dependent on the inclusion of Inferred Resources in the Scoping Study.

The Company considers all the material assumptions in this Study to be based on reasonable grounds. These include assumptions about the availability of funding. While Firebird considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved. To achieve the range of potential outcomes indicated in the Scoping Study, funding of in the order of $123 million (excluding working capital and finance costs) will likely be required. Investors should note that there is no certainty that Firebird will be able to raise that amount of funding when needed. However, the Company has concluded it has a reasonable basis for providing the forward-looking statements included in this announcement and believes that it has a "reasonable basis" to expect it will be able to fund the development of the Project. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Firebird's existing shares. It is also possible that Firebird could pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the project. If it does, this could materially reduce Firebird's proportionate ownership of the project. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

The Mineral Resources underpinning the production target in the Scoping Study have been prepared by a competent person in accordance with the requirements of the JORC Code (2012). For full details of the Mineral Resources estimate, please refer to Firebird's ASX release dated 23 March 2023. Firebird has confirmed that it is not aware of any new information or data that materially affects the information included in that release. All material assumptions and technical parameters underpinning the estimates in that ASX release continue to apply and have not materially changed.

MARKET OVERVIEW

THE SHIFT TOWARDS MANGANESE-RICH CATHODE MATERIALS

- **Focus on Cathode Development:** The performance of Li-ion batteries is largely driven by cathode materials. There are countless chemical combinations, making cathode development a key focus area
- **Market Shift to LFP:** Nickel-based cathodes (Ternary) once dominated the market, but now Lithium Iron Phosphate (LFP) batteries have taken over, representing more than 70% of the market share
- **Why LFP?** LFP is more affordable (1/3 the cost of nickel-based materials), safer with higher thermal stability and provides good range capabilities with innovations like blade technology
- **LFP Limitations and LMFP Emergence:** LFP has reached its capacity limits. The next evolution, with the market starting to grow quickly, is Lithium Manganese Iron Phosphate (LMFP), an upgraded and lower-cost version of LFP
- **Advantages of LMFP:** LMFP provides up to 20% higher energy density compared to LFP, offering performance on par with mid-level nickel-based batteries, while being far more cost-effective on a wh/kg basis
    - Soochow Securities forecast **LMFP will replace 50% of LFP batteries by 2030**
    - Caitong Securities forecast **blending LMFP with nickel-based batteries in China to reach 30% by 2030**
- **Critical Role of $MnSO_4$ & Mn_3O_4:** High purity Manganese Sulphate ($MnSO_4$), Manganese Tetroxide (Mn_3O_4) and derivatives are essential for producing Cathode Active Material
- **Firebird well-positioned to efficiently grow into a near-term and low-cost $MnSO_4$ and Mn_3O_4 producer and become a key supplier to a rapidly growing market**

Source: Company research

CRITICAL ROLE OF MANGANESE IN BATTERIES

Traditional Uses

- Manganese has a long history of being a cathode material for batteries in the form of Electrolytic Manganese Dioxide (EMD)

Manganese Lithium-ion Batteries

- Mn is used in Li-ion batteries, including NCM, LMO and LMFP – due to significant benefits of LMFP, the use of this cathode mix is set for massive growth
- **Size and growth of LMFP market is potentially the largest in medium to long term (est. avg. 900kg of $MnSO_4$ per 1 tonne of LMFP)**

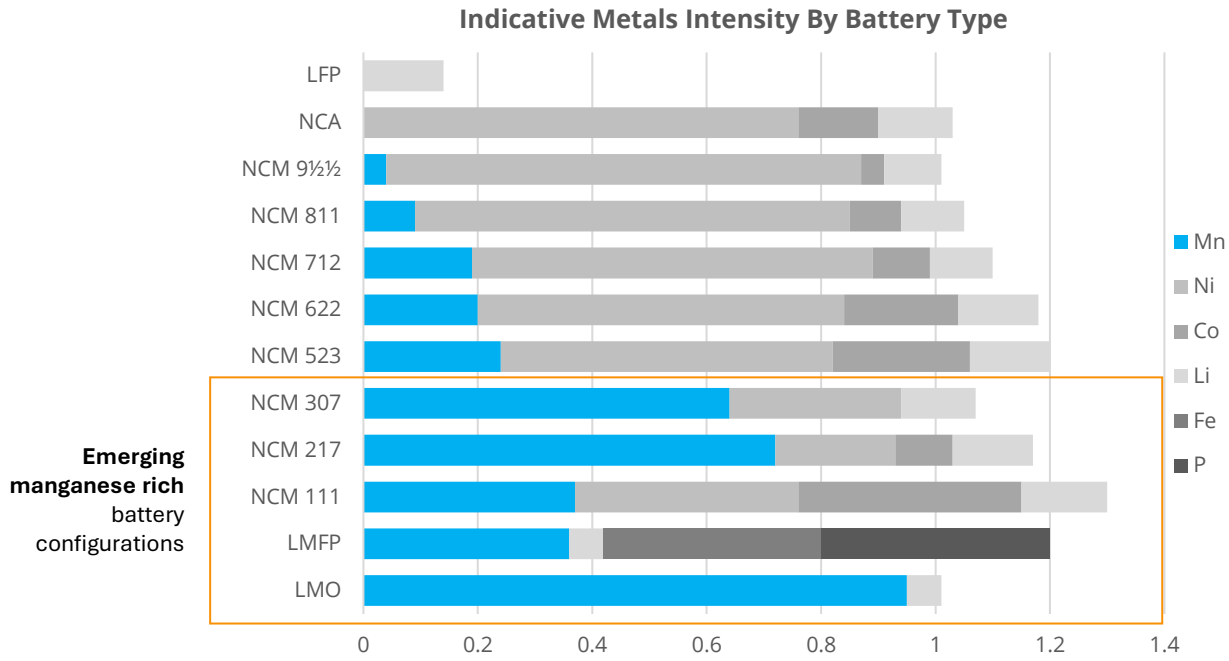
Na-ion Batteries

- Na-ion batteries inherently have lower density
- Some sodium batteries contain around 30% Mn

Research and advocates for manganese rich batteries is on the rise, due to manganese being abundant and relatively inexpensive compared with nickel and cobalt

Manganese content (100% Mn metal basis) in per battery in each vehicle above

Source: Benchmark Mineral Intelligence



Emerging manganese rich battery configurations

Source: Benchmark Mineral Intelligence and company research

CURRENT TRENDS IN CATHODE DEVELOPMENT

September Suzhou Conference Highlights

Leading researchers and companies showcased the latest developments and new products in manganese-based battery technology

Key Areas of Focus

- **Current Trends:** Continued advancement of Lithium Manganese Oxide (LMO), a widely used Li-ion cathode for over 15 years. Efforts are also underway to increase manganese content in ternary cathodes
- **Short to Medium Term:** Lithium Manganese Iron Phosphate (LMFP) is rapidly emerging as an upgrade from LFP. LMFP is now commonly used in two-wheel vehicles and mixed with ternary cathodes (e.g., CATL M3P) in EVs, with a shift towards standalone use in EVs
- **Future Outlook:** Li-rich and Mn-rich (LMR) cathodes are expected to play a pivotal role in solid-state batteries, as manganese is uniquely suited for these advanced cathode materials

Source: Company research

FIREBIRD METALS LIMITED

SUCCESSFULLY ESTABLISHING A BATTERY GRADE MANGANESE OPERATION IN CHINA

INDUSTRY-LEADING MANGANESE EXPERTISE

- **Proven Track Record -** Since listing in 2021, Firebird has focused exclusively on developing a world-class manganese business. The team has consistently met its objectives on time and within budget, driven by a vision to become a fully integrated manganese battery material leader
- **Leadership Team**
  - **Peter Allen, Managing Director:** Over 20 years of experience in marketing and developing manganese projects, providing strategic direction and industry insights
  - **Wei Li, Executive Director & Managing Director of China Operations:** Expert in manganese battery material business, instrumental in commissioning a A$150 million Electrolytic Manganese Dioxide (EMD) plant in Hunan, China
- **Key Technical Experts**
  - **Mr. Zhou Qiyun, Chief Technical Officer:** 20 years' experience in battery grade MnSO4 production. Co-owned a 10,000 tonne/year MnSO4 plant, and has been pivotal in optimising and commercialising MnSO4 processing technologies, holding a number of patents
  - **Mr. Tang Min, Operations Manager:** Extensive experience in the design, engineering, and operation of MVR and sulphate production systems
- **Collaborative R&D Efforts -** Professors Ou and Ming bring extensive industry experience, having worked on numerous real-world projects, including serving as the Chief Technical Officer for LFP development between 2010 and 2014. More recently, they played a key role in establishing and listing Pa Wa Gu Fen (Stock Code 688184, POWER), a Shenzhen-listed company focused on ternary-based cathodes

BOARD & MANAGEMENT

EVAN CRANSTON
Non-Executive Chairperson

PETER ALLEN
Managing Director

WEI LI
Executive Director

ASHLEY PATTISON
Non-Executive Director

BRETT GROSVENOR
Non-Executive Director

CHINA IN-COUNTRY TEAM
HUNAN FIREBIRD BATTERY TECHNOLOGY (HFBT)

WEI LI
Managing Director

PROFESSOR MING LEI
Central South University

MR ZHOU QIYUN
Chief Technical Officer

PROFESSOR OU XING
Central South University

MR TANG MIN
Operations Manager

STRATEGIC LOCATION – JINSHI HIGH-TECH INDUSTRIAL PARK

- **Premier Chemical Industrial Hub:** Jinshi High-Tech Industrial Park is one of the top-rated parks in Hunan Province, known for its exceptional services and state-of-the-art facilities
- **Strategic Connectivity:** Located on the Lishui River, the park connects directly to the Yangtze River, with a bulk terminal capacity exceeding 10 million tonnes per annum, ensuring seamless logistics and transportation
- **World-Class Infrastructure:** The park offers access to critical infrastructure, including a steam plant, dual power lines, a water treatment facility, and a cement plant depot, supporting diverse industrial needs
- **Competitive Advantages:** Firebird benefits from highly attractive land prices and tax incentives, receiving better terms than any other company in the park. The company also qualifies for all available Chinese domestic grants
- **Supportive Business Environment:** The park receives robust support from all levels of governments, particularly for foreign investment initiatives, making it an ideal location for international business expansion
- **Thriving Industrial Community:** Over 100 companies are currently operating in the park. Several new businesses have established pilot plants within the development area

AERIAL VIEW OF PROPOSED PLANT

- Preliminary design and key permits secured in less than 12 months
- Production Capacity – Battery grade 50kt $MnSO_4$ plus 10kt Mn_3O_4, (72.5Kt $MnSO_4$ equivalent)
- 12.09 hectares land with 84,399sqm building area
- >5,000 sqm land available on site for future expansion
- Firebird can build the proposed plant in less than 12 months from making FID - a key advantage of establishing operations in China

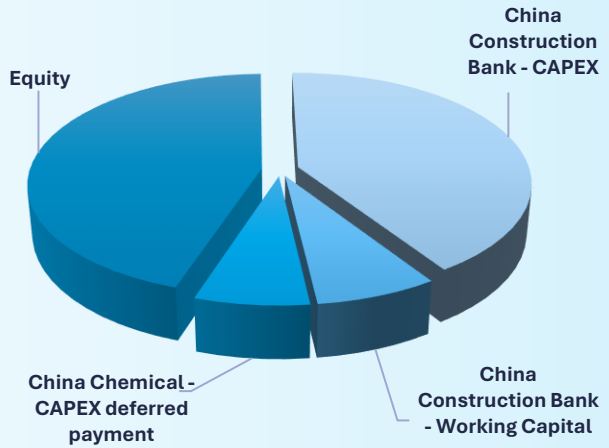
Refer ASX announcements 7/5/24, 2/10/24

Refer ASX announcement 2/10/24

LEADING PROJECT ECONOMICS – LOW-COST PATHWAY TO PRODUCTION

- **Project Economics:** Feasibility Study outlined a significant opportunity to establish a near-term, cost-competitive, battery-grade manganese sulphate operation
  - **Low Capital Expenditure (CAPEX): US$83.5 million**
  - **Working Capital: US$10.7 million**
  - **Plant Capacity:** Producing 50,000 tonnes per annum (t/a) of battery-grade MnSO4 and 10,000 t/a of Mn3O4, or an equivalent of 72,500 t/a of MnSO4
  - **Sustainable Process:** The facility is designed to be environmentally friendly, generating no wastewater and ensuring all residues are utilised by a cement plant
- **Operational Efficiency:** The project's operational expenses (OPEX) are very competitive with peers in China and do not depend on subsidies from joint venture partners or the government, underscoring the project's economic viability
- **Financing Secured:** Approximately 60% of the required financing has been secured through indicative and non-binding agreements with key partners, including China Chemical and China Construction Bank
- **Permits and Approvals:**
  - All critical permits, including environmental, safety, and energy permits, have been obtained since the establishment of Hunan Firebird Battery Technology Co., Ltd in November 2023
  - Preliminary design has been completed and approved by the Jinshi High-Tech Industrial Park Committee, covering roughly 80% of the requirements for the building permit
  - The building permit is expected to be granted shortly after the completion of the detailed engineering design

CAPEX US$83.5M + Working Capital US$10.7M



Refer ASX announcements 7/5/24, 14/5/24, 28/5/24,10/9/24 and 24/9/24

PEER COMPARISON

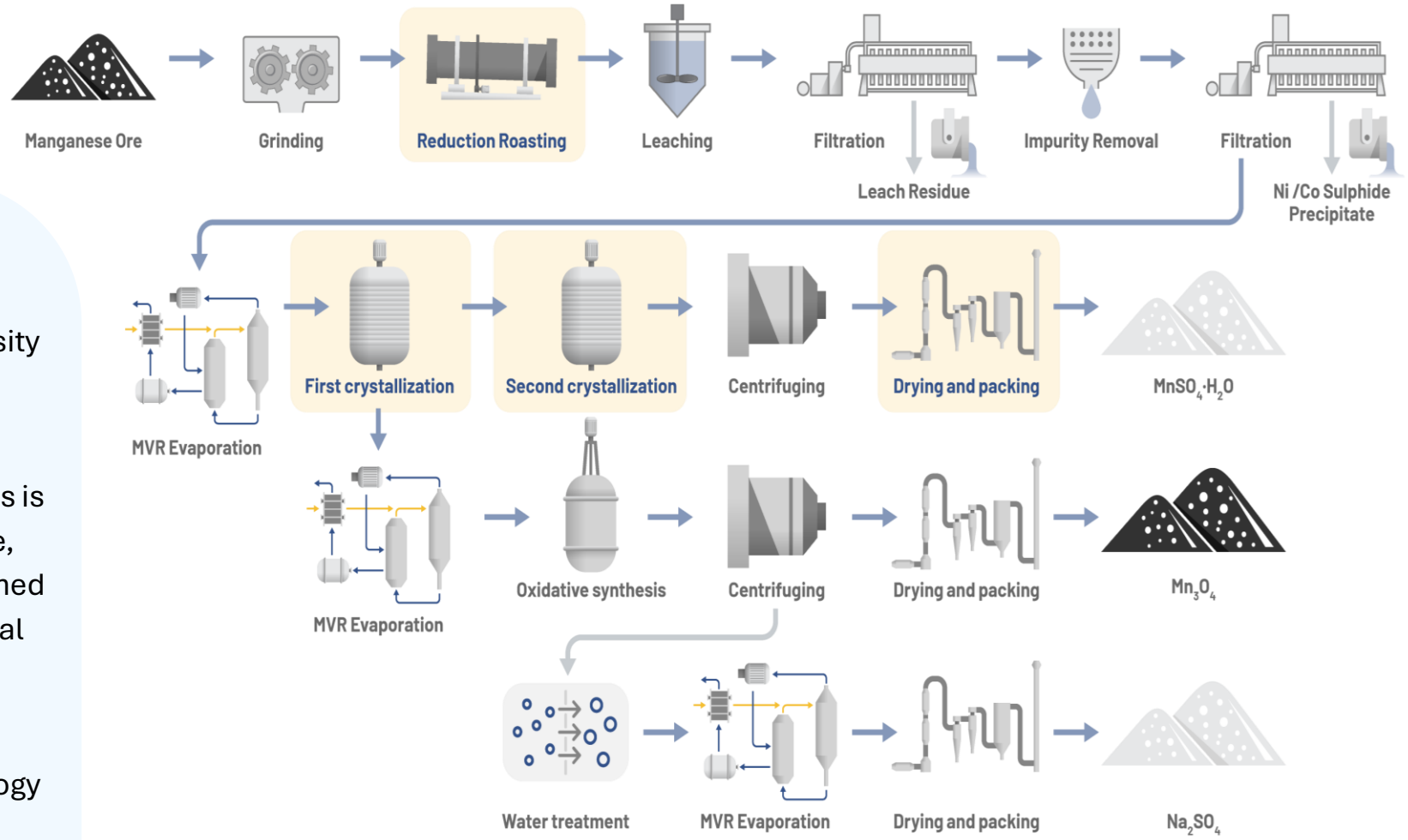
	Firebird Metals (ASX: FRB)	Element 25 Train 1 (ASX: E25)	Euro Manganese (ASX:EMN, TSXV: EMN, OTCQB: EUMNF)
Study Complete	Feasibility Study	Feasibility Study	Feasibility Study
Production Capacity	72,500 t/a HPMSM	65,000 t/a HPMSM	100,000 t/a HPMSM & 15,000 t/a HPEMM
Products	50,000 t/a HPMSM & 10,000 t/a Mn3O4	65,000 t/a HPMSM	100,000 t/a HPMSM & 15,000 t/a HPEMM
Capital	US$82.3 M	US$289 M	US$757.3 M
Production Cost	US$609 per tonne product US$579 per tonne product (with kiln cost savings)	US$1,294 per tonne product	US$214.54 per tonne of dry plant feed
Tonnes of feed processed	66,000 t/a	~72,000 t/a	1,066,000 t/a
HPMSM Price Assumption	US$1419	Not Disclosed	US$4,019
Cathode Development plans	Yes		
Solid Waste	100% treated by cement plant	"The net result of the flowsheet design is that the solid by products are removed via the production of three coproduct streams that can be repurposed in other industrial applications thereby largely eliminating the need for a solid waste landform as part of the Facility"	"Returning washed tailings to the carefully prepared containment cells in the excavated areas of the tailings progressively remediates the environmental impact risks of legacy mining operations"
Permits	Environmental, Energy and Safety Permit Received all received in less than 1 year	Air Permit received	Environmental (ESIA) received
Sulphate Commercial Production / FID	No	No	No

Sources: See slide in reference

LOW-COST AND STRONG ECONOMIC PROFILE

PROCESS FLOW DIAGRAM – SIMPLE & EFFECTIVE

- **Efficient and Cost-Effective Operations:** Firebird's Chinese technical team has developed a process with low capital intensity and operational costs, demonstrating their expertise in the field
- **Sustainable and Eco-Friendly:** The process is designed to be environmentally sustainable, ensuring that all residues are either consumed or sold, minimising waste and environmental impact
- **Innovative Proprietary Technology:** The project is supported by proprietary technology specifically aimed at reducing operational expenses (OPEX), enhancing overall cost efficiency and competitiveness



For full details refer to ASX announcement dated 7/5/24

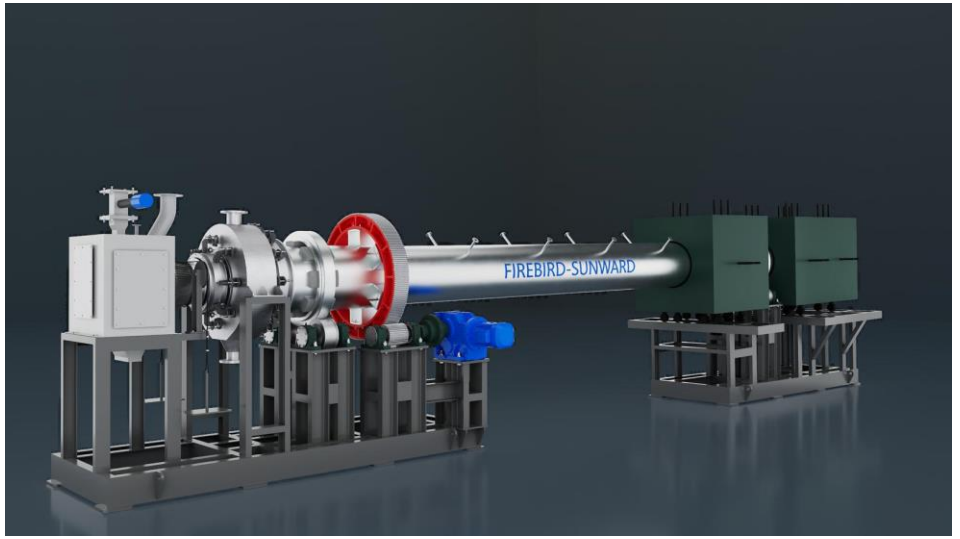
RESEARCH & DEVELOPMENT LAB

- **R&D Lab Completed Early:** Firebird successfully completed the construction of its Research and Development lab in January 2024, ahead of schedule and under budget
- **Pilot Plant in Operation:** Producing samples of MnSO4 and Mn3O4 for evaluation by potential customers and offtake partners
- **Showcasing to Financiers:** The pilot plant will also serve as a demonstration facility, showcasing the production process to potential financiers and stakeholders
- **Expanding Research Capabilities:** The R&D lab will be instrumental in testing and developing additional manganese-rich Cathode Active Materials (CAM), driving further innovation and product development
- Video of Firebird Lab

For full details refer to ASX announcement dated 29/1/24

WORLD'S MOST ENERGY-EFFICIENT MANGANESE REDUCTION ROASTING KILN

- **Innovative Technology for Reduced Energy Consumption:** Traditional Manganese calcining technology requires a minimum of 300 kWh per tonne of feed, heating materials to 900°C and then cooling with water and air, leading to significant energy loss
- **Revolutionary Energy-Saving Solution:** Firebird's proprietary technology, currently under patent application, recycles heat from the calcined material to pre-heat incoming feed, drastically cutting energy usage and boosting the cost-efficiency of its high-purity manganese sulphate plant
- **Strategic Partnership with Sunward:** Firebird entered a development agreement with Zhongji Sunward Technology Co., Ltd, a prominent producer of rotary tunnel kilns in China. Sunward will pay a 5% royalty on future sales revenue for using this innovative technology
- **Versatile Industrial Applications:** The energy-saving rotary kiln technology is adaptable for various industrial uses, including iron ore beneficiation and lithium sulphate production
- **Promising Pilot Plant Results:** Following internal trials and independent reports from Sunward, the kiln demonstrated remarkable energy savings. Compared to conventional kilns, which typically require more than 300 kWh1 per tonne of feed, Firebird s pilot kiln operates at only 80-100 kWh per tonne — delivering 70% in energy savings
- **Path to Commercialisation:** The pilot plant's energy consumption is already lower than that of a full-sized conventional kiln. This indicates that a scaled-up version of the Firebird kiln will be even more efficient. Firebird and Sunward are collaborating closely to commercialise this groundbreaking technology



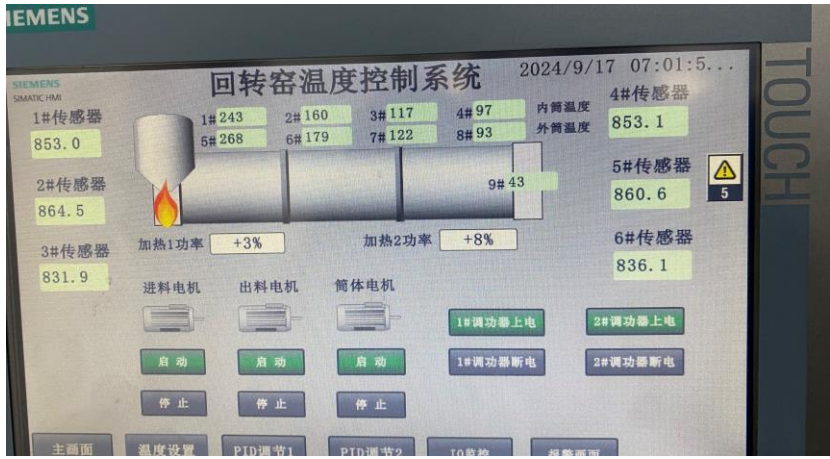
Detailed 3D Design of Firebird's Rotary Kiln

For full details refer to ASX announcement dated 5/6/24, 12/9/24 and 21/10/24

KILN TESTING

Speed of Development

- R&D – 1 month
- Design – 1 month
- Engineering – 1 month
- Fabrication and installation – 1 month
- Testing and reporting – 1 month
- Minimum 70% energy reduction



For full details refer to ASX announcement dated 5/6/24, 12/9/24 and 21/10/24

WORLD-LEADING 5TH GENERATION CONTINUOUS HIGH-PRESSURE CRYSTALLISATION REACTOR

1st

1st generation Single effect evaporator
- Indirect heating to concentrate solution

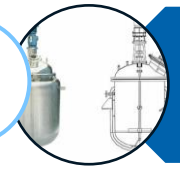
2nd

2nd generation Multi-effect evaporator
- 60% energy use of 1st generation
- Recycle residual heating to pre-heat incoming solution

3rd

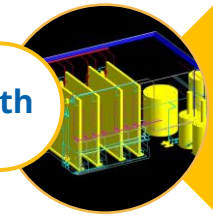
3rd generation MVR
- 40% energy use of 1st generation
- More efficient heating and recycle energy

4th

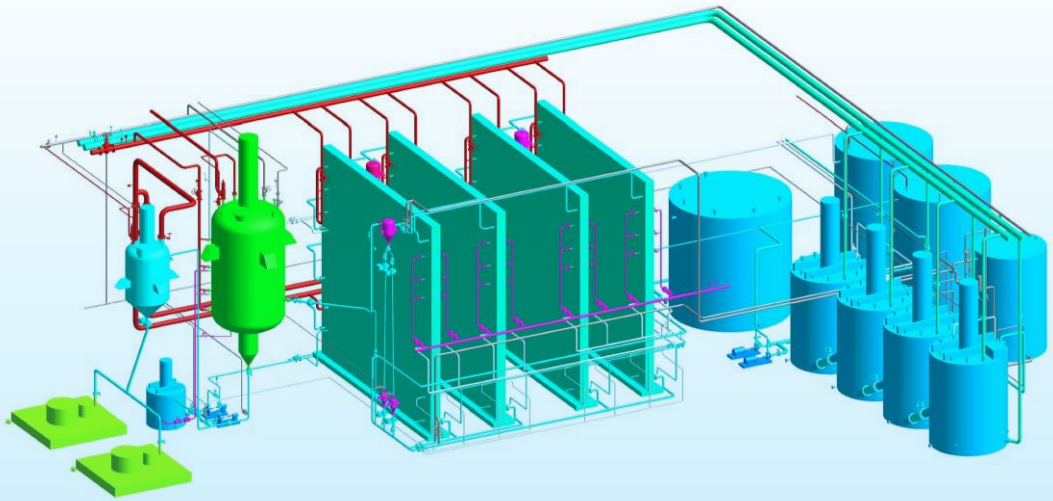


4th generation Single High pressure, high temperature reactor
- 25% energy use of 1st generation
- Like a pressure cooker, efficiency improved due to high pressure and temperature

5th



5th generation (patent technology) Continuous high-pressure system, 8% energy use of 1st generation
- 1/3 energy use of 4th generation
- Based on 4th generation system, it operates continuously & residual energy is used in pre-heating feed solutions



- **Current Industry Standard:** Most companies are still utilising 1st to 4th generation technologies for sulphate production
- **Advanced 5th Generation Technology:** Firebird's 5th generation technology is already in successful commercial use, with three units sold to date
- **Significant Steam Savings:** Steam is a major cost factor in sulphate production. This advanced technology is expected to reduce steam consumption to less than half of the industry average, greatly improving cost efficiency

For full details refer to ASX announcement dated 7/5/24

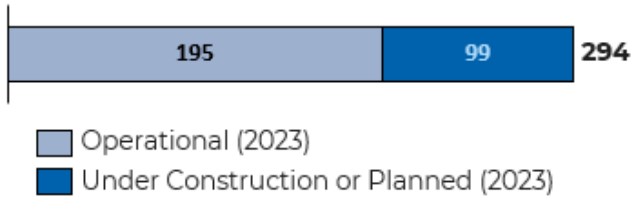
WHY CHINA FIRST? A STRATEGIC CHOICE FOR THE FUTURE

- **Dominant Electric Vehicle Market:** China became the largest car exporter in 2023, with electric vehicles (EVs) making up nearly all of these exports. Half of all new car sales in China are EVs, and this percentage continues to grow
- **Technological Leadership:** China's EV battery development is estimated to be at least a decade ahead of Western competitors. Western manufacturers are delaying expansion due to high costs, outdated technology, and a fragmented supply chain
- **Unmatched Industrial Efficiency:** China boasts the world's most efficient industrial supply chain, supported by a vast, skilled workforce and high production standards. The government is committed to environmental sustainability and streamlining project permits
- **Strategic Positioning of Firebird:** A key objective of Firebird is to establish a profitable manganese-based cathode material business, leveraging its unique process and technology. **This model can be replicated globally**
- **Investor Confidence:** Professional investors visiting Firebird's Chinese operations have been highly impressed by the rapid progress delivered, quality of work at the Jinshi High-Tech Industrial Park, extensive relationships developed, support for the Company and the overall business environment in China

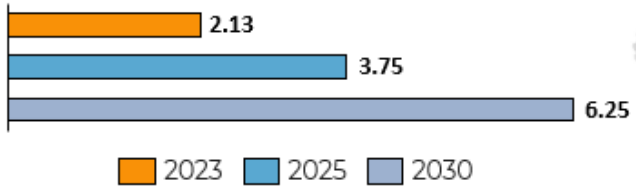
Source: Company research

HUNAN IS AT THE EPICENTRE OF CHINESE MNSO4 DEMAND

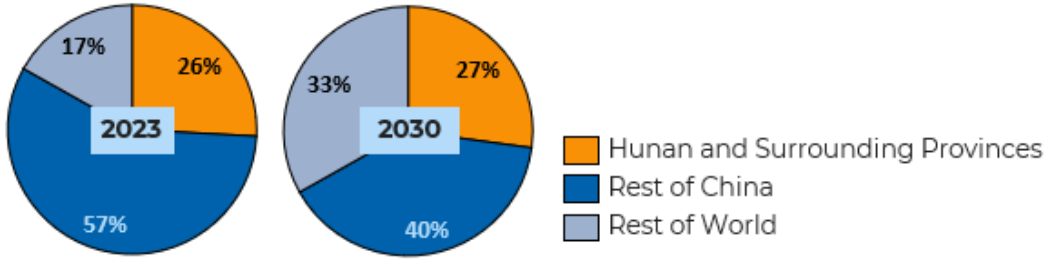
China Gigafactory Status



China Gigafactory Capacity (TWh)

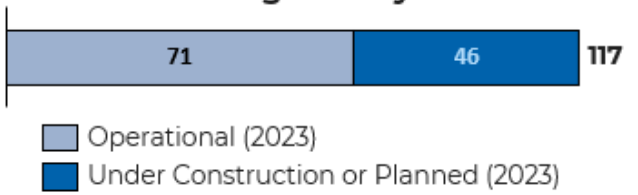


Share of Gigafactory Capacity

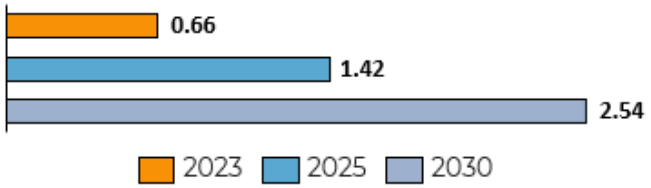


Hunan and Surrounding Provinces			
1	Hunan	6	Guizhou
2	Chongqing*	7	Guangxi**
3	Sichuan	8	Guangdong
4	Hubei	9	Jiangxi
5	Yunnan		

Hunan and Surrounding Provinces Gigafactory Status



Hunan and Surrounding Gigafactory Capacity (TWh)



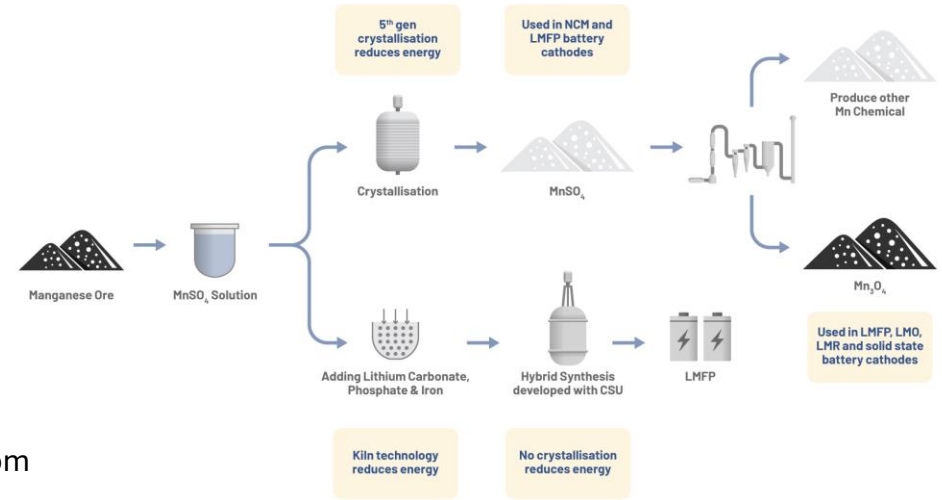
*Chongqing is a Municipality
** Guangxi is a Region

LMFP WITH CENTRAL SOUTH UNIVERSITY

HOW DOES FIREBIRD CAPTURE THE WAVE OF THE NEXT-GEN LI-ION BATTERIES?

- **FRB's vision** is to combine its traditional mining business with downstream processing and grow into a global cathode producer
- **Firebird has a strategic advantage on integrating MnSO4 into LMFP production**
  - Crystallisation is a major operational cost in MnSO4 production, even with Firebird's patented 5th Generation Crystallisation technology
  - Typical LMFP production involves purchasing MnSO4, dissolving it and wasting energy from the crystallization process
  - Firebird's method eliminates this inefficiency, offering a significant cost advantage in LMFP production
  - Importantly, Firebird's technology is transferable to locations outside of China
- **Lab Testing, Internal Scoping Study, and Commercial-Sized Pilot Plant**
  - Firebird will start lab-testing soon, with specialist equipment already ordered
  - An internal Scoping Study is underway to prepare for a Pilot Plant capable of producing one metric tonne of LMFP per day
  - CSU professors and their team have developed a solid foundation in LMFP production
  - Lab testing with Firebird's technical team will refine the production process, which differs from mainstream methods
  - Firebird plans to patent aspects of the production process both in China and internationally
- **Industry Developments:**
  - **CATL Acquisition: CATL purchased Lithitech, valuing the company at US$131 million in 2021, for its 2,000 tonne per annum LMFP production and expansion plans**
  - **LOPAL Acquisition: LOPAL, through its subsidiary, acquired BEITERUI, an LMFP technology company, for US$119 million in December 2020**

Flow sheet to demonstrate energy and efficiency savings



Source: Company research

For full details refer to ASX announcement dated 28/10/24

RESOURCES

OAKOVER PROJECT

Over the medium to long term, Oakover will play an integral role in the delivery of Firebird's manganese battery material strategy

KEY HIGHLIGHTS

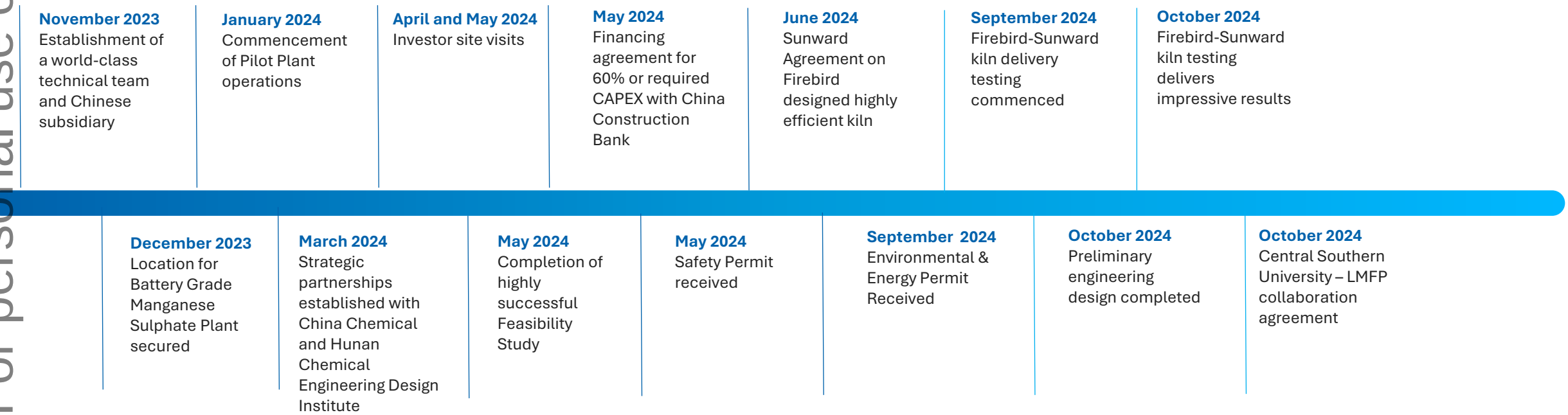
- Near-surface, gently dipping geology
- Metallurgical test work demonstrated saleable 30 - 32% Mn concentrate product achievable
- Hydrometallurgy test work demonstrated Battery Grade $MnSO_4$ achievable
- Updated DMS Manganese Concentrate Scoping Study generated strong results and highlighted Oakover as a long-life, high-quality operation:
  - 18-year Life of Mine
  - ~A$741.3 M NPV at a discount rate of 8%
  - Impressive IRR of 73.1%
  - CAPEX of A$123M

Mineral Resource Classification	Tonnes (Mt)	Mn (%)	Fe (%)	SiO_2 (%)	Al_2O_3 (%)	P (%)
Indicated	105.78	10.1	8.9	39.2	9.8	0.10
Inferred	70.87	9.6	8.0	36.5	9.5	0.09
Total	**176.65**	**9.9**	**8.6**	**38.1**	**9.7**	**0.10**

For full details refer to ASX announcements 10/3/22, 30/1/23, 23/3/23, 26/6/23 and 30/8/23

SUMMARY

DELIVERING ON STRATEGY – TRANSFORMATIVE 12 MONTHS



Ongoing

Government Support: Jinshi Government continues to actively assist Firebird in the permitting process, offering substantial financial incentives, including a 62.5% land rebate in cash within 60 business days and six years of tax incentives from commercial production.

INVESTMENT SUMMARY

Proven Team

Leading experience across high-purity manganese sulphate development & production, growing projects through the mining lifecycle and delivering long-term stakeholder value

Leading Location

Stage one operations to be established in China, providing significant competitive advantages across key areas including cost, technology and financing

Highly Competitive Cost Profile

Through establishing operations China, Firebird is on track to become a highly cost competitive battery-grade $MnSO_4$ producer

Environmental Benefits

Development of zero waste process through numerous synergies and commercial opportunities available through Chinese chemical parks

Right Timing

The LMFP market is forecast to experience exponential growth and become a >$US20 billion market by 2030

ASX:FRB

Share price as of 22 October 2024	$0.115
Shares on issue	142.36 M
Market capitalisation	$17 M
Options @ $1.00	12.0 M
Performance rights	2.2 M
Options @ $0.30	12.5 M
Options @ $0.40	12.5 M
Cash on hand (30 Sept 2024)	$4.2 M

Major Shareholders

Canmax Technologies	9.7%
Tolga Kumova	9.5%
Board (incl. related parties) & management	15.05%

FIREBIRD METALS
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REFERENCES

Comparisons with other Manganese Sulphate Developers - Sources

	Firebird Metals (ASX: FRB)	Source: ASX Announcement	Element 25 Train 1 (ASX: E25)	Source: ASX Announcement	Euro Manganese (ASX:EMN, TSXV: EMN, OTCQB: EUMNF)	Source: ASX Announcement
Study Complete	Feasibility Study	ASX announcement 7/5/24	Feasibility Study	ASX announcement 12/4/23	Feasibility Study	ASX announcement 28/7/22
Production Capacity	72,500 t/a HPMSM		65,000 t/a HPMSM		100,000 t/a HPMSM & 15,000 t/a HPEMM	
Products	50,000 t/a HPMSM & 10,000 t/a Mn3O4		65,000 t/a HPMSM		100,000 t/a HPMSM & 15,000 t/a HPEMM	
Capital	US$ 82.3 M		US$289 M		US$757.3 M	
Production Cost	US$609 per tonne product US$579 per tonne product	ASX announcement 7/5/24 ASX announcement 22/10/24	US$1,294 per tonne product		US$214.54 per tonne of dry plant feed	
Tonnes of feed processed	66,000 t/a	ASX announcement 7/5/24	~72,000t/a		1,066,000t/a	
HPMSM Price Assumption	US$1419		Not Disclosed		US$4,019	
Cathode Development plans	Yes	ASX announcement 28/10/24				
Solid Waste	100% treated by cement plant	ASX announcement 10/9/24	"The net result of the flowsheet design is that the solid by products are removed via the production of three coproduct streams that can be repurposed in other industrial applications thereby largely eliminating the need for a solid waste landform as part of the Facility"	ASX announcement 12/4/23	"Returning washed tailings to the carefully prepared containment cells in the excavated areas of the tailings progressively remediates the environmental impact risks of legacy mining operations"	ASX announcement 28/7/22
Permits	Environmental, Energy and Safety Permit Received all received in less than 1 year	ASX announcement 28/5/24, 10/9/24 and 24/9/24	Air Permit received	ASX announcement 20/5/24	Environmental (ESIA) received	ASX announcement 28/3/24
Sulphate Commercial Production / FID	No		No		No	