

ASX ANNOUNCEMENT

24 February 2025

## STRATEGIC ENGAGEMENT OF SEDGMAN FOR COMMERCIALISATION OF GROUNDBREAKING CALCINING KILN

### HIGHLIGHTS

- Firebird has engaged Sedgman Pty Ltd, a CIMIC Group company, to drive the technical marketing of the Company's innovative calcining kiln in Australia and internationally.
- Firebird's calcining kiln, currently under patent application, provides significantly greater energy efficiency than existing alternatives. Firebird has successfully completed trials of on the pilot scale calcining kiln, with excellent results generated.
- Compared to conventional kilns, which typically require more than 300 kWh per tonne of feed, Firebird's pilot kiln operates at only 80-100 kWh per tonne — delivering an impressive 70% energy savings. This translates to a cost reduction of USD30 per tonne of product, or 5% of total production costs.
- Kiln design is highly scalable, with expectations for further energy savings as it moves from pilot to full-scale production due to economies of scale.

Australian-owned Firebird Metals (ASX: FRB, Firebird or the Company) is pleased to announce that it has engaged **Sedgman** to assist in the technical marketing of the Company's innovative calcining kiln in Australia and internationally (excluding China). This is a key step in Firebird's strategy to commercialise its calcining technology globally, addressing rapidly growing demand for an energy-efficient solution for mineral processing.

Sedgman has over four decades of experience in minerals and metals project development and novel process technology adoption across critical and energy transition commodities, industrial minerals, and precious metals. This cements Sedgman as an industry leader in pioneering the use of new technologies to drastically improve the performance and efficiency of processing plants. Sedgman's regional experience spans major markets around the world. Sedgman, like Firebird, is committed to embracing and advancing new methods, materials and technologies that generate value and improve the efficiency of the industry.

Engaging Sedgman is a significant step forward for the Company in commercialising the innovative calcining kiln technology.

**Firebird Managing Director, Mr. Peter Allen**, commented: *"Partnering with Sedgman is a key step forward for Firebird as we look to commercialise our groundbreaking calcining kiln in the international markets, and support the ongoing and exciting work of our innovative research and development technical team in China."*

*"Sedgman is an industry leader that has been pioneering the use of new process technologies to improve the performance of processing plants for over four decades. Sedgman brings a proven track record of commercialising novel equipment and solutions to advance efficiency within our industry. Firebird's calcining kiln presents not only an opportunity to improve the cost efficiency of our processes as we*

*become an effective producer of manganese-based cathode materials, but also an opportunity to bring that same efficient and emerging technology to the global mineral processing industry.*

*“Sedgman, alongside Sunward, are high calibre development partners for our calcining kiln, and engaging them for this project reinforces our commitment to advancing innovative and efficient emerging technologies, in alignment with our LMFP Battery Strategy.”*

### **Firebird’s Energy Efficient Calcining Kiln**

Firebird’s calcining kiln, currently under patent application, provides significantly greater energy efficiency than existing alternatives. Firebird has successfully completed trials of the pilot scale calcining kiln, with remarkable results generated – indicating that the calcining kiln has the potential to reduce energy usage by 70%<sup>1</sup>.

Compared to conventional kilns, which typically require more than 300kWh per tonne of feed, FRB’s pilot kiln operates at only 80-100kWh per tonne – translating to a significant cost reduction of USD30 per tonne of product, or approximately 5% of total production costs.

The calcining kiln technology is highly scalable, and in addition to applications in manganese-related mineral processing, will also be assessed for use across industries such as iron ore beneficiation and lithium sulphate production.

Firebird has already received a number of inquiries about this technology internationally. Engaging Sedgman at this key juncture, with the organisations’ proven record of experience in innovative technologies, will support Firebird to capitalise on the growing demand for energy efficient solutions for mineral processing.

**This announcement has been approved for release by the Board.**

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<sup>1</sup> FRB Successfully Tests Energy-Efficient Rotary Kiln 70% Reduction in Energy Consumption

## About Firebird Metals Limited

Firebird Metals is an advanced manganese developer focused on combining mining and downstream processing with a dedication to the advancement of the EV battery sector.

The Company is currently progressing its unique China-focused lithium manganese iron phosphate (LMFP) battery strategy, which will develop Firebird into a near-term producer of high-purity, battery-grade manganese sulphate, a key cathode material in LMFP batteries for electric vehicles.

Execution of this strategy will place Firebird at the forefront of manganese sulphate production, at a time when the use and demand for manganese in batteries continues to rapidly grow. Due to the low number of ASX-manganese developers and increasing use of LMFP by car manufacturers, Firebird is in a strong position to benefit from this growing market and deliver significant value to its shareholder base.

The Company also has a project portfolio located in the renowned East Pilbara manganese province of Western Australia, which boasts a total Resource of 234Mt<sup>2,3</sup>, with exciting exploration and development growth upside. The portfolio is led by the flagship Oakover Project, which holds a Mineral Resource Estimate<sup>1</sup> of 176.7 Mt at 9.9% Mn, with 105.8 Mt at 10.1% Mn in an Indicated category.

The Company's other key Project is Hill 616 which provides Firebird with compelling growth opportunities. Hill 616 contains an Inferred Mineral Resource<sup>2</sup> of 57.5Mt at 12.2% Mn and shares similar geological traits to Oakover.

The Company is committed to generating sustainable long-term value and growth for stakeholders, through the implementation of best practice exploration methods while prioritising the well-being, health and environmental protection of its employees and communities it operates in.

## JORC Compliance Statements

This announcement contains references to Mineral Resource Estimates for the Oakover and Hill 616 Projects which have been reported in compliance with Listing Rule 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 previously reported and that all material assumptions and technical parameters underpinning the Mineral Resource Estimates continue to apply and have not materially changed.

The Company confirms it is not aware of any new information or data that materially affects the information included in the previously released market announcements that are referred to in this announcement.

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<sup>2</sup> See ASX announcement dated 23 March 2023: 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.

<sup>3</sup> See ASX announcement dated 1 December 2021: Inferred Resource of 57.5 Mt at 12.2% Mn.