



ASX / MEDIA ANNOUNCEMENT

01/12/2021

HILL 616 MAIDEN INFERRED RESOURCE INCREASES MANGANESE INVENTORY BY 90%

Highlights

- **Maiden Inferred Mineral Resource Estimate at Hill 616 of 57.5mt at 12.2% Mn**
 - Includes a close-to-surface supergene manganese zone of 8.1mt at 17.4% Mn
- **Identification of higher-grade supergene zone at Hill 616 strengthens Firebird's Rapid Development Strategy, which is currently underway and evaluating initial production through DSO via simple beneficiation**
 - Firebird focused on assessing speed to market options to provide early cashflow to fund future manganese sulphate development for the battery market
- **Addition of Hill 616 Mineral Resource to the Oakover Project Mineral Resource increases the Company's total Inferred Mineral Resources by 90% to 121mt:**
 - Oakover Project - Inferred JORC 2012 Mineral Resource Estimate of 64 Mt @ 10% Mn
 - Hill 616 Project - Inferred JORC 2012 Mineral Resource Estimate of 57.5 Mt @ 12.2% Mn
- **Historical drilling of more than 4,900m over 2.2 km of strike was sufficient to establish the Hill 616 Maiden Resource, resulting in a significant and inexpensive uplift in total defined resource**
- **Resource remains open in all lateral directions, as drilling has yet to fully delineate the Hill 616 supergene and mangiferous shale mineralisation**

Firebird Metals Limited (ASX: FRB) (Firebird or the Company) is pleased to announce a Maiden Inferred Mineral Resource Estimate (MRE) at Hill 616 of 57.5 million tonnes grading 12.2% Mn, which includes a higher-grade lateritic supergene zone of 8.1 million tonnes grading 17.4% Mn.

The MRE was completed by CSA Global Pty Ltd using historical drill results from a 162 hole, 4,977m program that was completed between 2009-2011 (Figure 2).

The superior grade delineated in the subsection of the defined resource provides Firebird with an additional development option to target Direct Shipping Ore (DSO), as part of the Rapid Development Strategy that is underway at the Company's flagship Oakover Manganese Project (Oakover).

Hill 616 is located 85km southeast of Newman and 37km from Oakover.

Firebird's Managing Director, Peter Allen, commented: "We are excited to see such a significant increase in the total resource base across our project portfolio, through the addition of the maiden Inferred Mineral Resource at Hill 616."

“To deliver a Maiden Resource based on a technical review of historical drilling at Hill 616, without having to complete any further drill holes or exploration work is a truly outstanding result. This has resulted in an inexpensive and rapid uplift in total defined resource for the benefit of our shareholders.

“The Inferred Mineral Resource defined at Hill 616 provides a strong foundation for Firebird to continue to assess development opportunities in combination with our flagship Oakover Project. Mineralisation is open to the south of Hill 616 and remains a prospective target for future extensional drilling.

“Importantly, the work completed by CSA Global has delineated a near surface, higher-grade supergene zone within the Inferred Mineral Resource, which further strengthens development options for the Rapid Development Study, which is evaluating a speed to market strategy, targeting initial production through DSO from supergene zones and simple processing methods, to deliver early production and cash flow. Looking ahead, Firebird is also focused on assessing assay results from drilling recently completed at the Sixty Sixer and Karen deposits to understand the potential to define further supergene manganese zones across the Oakover Project.”

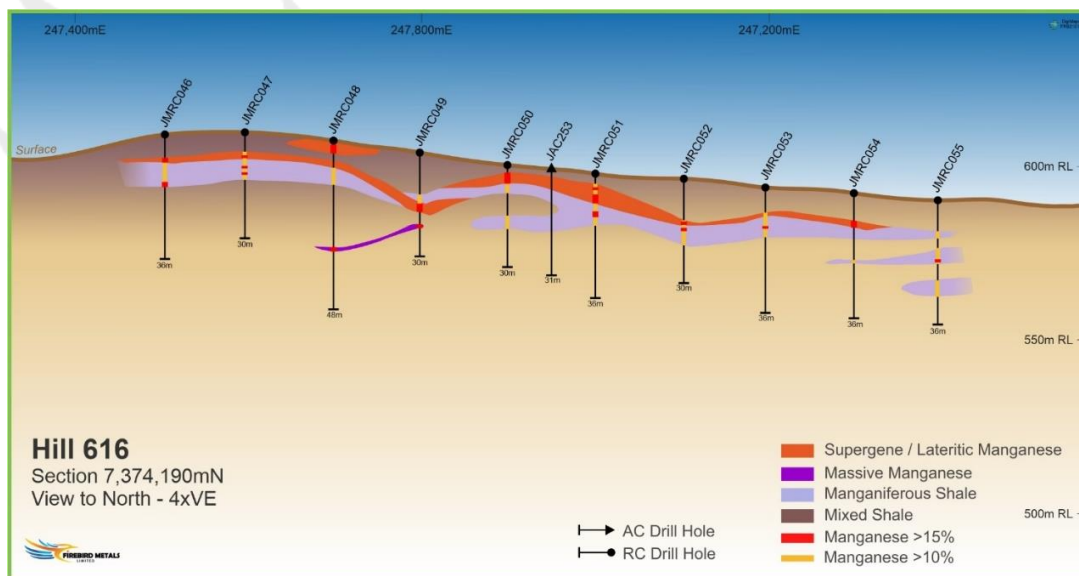


Figure 1: Hill 616 cross section

Mineralisation at Hill 616 extends from surface to a depth of approximately 20m, with good geological continuity in the east-west and north-south directions (Figure 1). The interpreted manganiferous shale and supergene/lateritic units were estimated for resource.

Future infill drilling will allow the investigation of grade continuity and potentially improve the resource classification. The data collection and density of sampling has been deemed appropriate by CSA Global for the Mineral Resource classification of the Hill 616 deposit.

Firebird's Rapid Development Strategy, which is currently underway, was designed to assess early cashflow opportunities to fund future development opportunities and minimise dilution to existing shareholders.

CSA Global believes that it is reasonable to assume that a marketable manganese product may be achievable from the higher-grade supergene manganese via Ore Sorting techniques. Suitable trials are in progress on Firebird's Oakover and Karen deposits, which are of similar geological setting and mineralisation as Hill 616.

It is also reasonable to assume that production of a high purity electrolytic manganese metal and battery grade manganese sulphate may be possible using hydrometallurgy. Further metallurgical test work to determine how the manganiferous and manganese supergene material will be economically extracted will be required to confirm these assumptions.

In combination with the previously estimated 64 million tonnes Inferred Mineral Resource estimate grading 10% Mn at Oakover, this new resource brings the **total Inferred Mineral Resources to 121mt, representing an increase of 90% in tonnes.**

The total Firebird manganese resources include:

- Oakover Project - Inferred JORC 2012 Mineral Resource estimate of 64 Mt @ 10% Mn
- Hill 616 Project - Inferred JORC 2012 Mineral Resource estimate of 57.5 Mt @ 12.2% Mn

Zone	Mineral Resource Classification	Tonnes (Mt)	Mn (%)	Fe (%)	SiO ₂ (%)	Al ₂ O ₃ (%)	P (%)	LOI (%)
Manganiferous shale	Inferred	49.3	11.4	17.3	40.0	8.5	0.13	7.6
Supergene manganese	Inferred	8.1	17.4	16.8	30.1	9.4	0.09	9.9
Grand Total	Inferred	57.5	12.2	17.2	38.6	8.6	0.13	8.0

Table 1: Hill 616 Mineral Resource estimate

*Mineral resources reported at a cut-off grade of 8% Mn

*Fe₂O₃¹ converted to Fe% using a factor of 0.6994 calculated from atomic mass and molecular weight.

* P₂O₅² 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

¹ Assumption is all the Fe occurs in the form of Fe₂O₃

² Assumption is all the P occurs in the form of P₂O₅

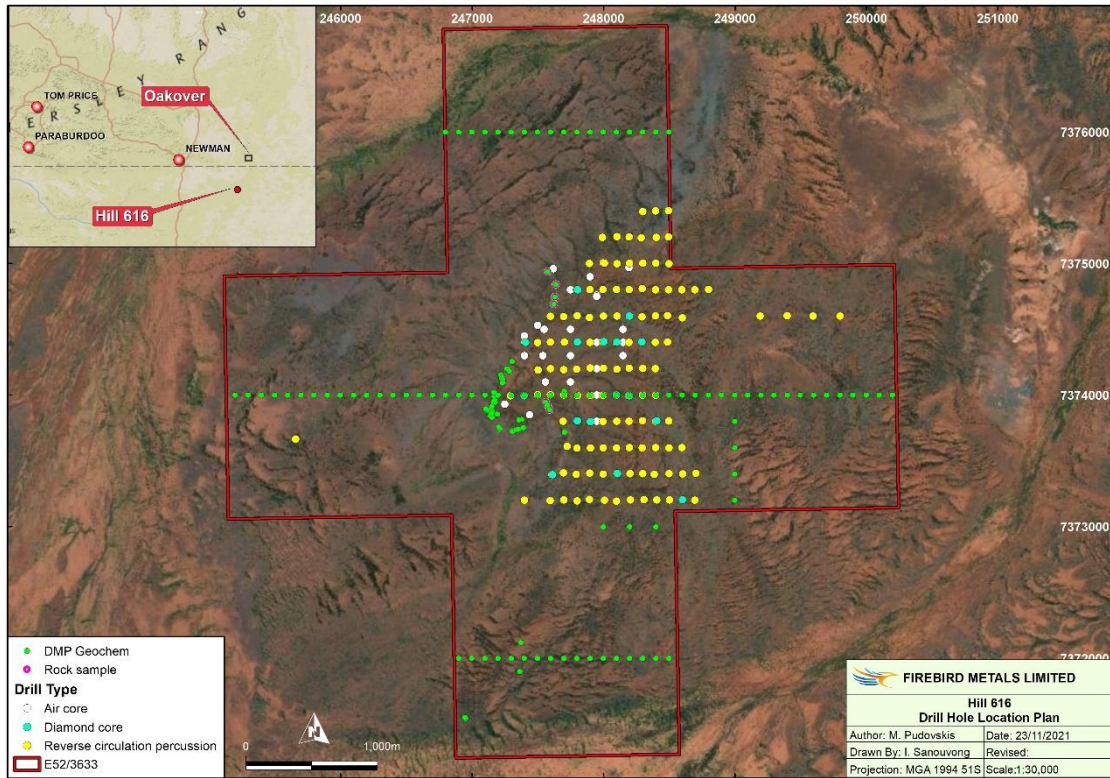


Figure 2: Hill 616 Tenement and drill hole location plan

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About Firebird Metals Limited

Firebird Metals Limited (ASX: FRB) is an exploration and development company that owns 100% of four highly prospective manganese projects in the renowned East Pilbara manganese province of Western Australia:

- Oakover Project - Inferred JORC 2012 Mineral Resource estimate of 64 Mt @ 10% Mn
- Hill 616 Project - Inferred JORC 2012 Mineral Resource estimate of 57.5 Mt @ 12.2% Mn
- Disraeli Manganese Project - potential Woodie Woodie style mineralization
- Raggard Hills - potential Woodie Woodie style mineralization

The Company's primary focus will be on the flagship Oakover Project which is located 85 km east of Newman and covers approximately 360 km². Oakover has a JORC 2012 Inferred Mineral Resource estimate of 64Mt at 10% Mn at the Sixty Sixer and JayEye prospects.

The Company's total Inferred Mineral Resources Estimate of 121mt provides a solid technical foundation for further development, with the Company planning to complete additional infill and extensional drilling in conjunction with modern metallurgical test work utilising lower cost DMS and ore sorting techniques to deliver marketable manganese products to the global steel and battery markets.

Competent Persons Statement

The information in this report that relates to the Hill 616 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 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.