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Projects:
Fraser Range nickel-copper, gold

Polar Bear gold, nickel

Canyon Creek molybdenum,
 copper, gold

Youanmi nickel, copper, PGM's

Collurabbie nickel, copper, PGM's

MAJOR NICKEL-COPPER DISCOVERY
New deposit style, new nickel province, first of three EM targets to be tested at the Eye

Sirius Resources (**ASX:SIR**) advises that it has discovered significant nickel and copper sulphide mineralisation in the first reverse circulation (RC) drill holes at its 70% owned Fraser Range project in Western Australia.

The discovery has been named the Nova deposit.

The Nova deposit is located in a previously unexplored and inaccessible area, beneath transported overburden, and was discovered with the first drill hole designed to test a very large electromagnetic (EM) conductor – one of three EM conductors at the Eye prospect.

Key points are as follows:

- **First hole (SFRC0024) – the discovery intersection - intersected 4 metres @ 3.8% nickel and 1.42% copper where predicted by the EM model, plus minor hangingwall zones.**
- **Step-out hole SFRC0026 has since intersected 15 metres of similar matrix to massive style sulphide mineralisation (assays awaited) some 55 metres up-dip from the discovery hole.**
- **The EM model indicates sulphide mineralisation may continue for a further 200 metres down dip from the discovery hole on this drill section.**
- **These intersections are at the uppermost edge of a very large (1,000 long x 300 metre wide) EM anomaly – indicating potential for the Nova discovery to be a very large massive nickel-copper sulphide deposit.**
- **This EM conductor is the first of three EM targets at the Eye nickel-copper prospect.**
- **The mineralisation represents a totally new style of nickel-copper sulphide deposit.**
- **This discovery defines an entirely new unexplored nickel province in which Sirius and its major shareholder, Mark Creasy, are the dominant land holders.**

- It is a blind (ie concealed by transported sediments) virgin discovery which vindicates Sirius' exploration methodologies and corporate strategy of identifying high leverage greenfields opportunities in stable jurisdictions.
- It is not yet known if the mineralisation also contains platinum group metals (PGM's) – definitive assays are awaited.
- The sulphide minerals are high tenor and will likely produce a clean high value concentrate.
- The deposit is only 40km north of the Eyre Highway and closer, via sealed road, to the port of Esperance than any nickel mine in Western Australia.
- Drilling is ongoing.

Sirius' managing director Mark Bennett said "this appears to be a major new nickel-copper discovery, of a new deposit style in an entirely new province. It is very gratifying to start from scratch in a new frontier doing what we do best and make a discovery. This success vindicates our somewhat unfashionable corporate strategy of seeking to identify early stage exploration opportunities with low entry cost in safe jurisdictions and creating real value through discovery and definition of significant resources".

"It is very early days but it ticks all the boxes. The mineralogy looks ideal for the production of a high quality concentrate because there are none of the troublesome silicate minerals which can cause recovery problems in the typical Goldfields-style nickel deposits, and its location relative to port is second to none." he said.

Discussion

The mineralisation intersected in discovery hole SFRC0024 comprises a 4 metre thick zone of heavy pyrrhotite-pentlandite-chalcopyrite sulphides (from 191-195m) grading 3.8% Ni and 1.42% Cu. The mineralisation intersected in step-out hole SFRC0026, some 55 metres up-dip, comprises 15 metres of matrix and massive sulphides similar in appearance to those in the discovery hole. Assays are awaited for this step-out hole. The intersection angle in both holes is such that the stated down hole widths are interpreted to represent true width. The EM model indicates that massive sulphides may extend for a further 200 metres down dip on this section from the discovery hole – this area is yet to be drilled (see *Figures 1 and 2*).

Both holes intersected mineralisation where predicted by the EM model, which has been described by Newexco Geophysical Consultants as having all the characteristics of massive sulphide. The fact that the intersections in SFRC0024 and 0026 are situated at the uppermost tip of this very large and strong EM conductor which extends for 1,000 metres down plunge from confirmed mineralisation suggests that the remainder of the EM conductor is likely to be a very large body of massive sulphide similar to that intersected in SFRC0024 and 0026 (see *Figure 3*).

At this stage it is unknown if the mineralisation also contains platinum group metal (PGM) mineralisation – assays for PGM's and other elements are expected to take several weeks.

The mineralisation at Nova is hosted in very strongly metamorphosed rocks termed granulites and comprises pyrrhotite, pentlandite and chalcopyrite. The associated silicate minerals are unlike those found in most Goldfields-style nickel deposits, and the sulphides are likely to be highly amenable to conventional

separation techniques, suggesting the likelihood of producing a clean, high grade concentrate. In contrast to the typical Goldfields-style nickel deposits, the crystalline nature of the Nova host rock is also likely to be favourable in terms of ground stability and degree of mining dilution.

The success of the three hole RC drill program has led Sirius to extend the program, and RC drilling of the uppermost part of the deposit is ongoing, with a deeper diamond drill program to follow within 2-3 weeks.

The Nova discovery is the first of three EM conductors to be tested at the Eye. The other two nearby EM conductors have also been described by Newexco as being strong anomalies with the conductivity characteristics of massive sulphides.

Sirius, together with its major shareholder and joint venture partner Mark Creasy, control most of the ground in this belt and are in a unique position to control what appears to be a significant new nickel province. Outside of the Eye, none of this ground has yet been explored using EM.



Mark Bennett, Managing Director and CEO

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Competent Persons statement

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Dr Mark Bennett, who is an employee of the company. Dr Bennett is a Member of the Australasian Institute of Mining and Metallurgy and a Fellow of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2004 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Bennett consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

Exploration results are based on standard industry practices, including sampling, assay methods, and appropriate quality assurance quality control (QAQC) measures. Reverse circulation (RC), aircore (AC) and rotary air blast (RAB) drilling samples are collected as composite samples of 4 or 2 metres and as 1 metre splits (stated in results). Mineralised intersections derived from composite samples are subsequently re-split to 1 metre samples to better define grade distribution. Core samples are taken as half NQ core or quarter HQ core and sampled to geological boundaries where appropriate. For soil samples, PGM and gold assays are based on an aqua regia digest with Inductively Coupled Plasma (ICP) finish and base metal assays may be based on aqua regia or four acid digest with inductively coupled plasma optical emission spectrometry (ICPOES) or atomic absorption spectrometry (AAS) finish. In the case of reconnaissance RAB, AC, RC or rock chip samples, PGM and gold assays are based on lead or nickel sulphide collection fire assay digests with an ICP finish, base metal assays are based on a four acid digest and inductively coupled plasma optical emission spectrometry (ICPOES) and atomic absorption spectrometry (AAS) finish, and where appropriate, oxide metal elements such as Fe, Ti and Cr are based on a lithium borate fusion digest and X-ray fluorescence (XRF) finish. Sample preparation and analysis is undertaken at Genalysis Intertek and Ultratrace laboratories in Perth, Western Australia.

The quality of RC drilling samples is optimised by the use of riffle and/or cone splitters, dust collectors, logging of various criteria designed to record sample size, recovery and contamination, and use of field duplicates to measure sample representivity. The quality of analytical results is monitored by the use of internal laboratory procedures together with certified standards, duplicates and blanks and statistical analysis where appropriate to ensure that results are representative and within acceptable ranges of accuracy and precision. Exploration results obtained by other companies and quoted by Sirius have not necessarily been obtained using the same methods or subjected to the same QAQC protocols. These results may not have been independently verified because original samples and/or data may no longer be available.

Where quoted, nickel-copper intersections are based on a minimum threshold grade of 0.3% Ni and gold intersections are based on a minimum gold threshold grade of 0.1g/t Au unless otherwise stated. Sulphide intersections are length and density weighted as per standard industry practice. Sample and drill hole co-ordinates are based on the GDA/MGA grid and datum unless otherwise stated.

Hole No.	Northing	Easting	Dip	Azimuth	From, m	To, m	Width, m	Grade, %	
SFRC0024	6479500	518210	60	270	174	175	1	0.76% Ni, 1.36% Cu	
						178	181	3	0.31% Ni, 0.68% Cu
						191	195	4	3.80% Ni, 1.42% Cu
SFRC0025	6479500	518080	60	270	-	-	-	No significant intersection (on far upper western edge of EM target)	
SFRC0026	6479500	518140	60	270	121	136	15	Massive & matrix sulphides – assays awaited	

Table 1. Details of the three RC drill holes at the Nova deposit. The nickel and copper values are from four acid digest and AAS finish at Genalysis Intertek Laboratory, Perth. Full analytical results (including PGM's) are pending.



Figure 1. Discovery hole SFRC0024, Saturday 21st July 2012. Note the run of darker grey samples (with disseminated sulphide) culminating in the black samples (matrix to massive sulphide).

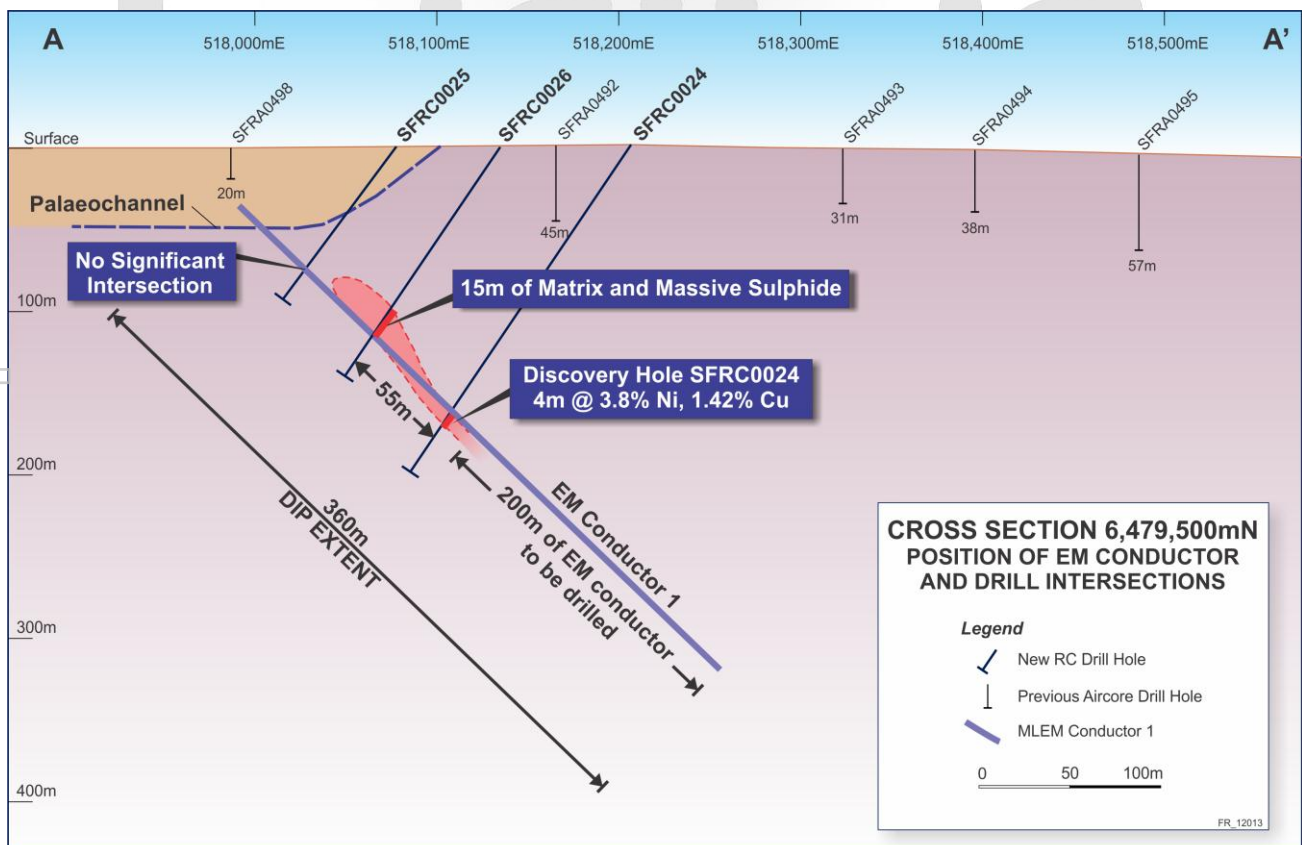


Figure 2. Cross section 6479500N - the uppermost tip of EM conductor 1 showing intersections relative to the extent of conductor.

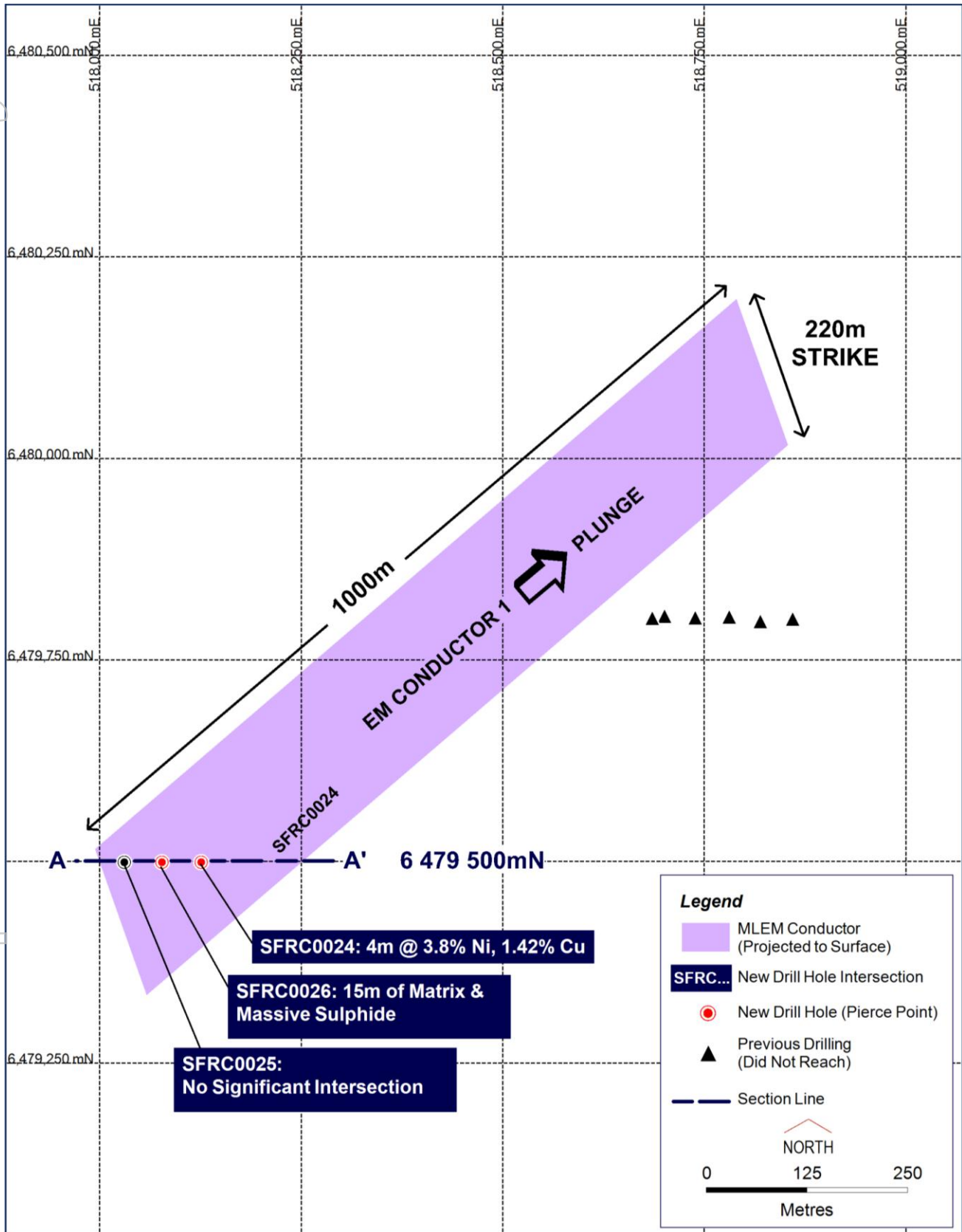


Figure 3. Plan projection of EM conductor 1 (Nova) showing location of discovery hole SFRC0024 and step-out hole SFRC0026.