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Polar Bear gold, nickel

Canyon Creek molybdenum,
 copper, gold

Youanmi nickel, copper, PGM's

Collurabbie nickel, copper, PGM's


NOVA UPDATE

- ***Another thick sulphide intercept on 700N line***
- ***Drilling extends 600N line further down dip***
- ***Downhole EM on 800N line confirms Conductor 1***
- ***Diamond drilling to commence on 800N line***
- ***Conductor 4 model redefined***
- ***Induced polarisation (IP) survey commenced***

Sirius Resources NL (ASX:SIR) ("Sirius" or the "Company") advises that ongoing drilling continues to expand the Nova nickel-copper deposit and that results from recent downhole electromagnetic (DHEM) surveys indicate that Conductor 1 (Nova) continues down plunge to the north and that Conductor 4 (Nova West) is situated further to the west than modelled by the previous fixed loop EM (FLEM) survey.

Drilling – line 600N

Hole SFRD0050, the deepest/easternmost hole drilled with the expectation of closing off the down dip extent of mineralisation on the 600N line, intersected mineralisation 30 metres down dip from hole SFRD0049 (announced 18th September). The mineralisation comprises:

- 1 metre of massive sulphide from 363 metres, and;
- 9.4 metres of mixed (disseminated, stringer and minor massive) sulphides from 405 metres.

Mineralisation on this line continues further down dip than expected and although weakening is now defined over a dip extent of 330 metres (see *Figures 1 and 2*) and is still open beyond this point.

Drilling – line 650N

Drilling has commenced on infill line 650N with the aim of closing up the drill spacing along the main axis (plunge) of the deposit from 150 metres (based on 100 metre spaced drill lines) to 75 metres (based on 50 metre spaced drill lines). Hole SFRD0056 has intersected mineralisation where expected, as follows:

- 4.6 metres of disseminated sulphide from 286.5 metres, and;
- 17 metres of mainly disseminated sulphide with narrow zones of massive sulphides from 301 metres.

Drilling – line 700N

Hole SFRD0054, drilled 45 metres down dip from hole SFRD0053 (announced 18th September), is the fourth hole to be drilled on the 700N line, and comprises:

- 17.8 metres of disseminated sulphides from 371 metres, and;
- 12.57 metres of mixed sulphides from 392.43 metres, including;
- 2.87 metres of massive and net textured sulphides from 392.43 metres (*see Figure 4*), and also including;
- 5.9 metres of mostly massive and breccia sulphides from 399.1 metres (*see Figure 5*).

This intersection extends the down dip continuity of the mineralisation on this line to 160 metres, and it remains open both up and down dip (*see Figures 1 and 3*). The next hole on this line has already commenced.

Drilling – line 800N

Drilling will commence on the 800N line tomorrow.

Down hole EM – Conductor 1 (Nova)

Down hole EM (DHEM) surveying of hole SFRD0013 on line 800N, located to the north of all drilling to date at Nova, has confirmed the presence of an EM conductor where expected. Its range of effectiveness is limited due to the masking effect resulting from the extreme conductivity of the thick zones of sulphide intersected on lines 600N and 700N. Drilling to test the conductor up dip of this hole will commence tomorrow (*see above*).

In addition to this, DHEM in hole SFRD0013 has also identified an off hole conductor located approximately 35 metres to the northeast of the hole. This is a previously unrecognised conductor of unknown extent.

Down hole EM – Conductor 4 (Nova West)

Conductor 4 (Nova West) was originally defined by a surface fixed loop EM (FLEM) survey as occurring below Conductor 1 (Nova). SFRD0035, since deepened as a DHEM platform hole, did not intersect any sulphides where predicted by the original FLEM model but has enabled a new EM model to be defined.

Modelling of Conductor 4 is affected by the masking effect of the nearby Conductor 1 (Nova) and as a result two alternative models have been calculated for Conductor 4 (*see Figure 1*). Both of these measure approximately 275 metres in a plunge direction and 150 metres in strike and are located slightly further west than originally modelled.

A follow up EM survey using different specifications will be undertaken to clarify the exact size and extent of Conductor 4, and this will be followed by drilling within the next few weeks.

Induced Polarisation survey

The discovery of the Nova nickel-copper deposit and the identification of additional EM conductors at the Eye prospect has confirmed the potential of the immediate area for magmatic nickel-copper sulphide mineralisation. In such situations, disseminated sulphide mineralisation may also be found associated with the massive sulphide occurrences but the EM geophysics used to find massive sulphides cannot detect disseminated sulphides.

Induced polarisation (IP) geophysics is specifically designed to find disseminated sulphides, and Sirius has commenced a major IP survey covering the entirety of the Eye to identify any such occurrences.

In particular, the IP survey will test the southern part of the Eye, approximately 800 metres south of Nova, to follow up an area previously identified in reconnaissance aircore drilling as containing strongly anomalous nickel and copper enrichment (up to 8 metres @ 1% nickel – see previous ASX announcement on 10th May 2012). This area is also unusually deeply weathered, has an unusual magnetic anomaly and “lit up” as an extensive unexplained early to middle time EM anomaly in the original MLEM survey (see ASX announcement on 18th April 2012).

Assay results

Assays for two key holes (SFRD0039 and SFRD0041) representing the thick sulphide intercepts obtained on the 600N line are expected within one week.



Mark Bennett, Managing Director and CEO

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. For strongly mineralised RC or core samples, base metal assays are based on a high precision four acid digest and AAS finish, sulphur is analysed on a special purpose carbon sulphur analyser and precious metals are based on a fire assay digest and an ICPOES 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 0.5% Ni and/or Cu, 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.

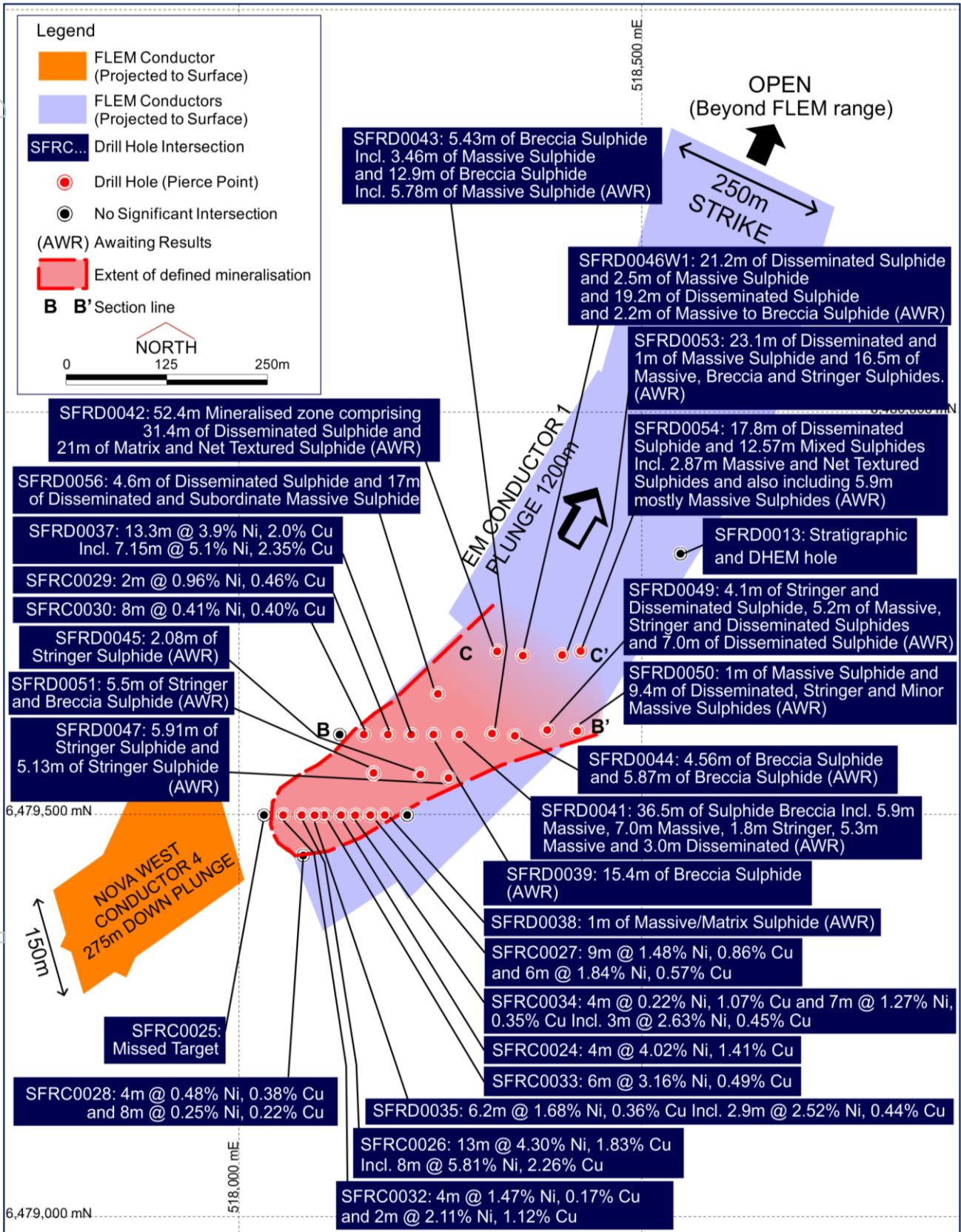


Figure 1. Plan projection of Nova showing location of EM conductors and drilling to date, with assays (where received) and visual intercepts (where assays awaited), with modified Conductor 4 (Nova West).

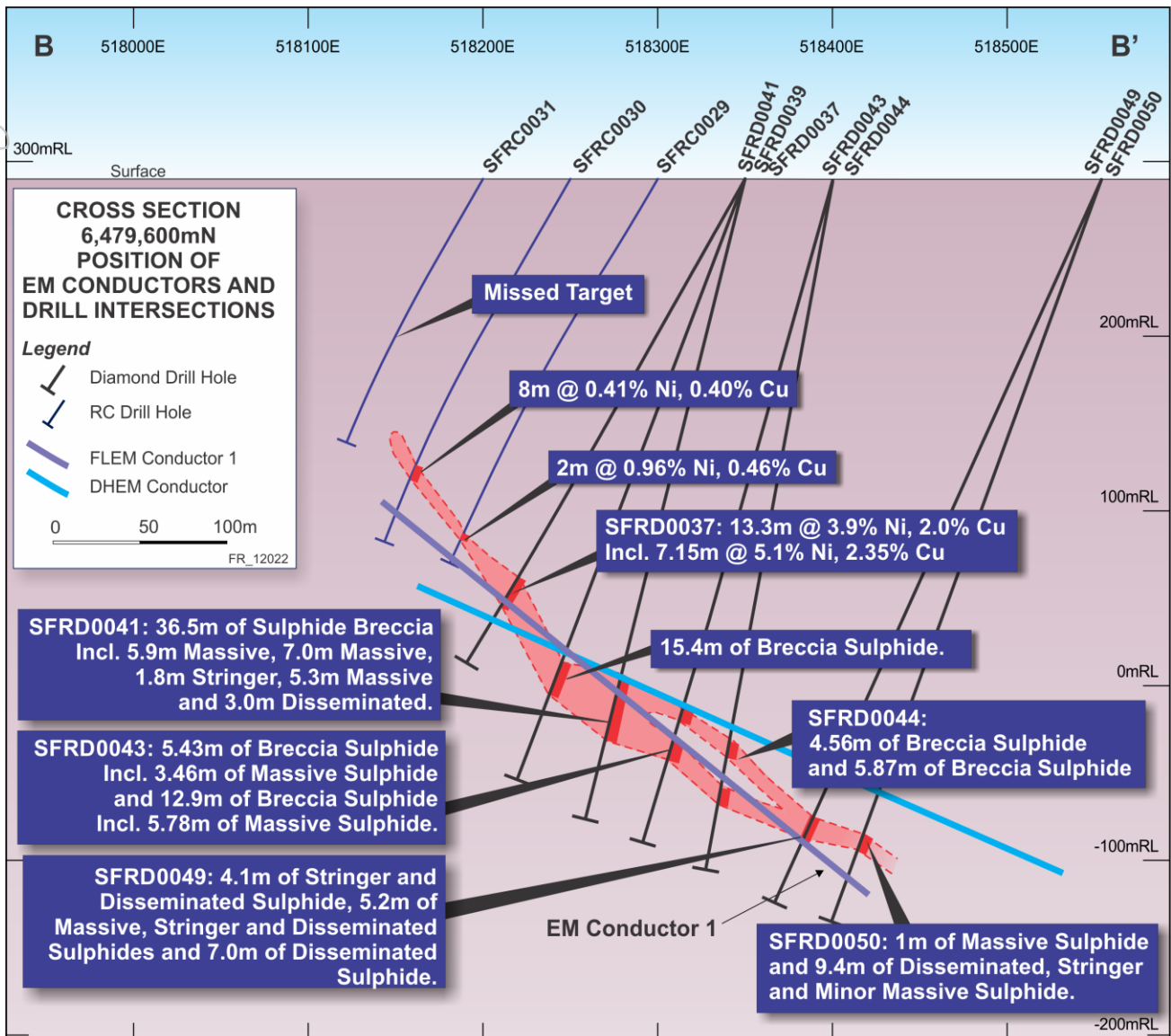


Figure 2. Cross section 600N showing drilling to date.

About the Nova nickel discovery

- The Nova deposit 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 was discovered by Sirius' target identification expertise and systematic use of geological, geophysical and geochemical exploration techniques.
- Based on the size of the associated EM conductor 1 (1,200 x 300 metres) and its close association with the nickel-copper mineralisation intersected to date, the Nova deposit could be a very large massive nickel-copper sulphide deposit. These deposits can be geometrically complex and our understanding of this will evolve with ongoing drilling and EM geophysics.
- The EM conductor that represents the Nova deposit is the first of four EM targets at the Eye nickel-copper prospect to be tested. The others have not yet been drilled but modelling by

Newexco Geophysical Consultants indicates that these also possess response characteristics indicative of massive sulphides.

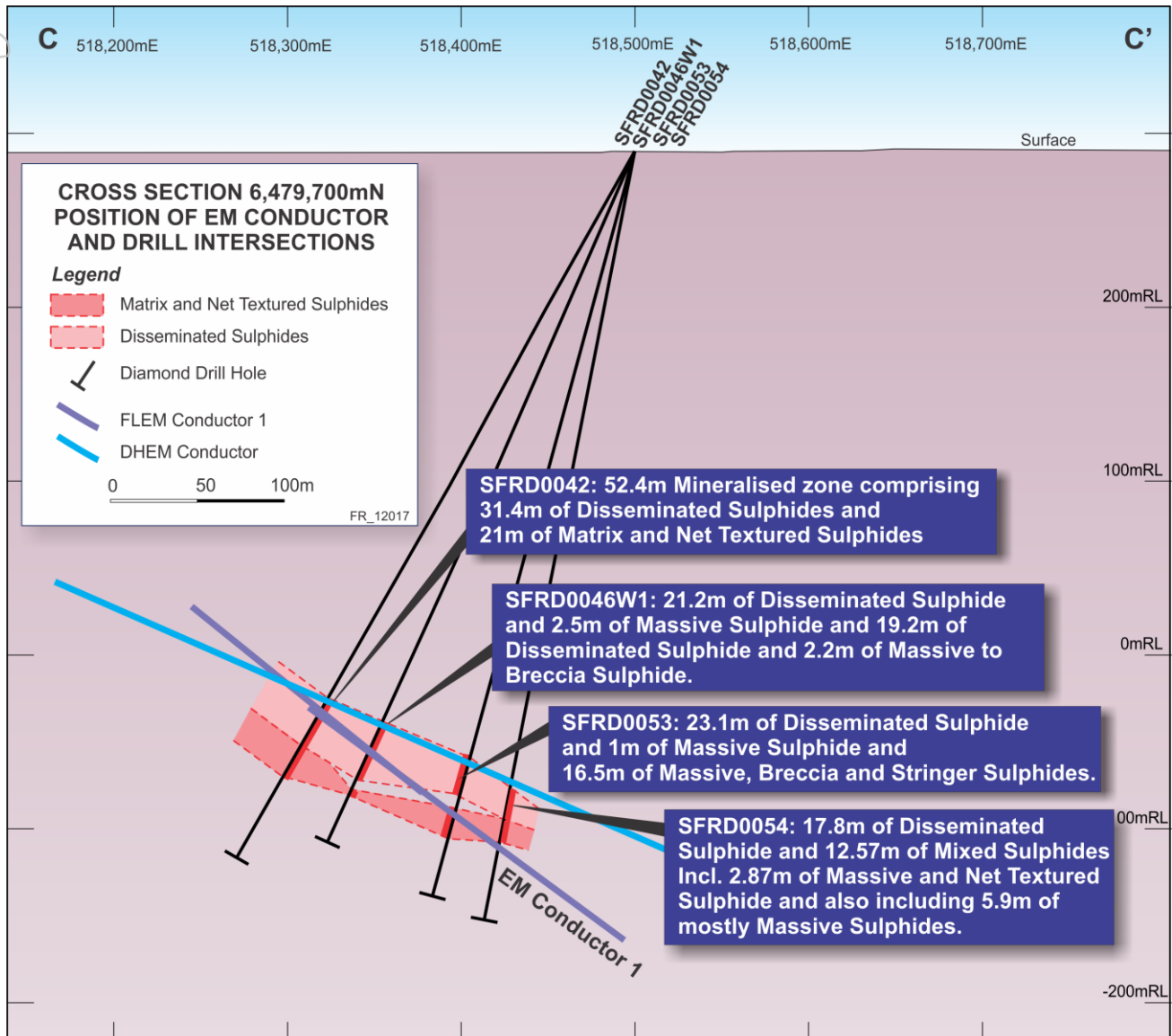


Figure 3. Cross section 700N showing drilling to date.

- The mineralisation comprises pyrrhotite, pentlandite and chalcopyrite within very strongly metamorphosed rocks termed granulites. The sulphide minerals are high tenor and will likely produce a high value concentrate and the accompanying silicate minerals are likely to be highly amenable to conventional separation techniques.
- The sulphides occur in a variety of styles typical of magmatic sulphide deposits. These include massive, matrix, net textured, breccia, blebby and disseminated sulphides.
- The host rock is a hypersthene-augite-garnet-hornblende-labradorite-quartz gneiss interpreted to represent a strongly metamorphosed mafic-ultramafic precursor of predominantly gabbroic composition.

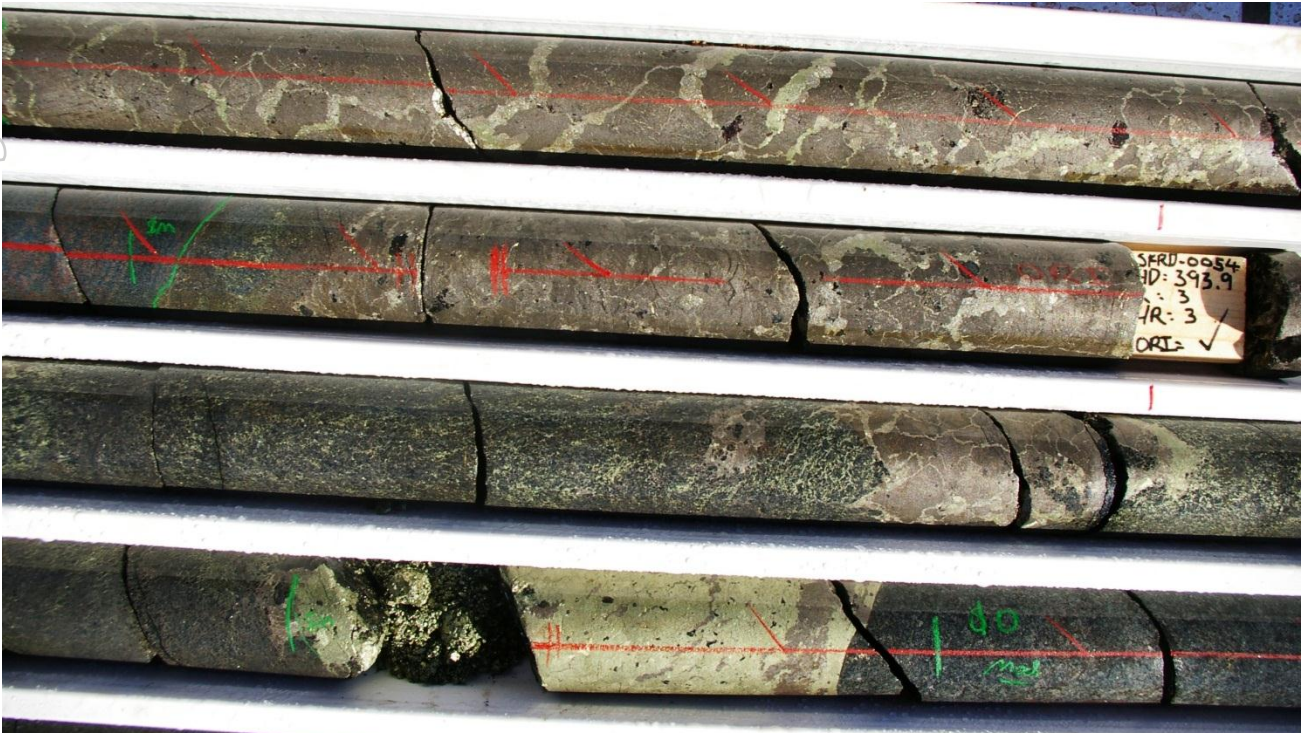


Figure 4. Photograph of upper zone of sulphides in SFRD0054, with very coarse grained pentlandite and pyrrhotite crystals and vein of massive chalcopyrite.

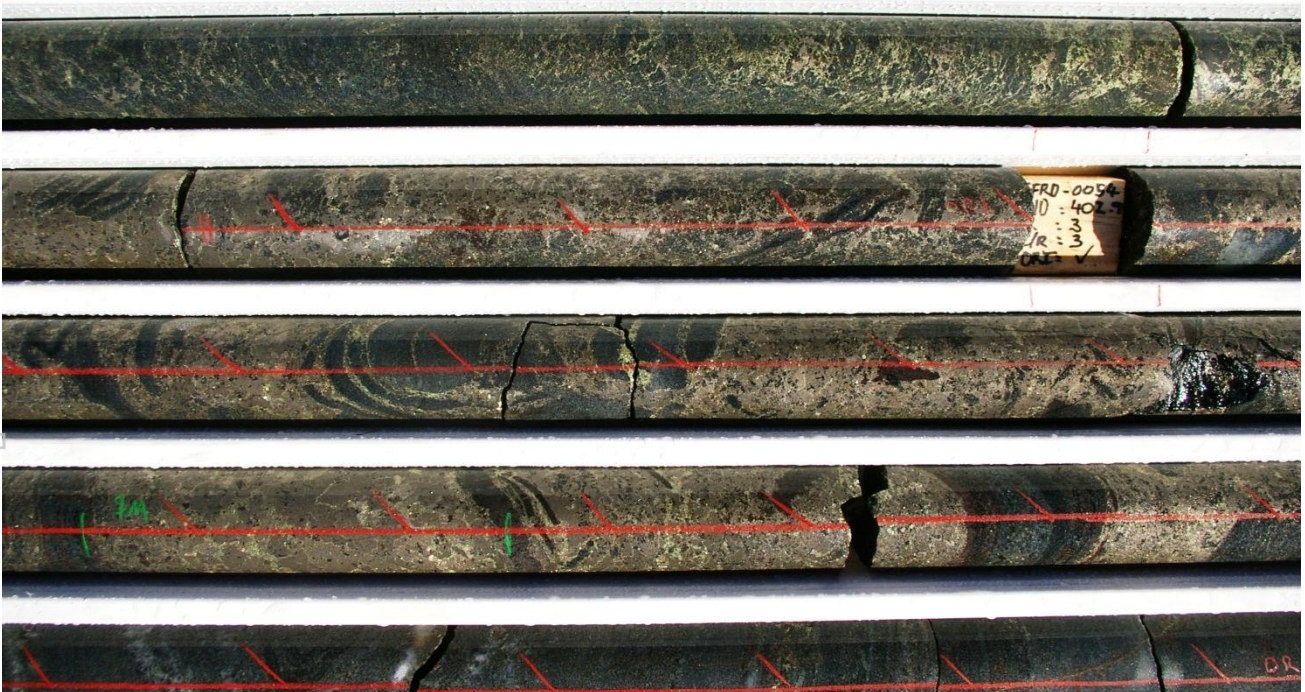


Figure 5. Photograph of lower zone of sulphides in SFRD0054 showing massive, breccia and net textured sulphides.

- The deposit is only 40km north of the Eyre Highway and closer, via sealed road, to the port of Esperance than any operating nickel sulphide mine in Western Australia.
- Planned metallurgical testwork will better quantify the mineralisation in terms of its crushing, grinding and flotation characteristics, the department of nickel and copper within the sulphides and the level (if any) of any deleterious or penalty elements in such a concentrate.

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About the Fraser Range Joint Venture

The Fraser Range Joint Venture is a joint venture between Sirius Resources (70%) and companies of the Creasy Group (30%), owned by Mark Creasy who is also Sirius' major shareholder through his investment company, Yandal Investments Pty Ltd.

The joint venture ground covers over 100 strike kilometres of the prospective belt and Sirius, together with various private companies owned by Mark Creasy, control the majority of this new nickel province. Sirius acknowledges the assistance provided by the WA Government co-funded drilling program, which sponsored a previous reconnaissance drill hole on the project area (see previous ASX announcements).

Hole No.	North	East	Dip	Azim	From, m	To, m	Width, m	Grade, %
SFRC0024	6479500	518210	60	270	174	175	1	0.76% Ni, 1.36% Cu, 0.03% Co, 4.0g/t Ag, 23ppb Au, 25ppb Pd, 6ppb Pt
And					178	181	3	0.31% Ni, 0.68% Cu, 0.01% Co, 1.4g/t Ag, 21ppb Au, 20ppb Pd, 10ppb Pt
And					191	195	4	4.02% Ni, 1.41% Cu, 0.12% Co, 2.2g/t Ag, 44ppb Au, 68ppb Pd, 32ppb Pt
SFRC0025	6479500	518080	60	270	-	-	-	Missed target
SFRC0026	6479500	518140	60	270	123	136	13	4.30% Ni, 1.83% Cu, 0.12% Co, 3.1g/t Ag, 36ppb Au, 90ppb Pd, 76ppb Pt
Including					128	136	8	5.81% Ni, 2.26% Cu, 0.16% Co, 3.7g/t Ag, 39ppb Au, 0.12g/t Pd, 0.12g/t Pt
SFRC0027	6479500	518250	60	270	229	238	9	1.48% Ni, 0.86% Cu, 0.05% Co, 2.5g/t Ag, 0.15g/t Au
Including					229	232	3	1.45% Cu, 0.4% Ni, 4.9g/t Ag, 0.34g/t Au
And					232	238	6	1.84% Ni, 0.57% Cu
Including					236	237	1	4.70% Ni, 0.40% Cu, 0.12% Co
SFRC0028	6479450		60	270	116	120	4	0.48% Ni, 0.38% Cu, 0.02% Co, 0.09g/t Ag
And					156	164	8	0.25% Ni, 0.22% Cu, 1.5g/t Ag
SFRC0029	6479600	518300	60	270	234	236	2	0.96% Ni, 0.46% Cu, 1.3g/t Ag
SFRC0030	6479600	518250	60	270	188	196	8	0.41% Ni, 0.40% Cu, 0.02% Co, 1.78g/t Ag
SFRC0031	6479600	518200	60	270	-	-	-	Missed target
SFRC0032	6479500	518085	75	270	60	64	4	1.47% Ni, 0.17% Cu, 0.05% Co, 0.25g/t Ag
and					80	82	2	2.11% Ni, 1.12% Cu, 0.07% Co, 4.25g/t Ag
SFRC0033	6479500	518155	75	270	165	171	6	3.16% Ni, 0.49% Cu, 0.10% Co, 1.12g/t Ag
SFRC0034	6479500	518230	60	270	200	204	4	0.22% Ni, 1.07% Cu, 0.01% Co, 2.8g/t Ag
And					212	219	7	1.27% Ni, 0.35% Cu, 0.04% Co, 0.84g/t Ag
Including					216	219	3	2.63% Ni, 0.45% Cu, 0.08% Co, 1.13g/t Ag
And					220	224	4	0.18% Ni, 0.47% Cu, 1.1g/t Ag
SFRD0035	6479500	518155	70	270	146.70	152.90	6.20	1.68% Ni, 0.36% Cu, 0.05% Co, 0.3g/t Ag
Including					149.20	152.90	2.90	2.52% Ni, 0.44% Cu, 0.08% Co, 0.5g/t Ag
SFRC0036	6479800	518500	90	n/a	n/a	n/a	n/a	Abandoned
SFRD0037	6479600	518300	60	270	263.90	268.40	4.50	0.23% Ni, 1.16% Cu, 0.01% Co, 3.9g/t Ag
and					268.40	281.70	13.30	3.9% Ni, 2.0% Cu, 0.12% Co, 3.7g/t Ag
Including					271.90	279.00	7.10	5.1% Ni, 2.36% Cu, 0.15% Co, 4.0g/t Ag

Table 1. Drill results at the Nova deposit based on assayed intersections. Visual estimates are not included here until assays are received.