

# **SIRIUS RESOURCES NL**

# **TO NOVA AND BEYOND**



**Mark Bennett, Australian Resources Conference, 14<sup>th</sup> November 2012, Perth**

**ASX code: SIR**

**[www.siriusresources.com.au](http://www.siriusresources.com.au)**

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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 rockchip 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 0.5% Ni and/or Cu and gold intersections are based on a minimum gold threshold grade of 0.1g/t Au unless otherwise stated. Intersections are calculated using standard industry practice length and density weighting methods. All sample and drillhole co-ordinates are based on the GDA/MGA grid and datum unless otherwise stated.

ASX Code	SIR
Shares on issue	191.4 m
Share options ( <i>Ave Ex Price ~58.8c</i> )	48.5 m
Performance Shares ( <i>unlikely to vest</i> )	2.2 m
Cash ( <i>as of end Sep 2012 – excluding subsequent option exercise income &amp; exploration expenditure</i> )	A\$17.3 m
<b>Market Cap (<i>at \$2.60, fully diluted</i>)</b>	<b>A\$623 m</b>
Enterprise Value ( <i>ditto</i> )	A\$606 m



**Discovery**



**Rerating**



**Minimally dilutive capital raising**



**Aggressive value adding drill program**



**In the money options**



**Self-funding growth program**



**Top 20 Shareholders 46%**

**Substantial Shareholder - Mark Creasy (~24%)**

**With a further 8 million 60 cent December 2012 options yet to be exercised (ie, A\$4.8 million of potential income), Sirius is fully funded to drill Nova to JORC Resource status, to drill the adjacent EM anomalies, and to explore its other targets at Fraser Range**

## Board of Directors

<p><b>Mr Steve Lowe</b> Non-Executive Chairman</p>	<p>Accountant, tax specialist, business manager for Mark Creasy (Sirius' major shareholder)</p>
<p><b>Dr Mark Bennett</b> Managing Director &amp; CEO</p>	<p>Geologist, former exploration manager of LionOre, discoverer of the Thunderbox gold mine, and the Waterloo nickel mines. Involved in discovery of Lounge Lizard and Banfora. <b>2003 Prospector of the Year</b></p>
<p><b>Mr Terry Grammer</b> Non-Executive Director</p>	<p>Geologist, co-discoverer of Jubilee's Cosmos nickel mine, founder of Western Areas. Chairman of South Boulder Mines. <b>2000 Prospector of the Year</b></p>
<p><b>Mr Jeff Foster</b> Technical Director</p>	<p>Geologist, former WMC diamond specialist, BHP nickel specialist, co-founder of Geodiscovery Group, consultant to Anglo American plc, Associate Professor at Univ. of Tasmania</p>

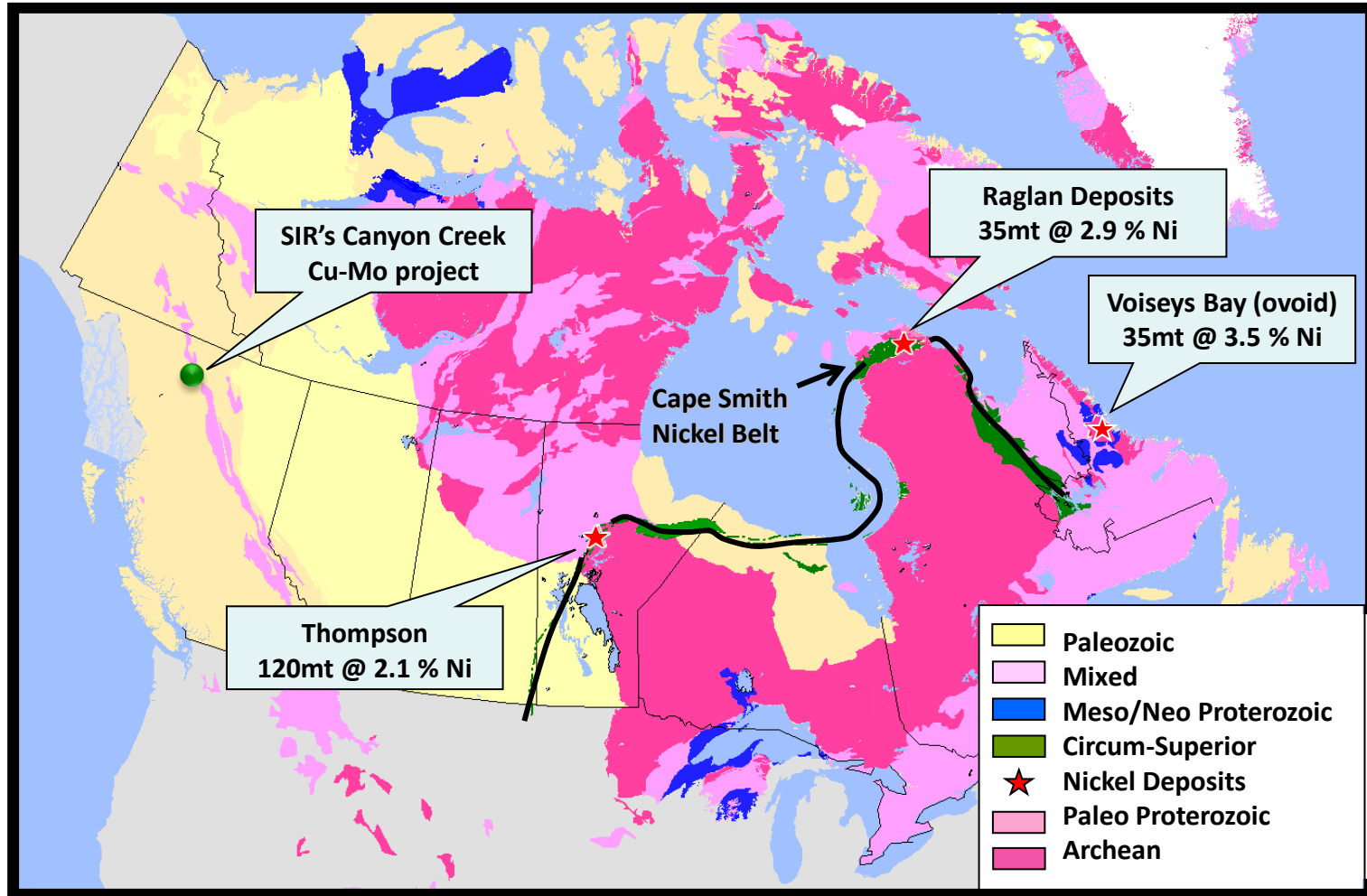
## Director/Company Officer

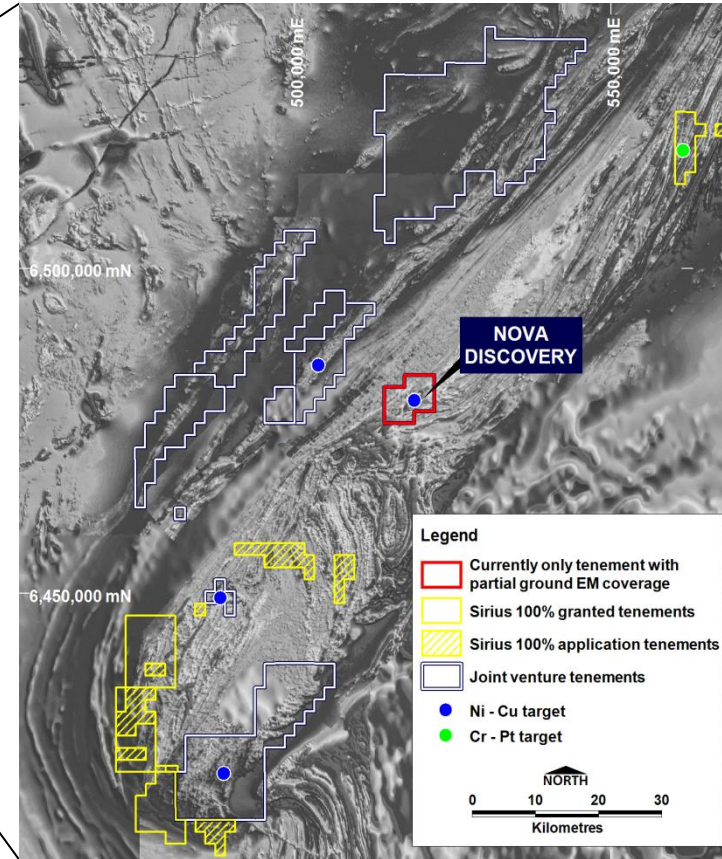
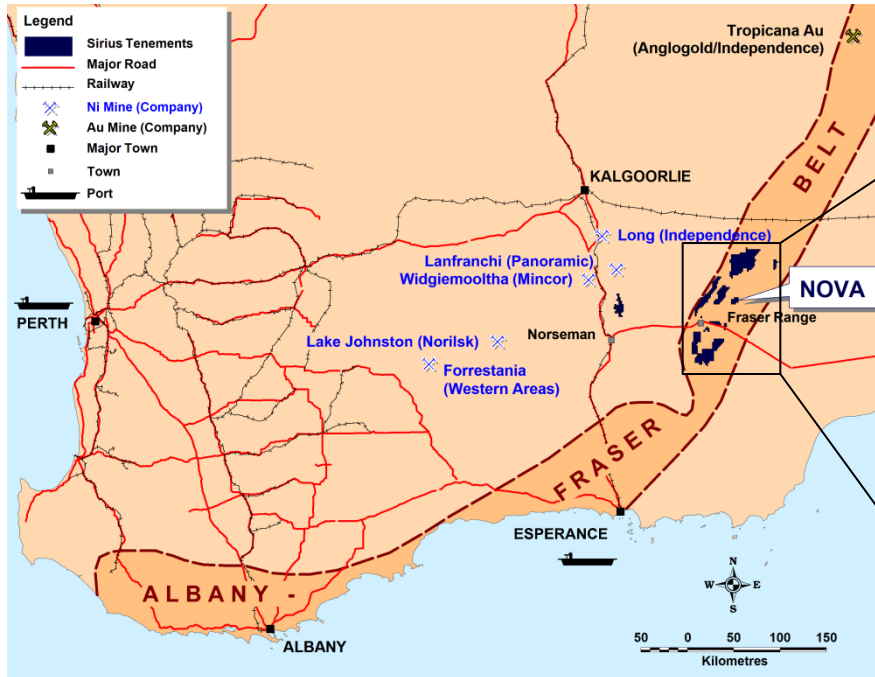
<p><b>Anna Neuling</b> Non-Executive Director, CFO and Company Secretary</p>	<p>Accountant, former auditor (Deloitte) and financial controller and Chief Financial Officer of various ASX listed companies</p>
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## JV Partner

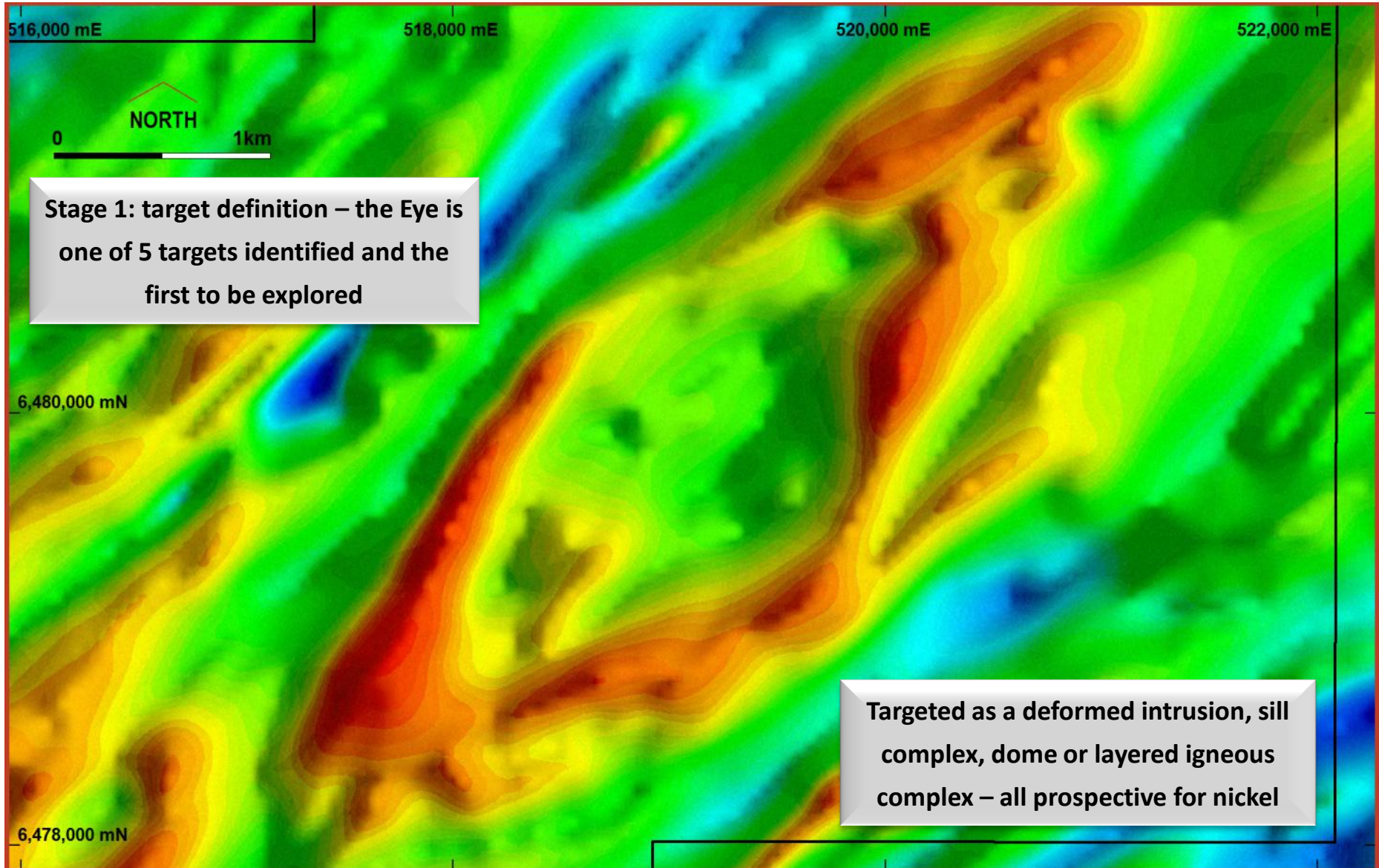
<p><b>Mr Mark Creasy</b> JV partner &amp; major shareholder</p>	<p>Prospector, entrepreneur, discoverer of the Bronzewing gold mine, <b>1993 inaugural Australian Prospector of the Year</b> Joint Venture provides Mark Creasy with a 30% free carried interest in Sirius' projects through to completion of a BFS</p>
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- Three giant nickel mining centres
- Each one is a cluster of several deposits
- The circum-Superior belt fringes the Archaean craton
- Just like the Proterozoic Fraser Range Complex fringing the SE margin of the Archaean Yilgarn craton in Australia





- Unexplored and/or ineffectively explored, not readily accessible
- +100 km strike/1,500 square km held by Sirius in the belt
- The only EM completed across Sirius' tenements has been at the Eye
- 70% interest through a JV with Mark Creasy (30%) who is free carried to completion of BFS
- Majority of this new nickel–copper province held by Sirius and its major shareholder and JV partner, Mark Creasy
- Prospective for Proterozoic craton-cratonic intrusive-associated magmatic Ni-Cu deposits like those in Canada
- Only 30km to the sealed Eyre Highway and then to export port of Esperance



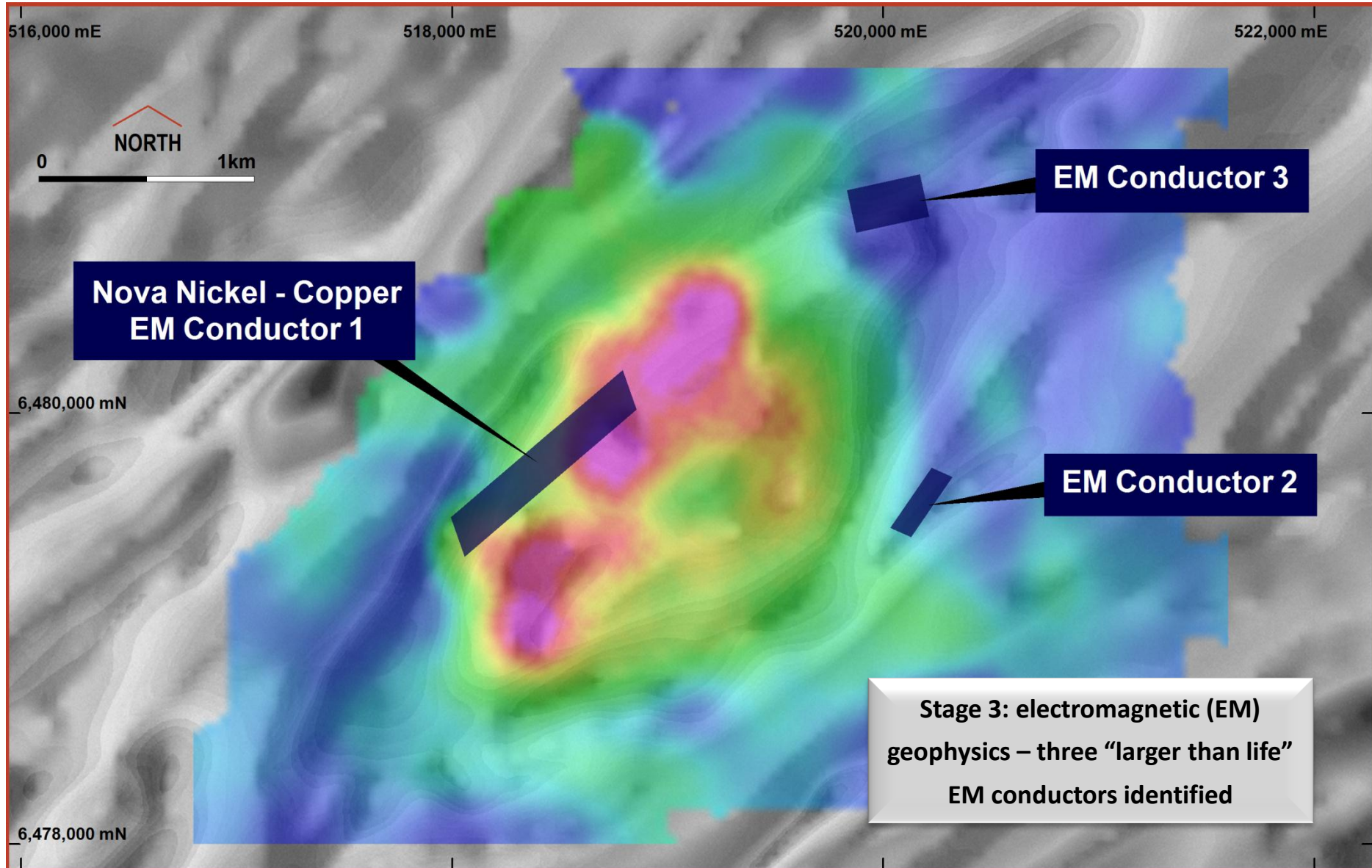
## Stage 2: soil sampling

**Crack soil sampling  
team - 2 vacation  
students: Chris Thaus  
and Shaun Hocking**



**The 8km walk  
through the  
woods to start  
soil sampling**



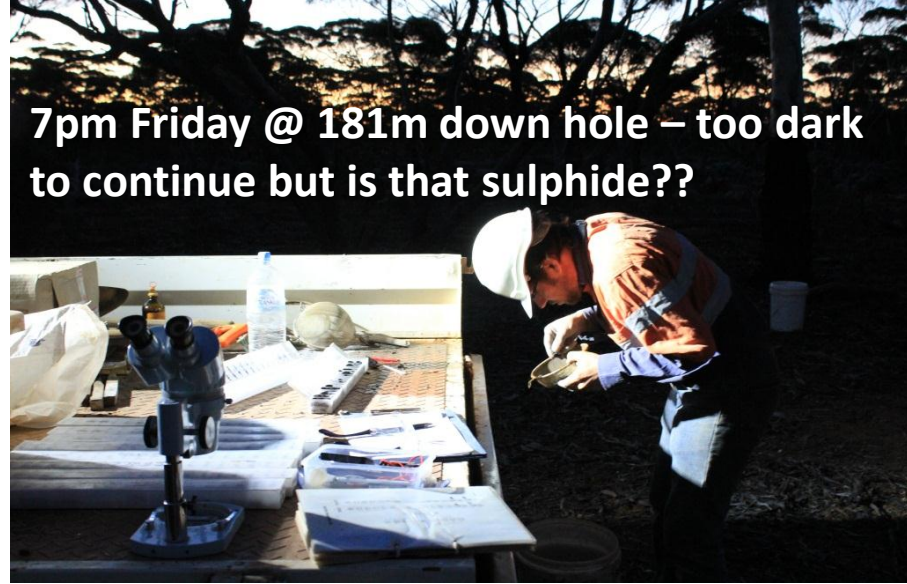


# DISCOVERY – THE DAY OF RECKONING

2pm Friday @ 52m down hole on SFRC0024  
– the last roll of the dice



7pm Friday @ 181m down hole – too dark to continue but is that sulphide??



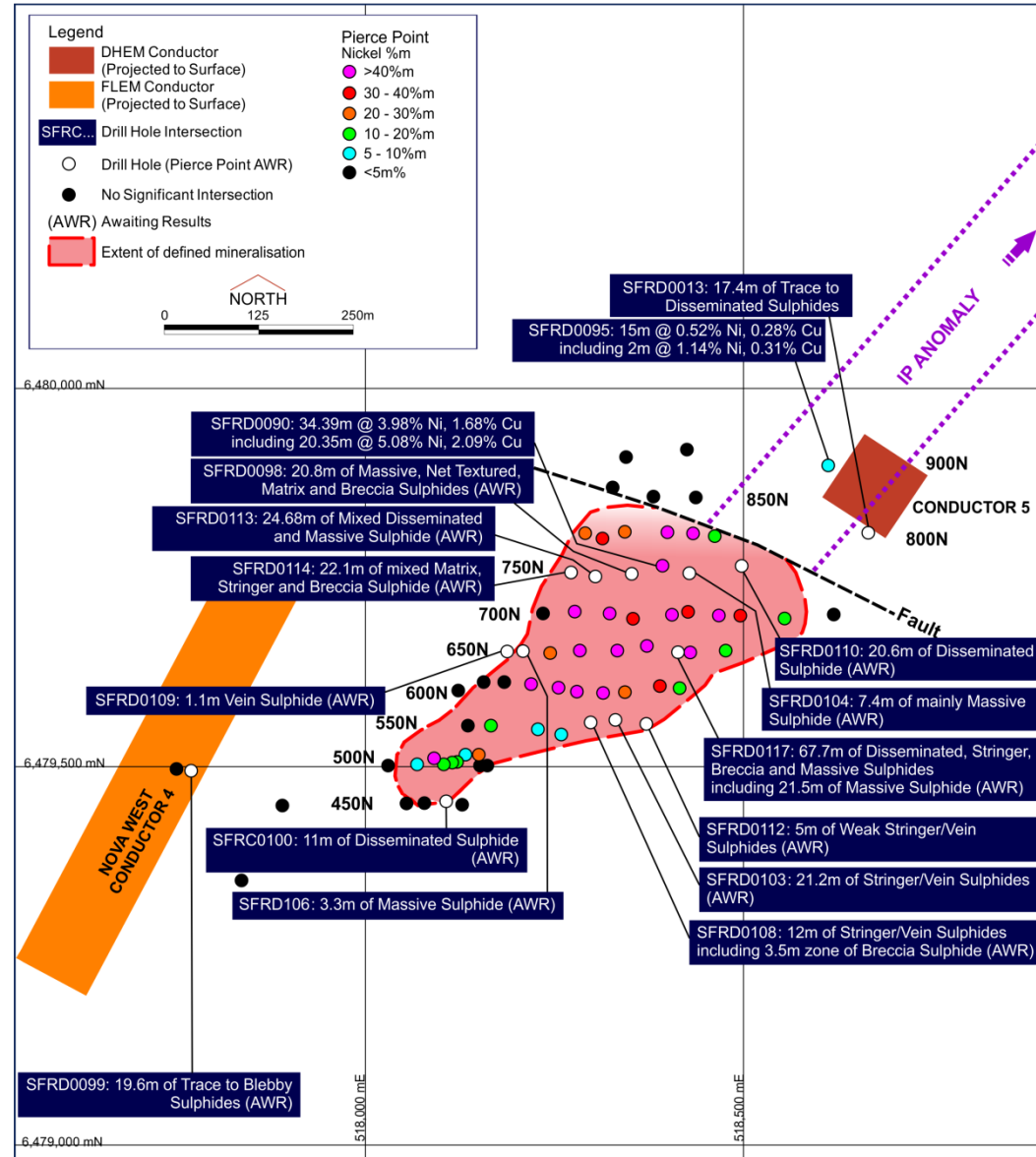
6am Saturday – after a freezing night camping and contemplating what the future may hold....



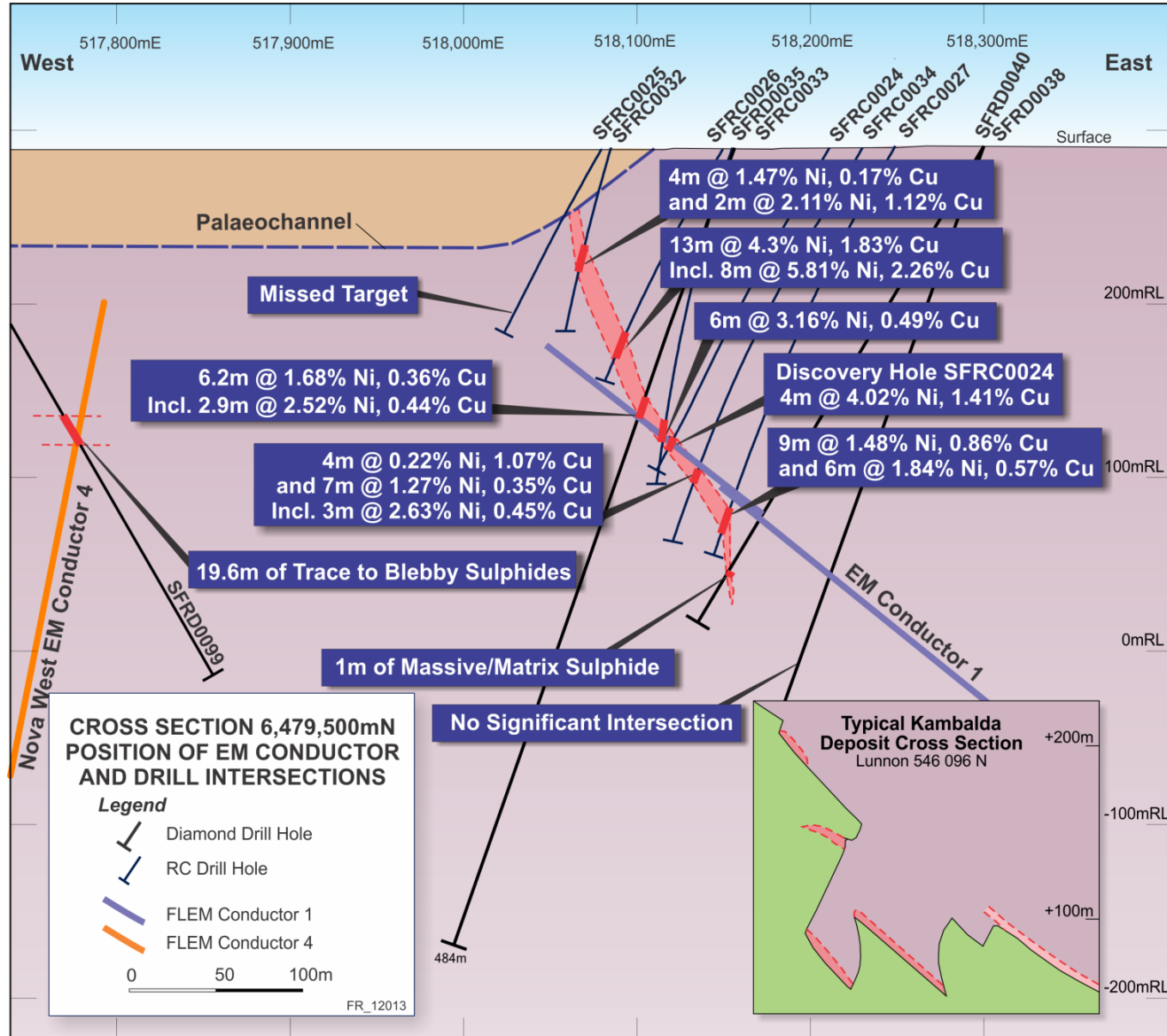
9am Saturday –  
DISCOVERY!



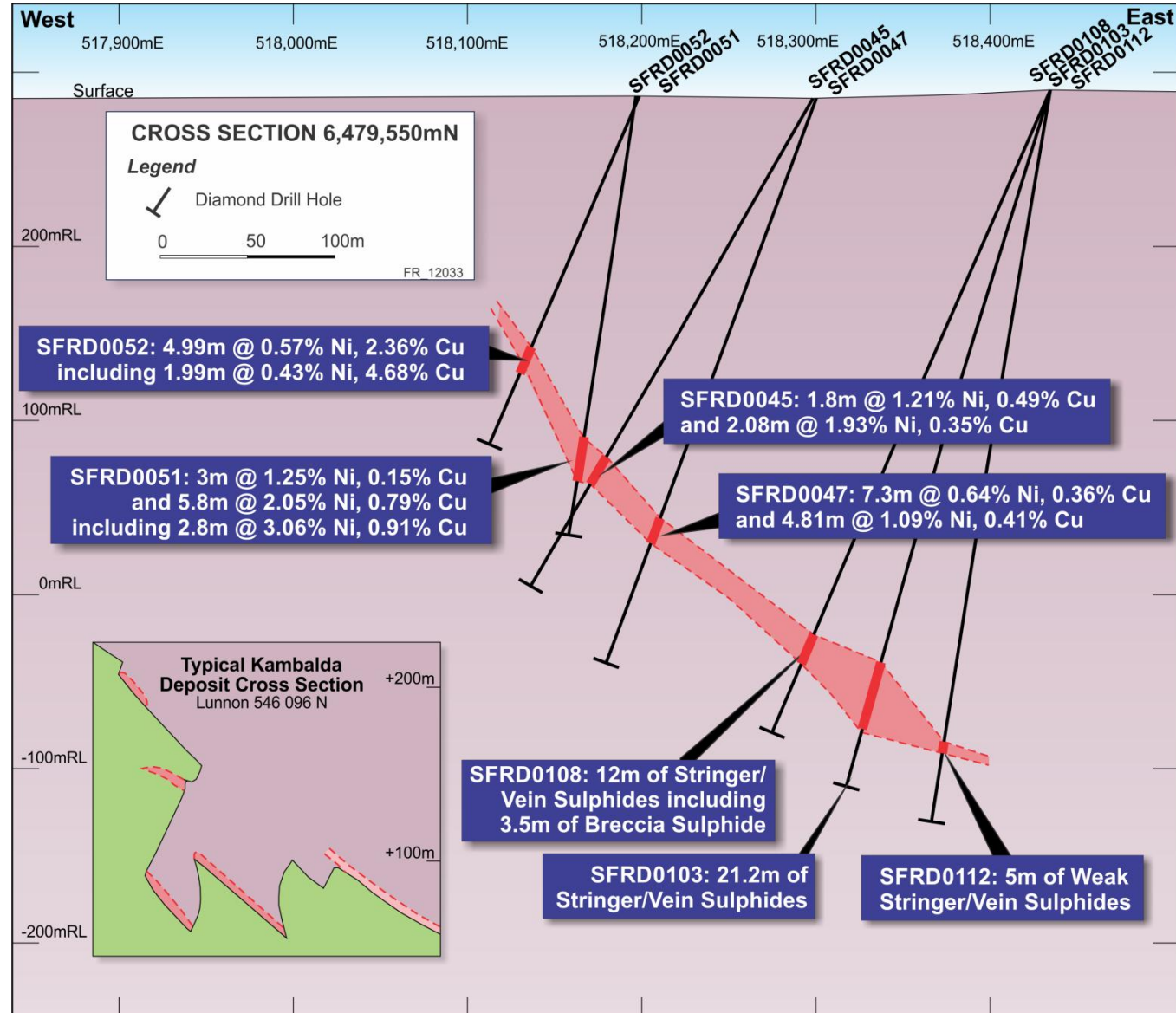
- 3 months since discovery - straight to resource drillout with 90 holes drilled
- Now defined mineralisation 500m down plunge, 400m wide and up to 60m thick
- Infill and metallurgical drilling underway
- Drilling underway at conductor 5, next to disseminated mineralisation in SFRD0095 (15m @ 0.52% Ni, incl. 2m @ 1.14% Ni)
- Follow up hole on conductor 4 (SFRD0115 – 80 metres down dip from SFRD0099) intersected minor disseminated sulphides and minor graphite at target depth, but has not yet explained the EM anomaly – drilling is ongoing



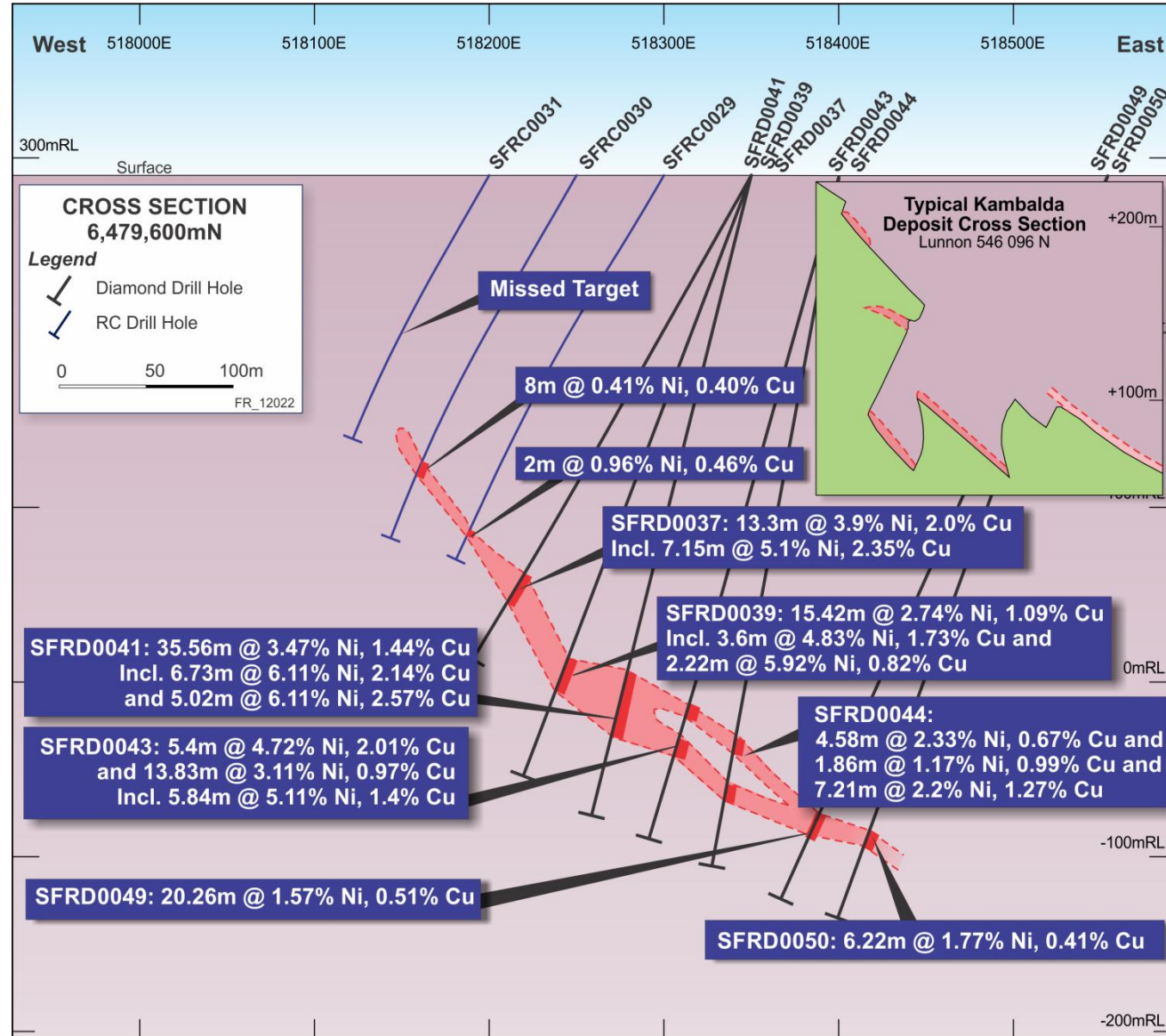
- Discovery hole intersected 4m @ 4.02% Ni, 1.41% Cu
- Then 13m @ 4.3% Ni, 1.83% Cu incl. 8m @ 5.81% Ni, 2.26% Cu
- 200 metres of dip extent defined
- Starts at ~50 metres below surface



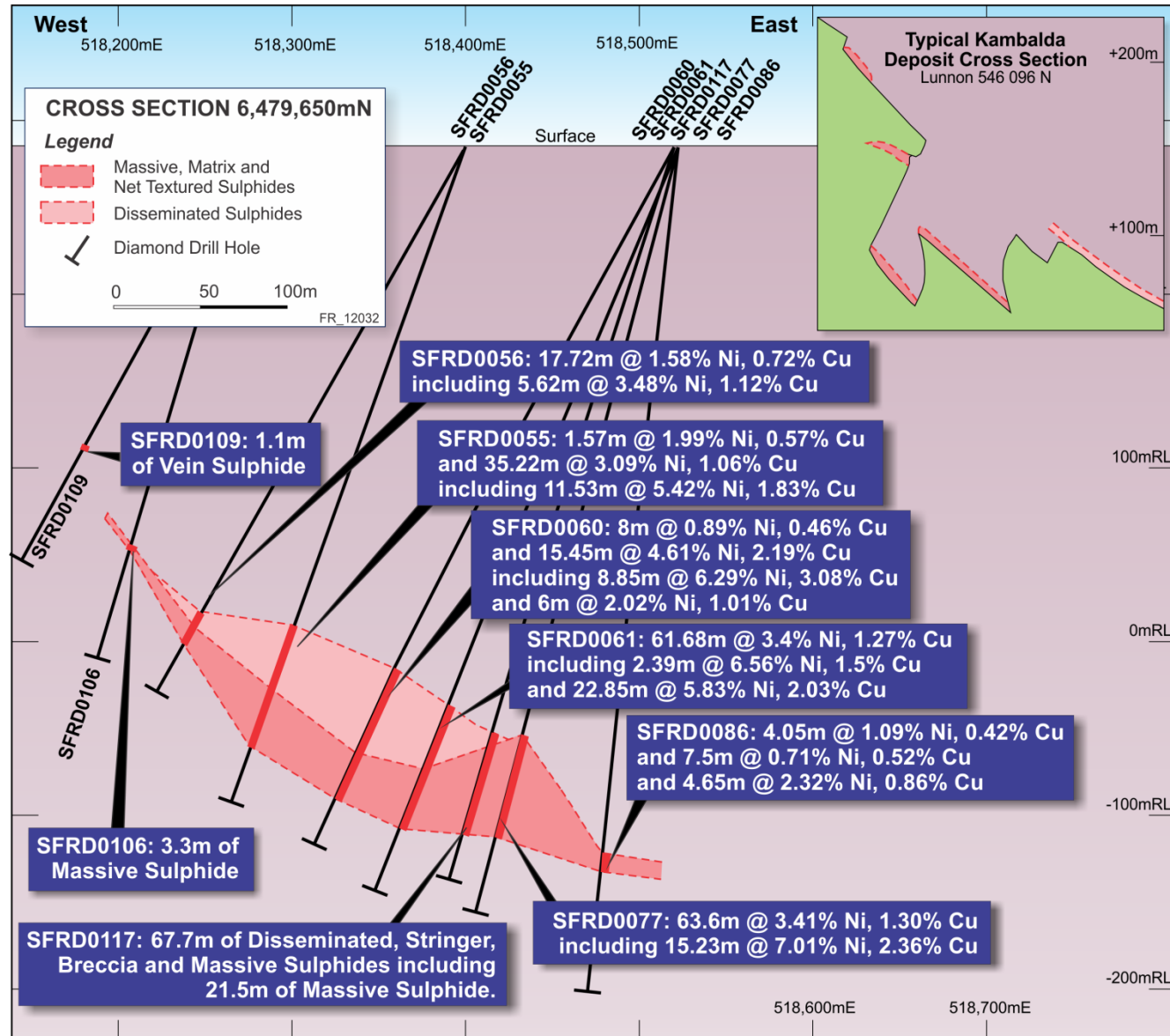
- Drilling has extended the mineralisation a further 150 metres down dip on this section
- Another infill hole is underway
- 350 metres of dip extent defined



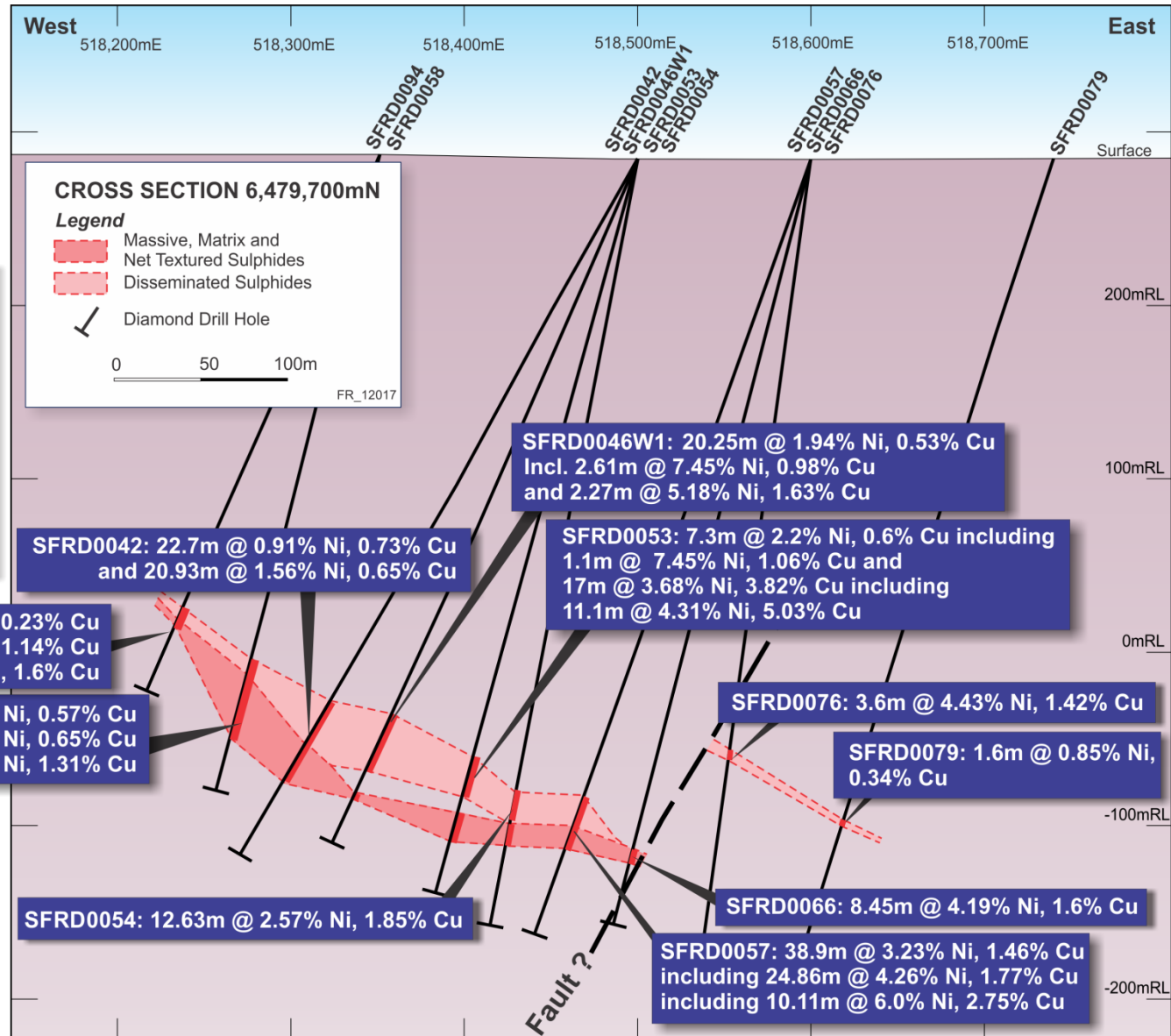
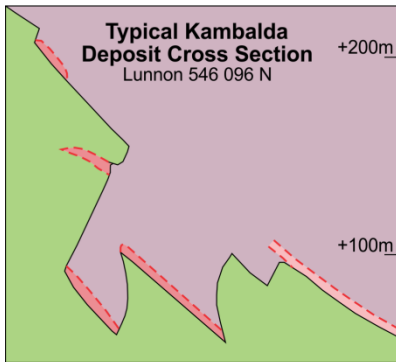
- Thick zones of massive and breccia textured sulphides intersected - eg, 35.56m @ 3.47% Ni, 1.44% Cu
- Thickness in centre is the height of a 12 storey building
- 350m of dip extent defined



- Thick massive, matrix and disseminated sulphides – eg, 61.7m @ 3.4% Ni, 1.27% Cu – this is the height of a 20 storey building
- 350m of dip extent defined
- Infill hole SFRD0117 confirms continuity



- Thick zones of massive, matrix, net textured and disseminated sulphides intersected – eg, 38.9m @ 3.23% Ni, 1.46% Cu



SFRD0094: 3.1m @ 1.32% Ni, 0.23% Cu and 0.5m @ 6.53% Ni, 1.14% Cu and 1.4m @ 0.67% Ni, 1.6% Cu

SFRD0058: 47.2m @ 1.86% Ni, 0.57% Cu including 36m @ 2.23% Ni, 0.65% Cu including 3.05m @ 6.1% Ni, 1.31% Cu

SFRD0042: 22.7m @ 0.91% Ni, 0.73% Cu and 20.93m @ 1.56% Ni, 0.65% Cu

SFRD0046W1: 20.25m @ 1.94% Ni, 0.53% Cu Incl. 2.61m @ 7.45% Ni, 0.98% Cu and 2.27m @ 5.18% Ni, 1.63% Cu

SFRD0053: 7.3m @ 2.2% Ni, 0.6% Cu including 1.1m @ 7.45% Ni, 1.06% Cu and 17m @ 3.68% Ni, 3.82% Cu including 11.1m @ 4.31% Ni, 5.03% Cu

SFRD0076: 3.6m @ 4.43% Ni, 1.42% Cu

SFRD0079: 1.6m @ 0.85% Ni, 0.34% Cu

SFRD0054: 12.63m @ 2.57% Ni, 1.85% Cu

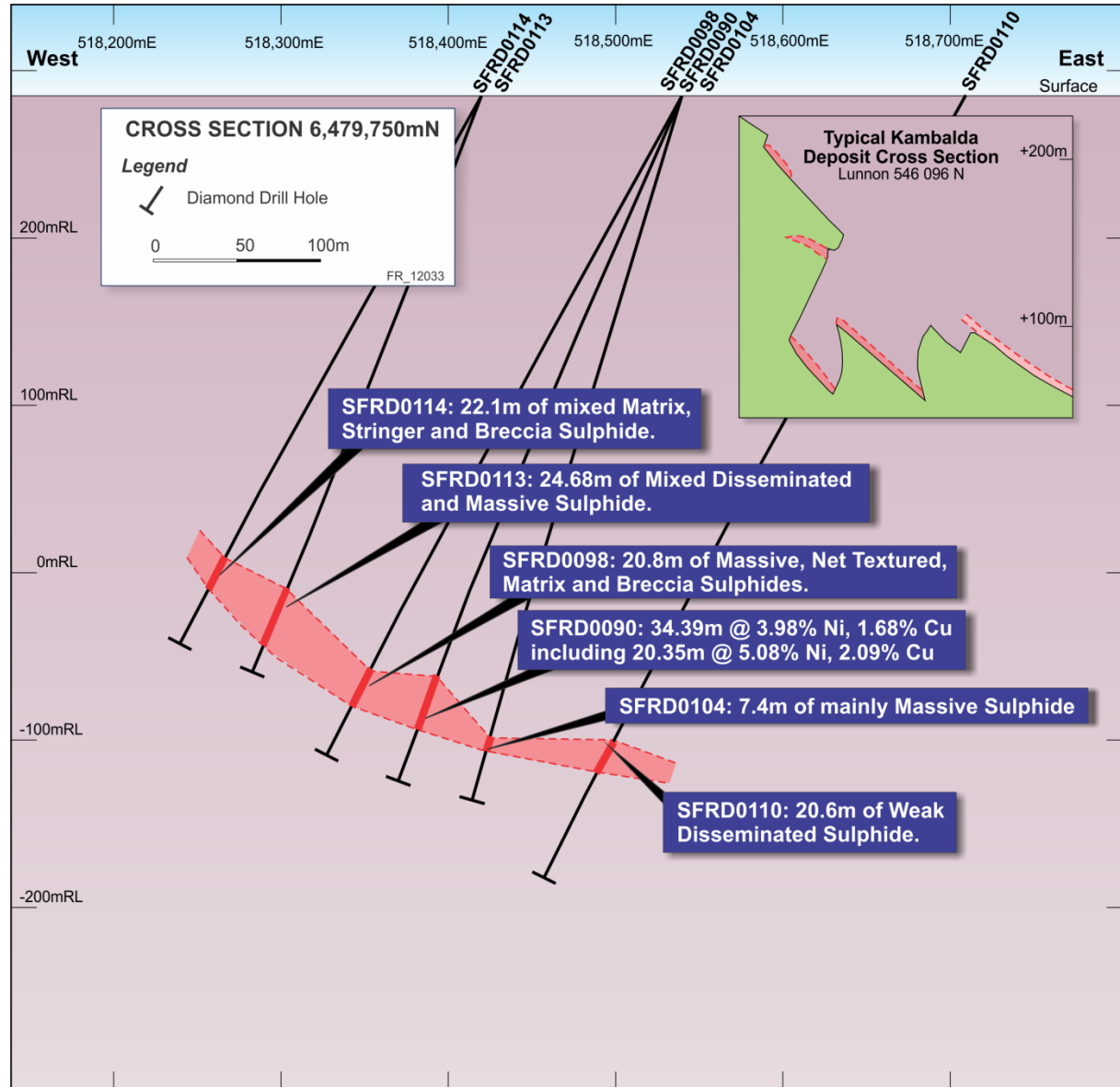
SFRD0066: 8.45m @ 4.19% Ni, 1.6% Cu

SFRD0057: 38.9m @ 3.23% Ni, 1.46% Cu including 24.86m @ 4.26% Ni, 1.77% Cu including 10.11m @ 6.0% Ni, 2.75% Cu

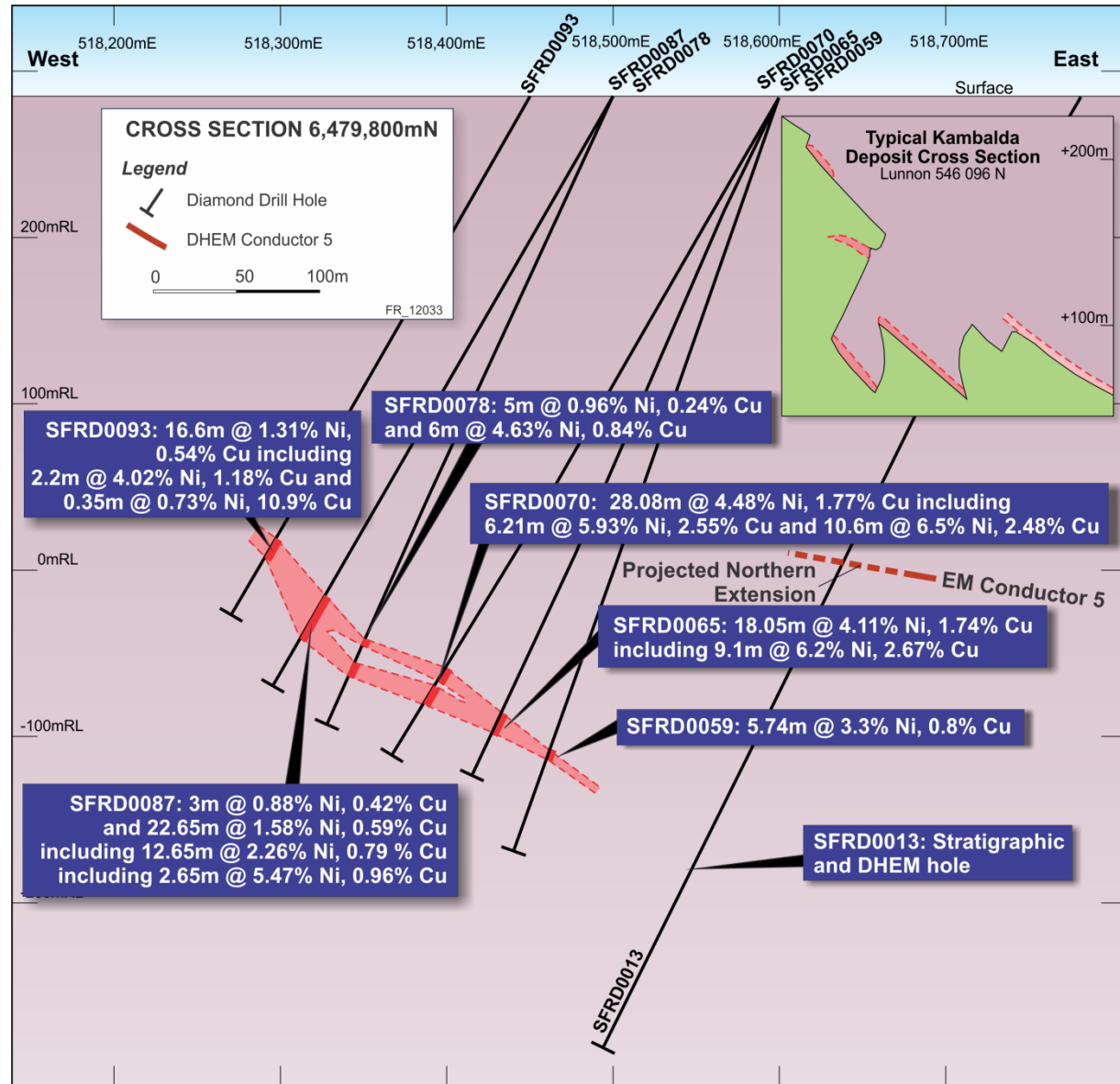
- 400m of dip extent defined



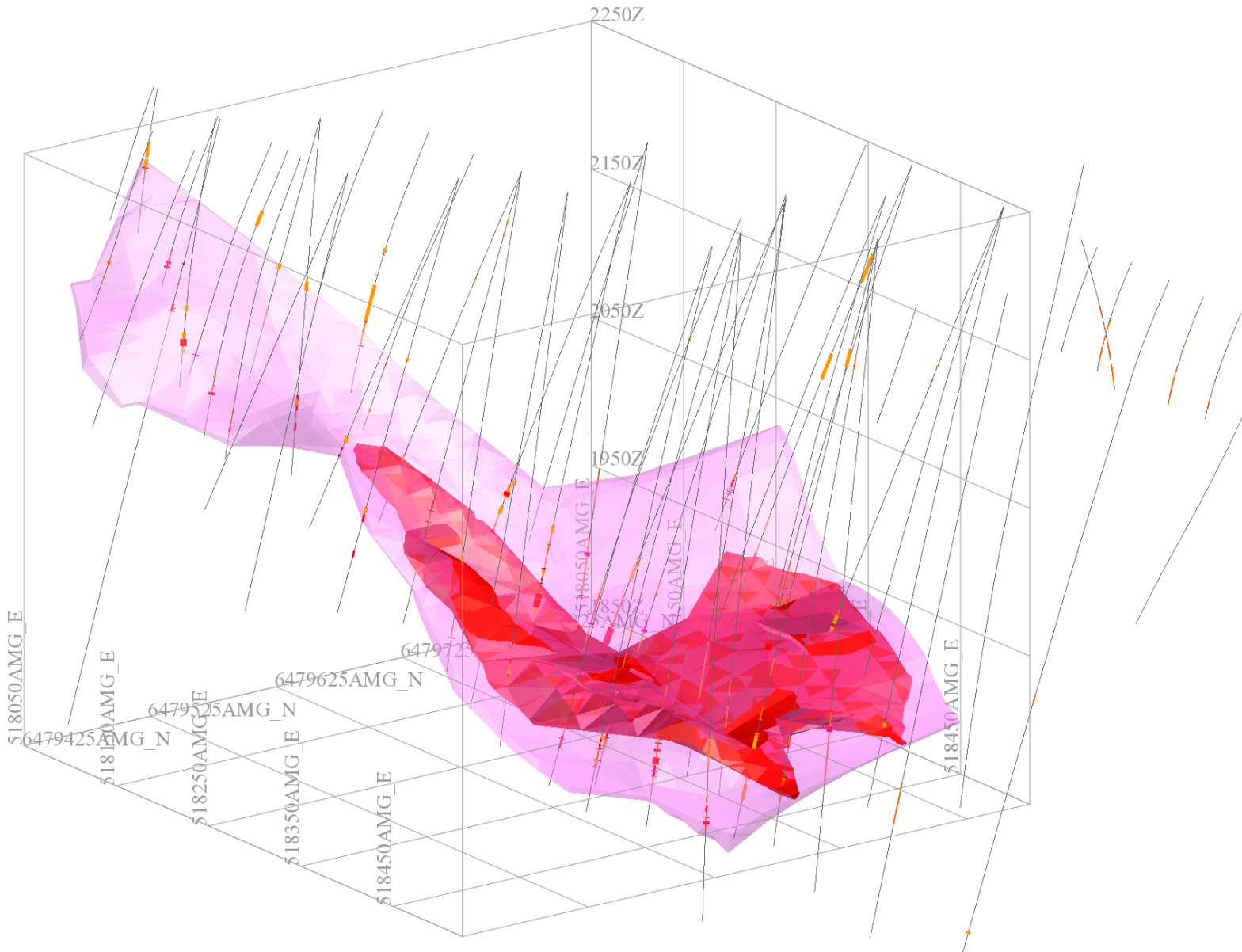
- Infill line for resource estimation
- Visual intersections of mineralisation exactly where expected
- Further evidence of good internal continuity
- First assay received: 34.39m @ 3.98% Ni and 1.68% copper in SFRD0090



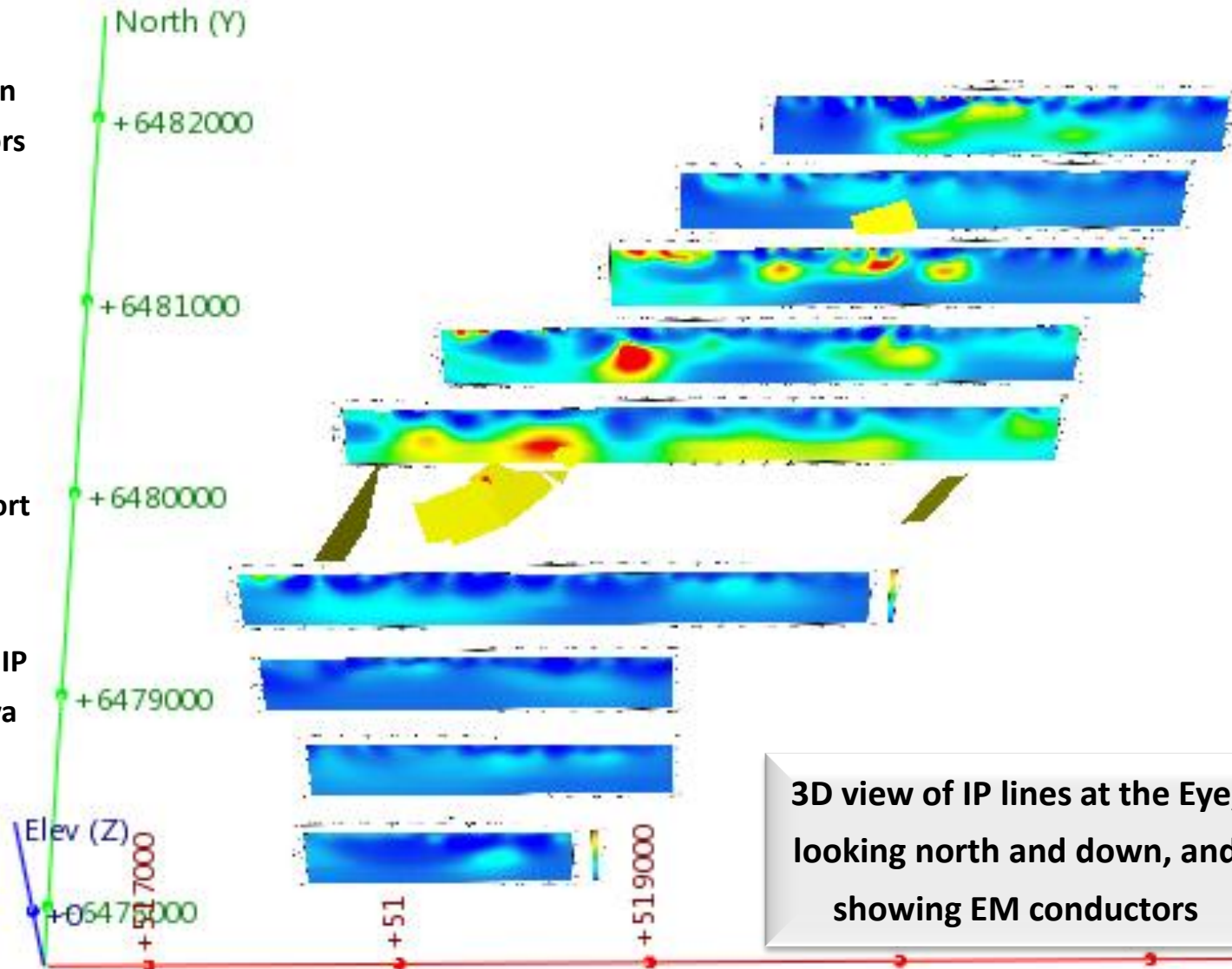
- Northernmost section of mineralisation at Nova
- 250m of dip extent defined and open up dip and down dip
- Intersections of up to 28.08m @ 4.48% Ni and 1.77% Cu (SFRD0070)



- 90 drillholes
- 500m plunge extent
- Up to 400m wide
- Up to 60m thick
- Edges being delineated
- Extensive zone of massive sulphides at base (dark pink)



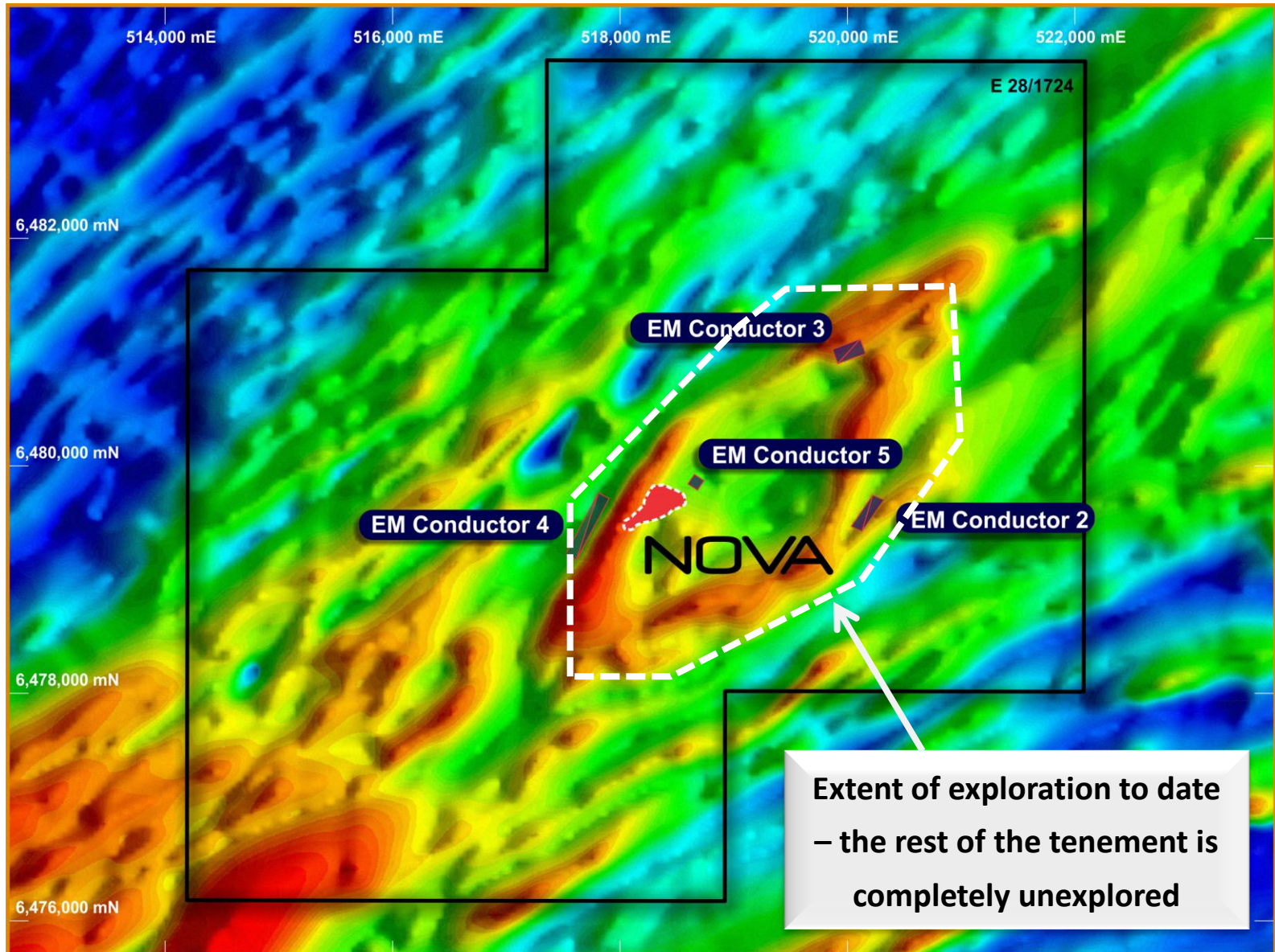
- IP shows strong anomalies over Nova, the northern projection of Nova, and conductors 2, 3 and 4
- IP anomalies may indicate disseminated sulphides
- Provides further support for EM conductors
- A 2km long consistent IP anomaly between Nova and conductor 3



3D view of IP lines at the Eye, looking north and down, and showing EM conductors

- Preliminary metallurgical work indicates:
  - No arsenic, no problematic high MgO minerals
  - No nickeliferous pyrrhotite (all Ni in pentlandite)
  - Very coarse grain size – sulphides and silicates
  - Potential for a good recovery and good quality concentrate
- Geotechnical logging indicates:
  - Hostrock is crystalline and competent (unlike most WA nickel mines)
  - Good RQD and rock mass properties
  - Very few late brittle fractures
  - Potential for good mining conditions





**Nova is a MAJOR nickel-copper discovery**

**The Nova deposit has been delineated in 3 months with 90 holes drilled**

**Current drilling at the Nova deposit comprises infill drilling for resource estimation and metallurgical testwork samples**

**A second drillhole at conductor 4 (SFRD0115) has intersected minor disseminated sulphides and minor graphite - follow up drilling is continuing to determine the source of the conductor**

**Drilling of conductor 5 has commenced**

**Drilling of conductor 2 will commence following this drilling and as soon as drill access and site preparations permit**

**Drilling of conductor 3 will commence following completion of drilling at conductor 2**

**EM surveying of the remainder of the Nova tenement and other regional targets has commenced**

