Nickel : Sirius Resources NL (SIR)

By : Eagle Research (Keith Goode)	JUNE 2013 VISIT TO NOVA (FRASER RANGE)		1 August 2013
Year Low/High:	$0.52 - $5.00	Recommendation	BUY
Diluted No. Shares	263.7m	Share Price	$2.60
Diluted Mkt Cap :	A$686m	Target Price	> A$3.25
Net Cash (est 30 Jun 2013)	A$40m	7.5% NPV : $2.90 ($6.80/lb:$15k/tNi), $3.25 ($7.25/lb:16k/tNi)	
Shares : 226.3m ords, 48.8m ops (37.4m in-the-money)		www.siriusresources.com.au	T:+618 9240 8914

Sirius Resources NL (SIR) – Advancing Nova Towards Possibly >25,000tpaNi Production from 2016 at Total Cash Costs of Potentially <US$1.00/lbNi.

- ***Sirius Resources has so far delineated an ~325kt nickel resource at its Nova Ni-Cu Project ~150km ENE of Norseman in WA, and expects to complete a scoping study by the end of SQ2013. Assuming (ERA estimates) that the BFS can be completed by SQ2014, along with regulatory approvals, mining could start followed by ~15 months of plant construction (to end 2015), with production ramping up in 2016.***
- ***Based on the recently completed 1.3mtpa to 1.5mtpa Sandfire DeGrussa operation for ~$400m at similar exchange rates, capex could be ~$400m to $450m (ERA estimates) for a probable 1.2mtpa to 1.5mtpa operation at Nova. At ~1.2mtpa the Nova Project may produce >25,000tpaNi and >10,000tpaCu at total cash costs of ~<$1.00/lbNi (applying the payable copper and cobalt revenue as a by-product).***
- ***The combined Nova-Bollinger resource of ~14.6mt @ 2.2%Ni complies with the new JORC 2012 reporting standard (that requires resources to be economically mineable) and hence the resource to reserve conversion could be relatively high at ~85% to 95% or ~13mt (which over an 8 to 12 year life = ~1.2mtpa to 1.5mtpa).***
- ***The current Nova-Bollinger resource occupies a relatively small footprint of ~700m x 350m in the ~4km long x 2km wide "eye" layered complex, and appears to be too small if it was the cause of the "eye", inferring that there may be extensions. There are a number of drill ready targets within the "eye": NW, SE, SW and NE of Nova.***
- ***Conceptually, Sirius' Nova Project can be compared to Western Areas' Flying Fox Project of ~190ktNi reserves @~4%Ni, and a life of ~8years at 25ktpaNi, with cash costs ~2.75/lbNi, and a market cap on ~200m shares of ~$640m (plus ~$190m net debt as at 31 Dec 2012), except that SIR is expected to have simpler lower unit cost mining & high by-product credits, with resulting materially lower cash costs.***

FINANCIAL ESTIMATES : (Note : This ERA scenario is just one of a number of possible scenarios for Sirius Resources)

Year end June		2014f	2015f	DH15f	JH16f	2016f	2017f	2018f	2019f
Nickel Production	t			850	7613	8463	25200	30240	29160
Copper Production	t			360	3255	3615	10640	12768	12312
Payable Ni	t			**595**	**5329**	**5924**	**17640**	**21168**	**20412**
Ni Price	US$/t	15000	15000	15000	15000	15000	15000	15000	15000
Ni Price	A$/t	16667	16667	16667	16667	16667	16667	16667	16667
A$ Exchange Rate	US$/t	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Ni Price	US$/lb	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81
Total Cash Cost Payable Ni	US$/lb			**1.71**	**0.85**	**0.94**	**0.47**	**0.47**	**0.56**
NPAT (Effectively attrib 70%)	A$m	**-7.0**	**-8.7**	**-6.4**	**27.6**	**21.2**	**50.3**	**64.6**	**64.8**
EPS (264m shares)	Ac	-3.1	-3.4	-2.5	10.7	8.2	19.2	24.5	24.6
P/E ratio @ A$2.60	x	n/a	n/a	n/a	n/a	n/a	13.5	10.6	10.6

OTHER KEY POINTS:

- **Sirius has a 7.5%NPV of A$2.91 @ US$6.80/lbNi** ($15,000/tNi & a US$/A$0.90 exch rate). The NPV **rises by ~A$0.75 per US$1/lb** increase in the US$ Nickel Price**.**
- **Relatively clean nickel and copper cons** may be produced at Nova-Bollinger, with a high iron content and low MgO that could realise a quality sale premium.

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- **Sirius has two further regional drill-ready potential nickel targets located in "eye-type"** aeromag shapes (being Buningonia and Yardilla), plus a number of gold targets.
- **Sirius' Nova could potentially be the world's lowest total cash cost nickel sulphide producer**, due to grade, structural size/ thickness and by-product credits.

Corporate Overview and Discovery of Nova

This is our first report on Sirius Resources NL (SIR) which was backdoor-listed through restructuring the old Croesus Mining [CRS] shell (which had been taken out of receivership in May 2008) in June 2009 and into which Mark Creasy vended in some nickel assets, as part of a raising of $7m at 0.85c. SIR initially focused on nickel at Lawlers and Collurabbie and started geochem surveys on the Fraser range area of WA in November 2009, and acquired the remainder of the Polar Bear JV (north of Norseman) from Barrick in 2010 with nickel and gold anomalies both there and at Youanmi.

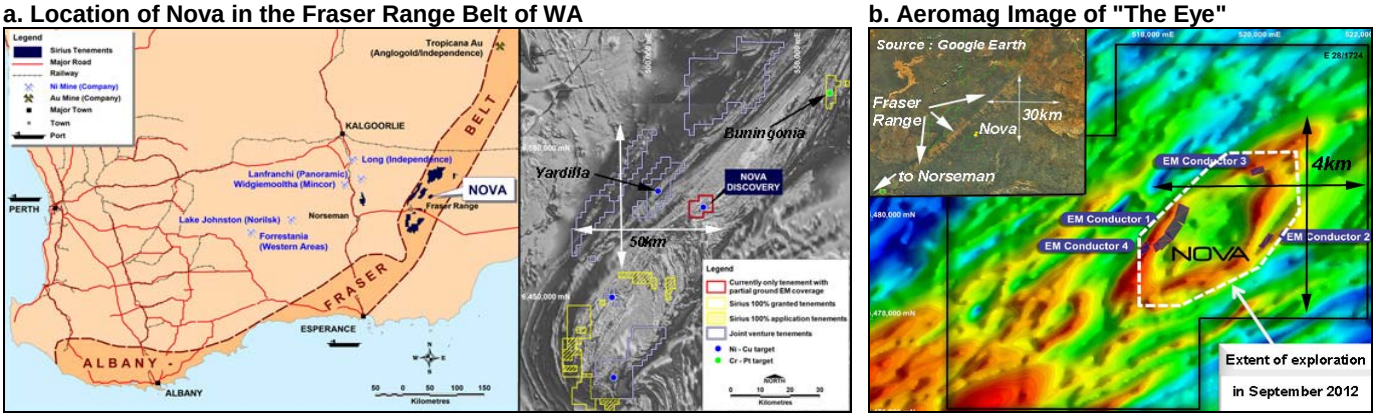
In September/October 2010, Mark Creasy purchased 600m options in SIR, and vended in some more of his tenements in the Fraser Range / Tropicana region for 276m fpo shares @ 1c. SIR raised $11m at 1c and underwent a 20-for-1 consolidation reducing the 1.6bn shares then on issue to ~150m. By DQ2010 some of the Fraser Range tenements had been relinquished (WA Govt requirement) leaving a partly isolated tenement containing the "eye" and its GSWA nickel anomaly.

The "eye" is an elliptical shape in the aeromag (usually symptomatic of a layered igneous complex and a classic Ni-Cu-PGE target). However, both the "eye" and the rest of the structures in the Fraser Range only appear to be identifiable in aeromag, as there is very little outcrop as can be seen in Figure 1b in Google Earth, & when we/ERA were on-site in early June 2013. The Fraser Range represents a very low range and easily missed line of rubble/ridge when it is passed on the Eyre Highway east of Norseman.

In October 2011, SIR reported that it had detected relatively strong, broad, low grade, near surface, nickel-copper intersections (~16 to 20m at ~0.6%Ni from 8m) in 5 out of 6 RC drillholes that had been drilled in part of the "eye" to decide the preferred location for a diamond drill hole (to be co-funded by the Government of Western Australia as part of its exploration incentive scheme).

Figure 1. Location of Nova in the Fraser Range Belt of WA and Aeromag Image of "The Eye"

a. Location of Nova in the Fraser Range Belt of WA **b. Aeromag Image of "The Eye"**



During March/April 2012 a general RAB survey was conducted over the "eye" followed by an EM survey that identified a very strong NE/SW striking plate anomaly coincident with nickel-copper anomalism, on the inner western side and a lesser anomaly opposite on the eastern side of the "eye". The RAB drilling was only drilled to 30m to 40m and hence did not really test the EM anomaly.

In the JQ 2012 report released on 19 July, SIR reported the assay results from its RAB drilling, noting that nickel mineralisation was present at the end of some of the drillholes that could represent oxidation of primary magmatic nickel sulphide (such as 8m @ 1.06%Ni from 68m), and not simply lateritic enrichment of weathered ultramafic. Options were being exercised to commence/continue drilling the EM plate, and on 23 July, SIR went into a trading halt and announced its discovery on 26 July 2012 of nickel-copper mineralisation at Nova with an intersection of 4m @ 3.8%Ni & 1.42%Cu from 191m downhole.

Further drilling intersected 13m @ 4.1%Ni ~55m updip from 123m and ~9m @ 1.2%Ni downdip from 229m as reported on 30 July. A placement of 10m shares at 76c was made, raising $7.6m on 14 August to advance the drilling using diamond drillholes and the first diamond drillhole reported on 20 August showed that the **host rock was a new type for nickel in WA being a pyroxene-garnet-gneiss (PXG)**.

On 27 August, SIR showed massive Ni-Cu sulphide drillcore from a ~19.6m zone ~150m down-dip, and on 1 October released an intersection of **36.6m @ 3.47%Ni**, 1.44%Cu & 0.1%Co from 293m that included **15.4m @ 4.7%Ni** (which in turn included 6.7m @ 6.1%Ni, 2.1%Cu & 0.19%Co). Some subsequent thicker intersections have been such as **61.1m @ 3.4%Ni that included 22.9m @ 5.8%Ni,** 2.0%Cu & 0.17%Co from 384m. In early 2013, Sirius reported the discovery of its Bollinger extension east of Nova, and a **maiden resource for Nova of 10.2mt @ 2.4%Ni**, 1.0%Cu & 0.08%Co **for 242ktNi**, 100ktCu & 7.7ktCo.

On 11 December 2012, SIR placed 22m fpo shares at $2.00/share raising $44m to further advance Nova, which with the exercise of options has resulted in the current **226.3m fpo shares** in issue and **48.8m options** (of which 37.4m are in-the-money at up to 60c by May 2017).

Geology

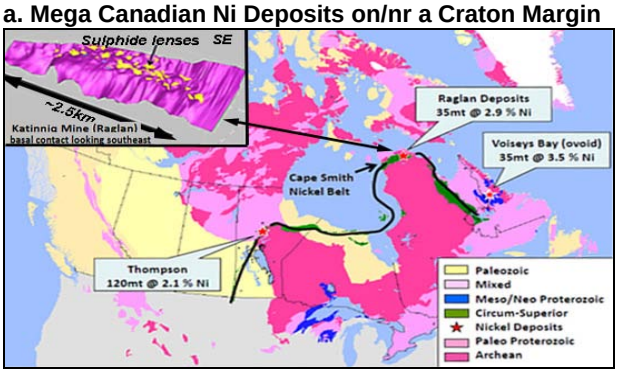
As shown in Figure 1a, SIR's Nova Ni - Cu Project is located within the Fraser Range Zone of the Albany-Fraser belt that lies along the south-eastern margin of the Yilgarn Craton. The Fraser Range Zone has been traced for ~425km trending NE/SW long by ~40km wide, and comprised mostly of metamorphosed granitic, gabbroic and sedimentary rocks. The Nova orebody lies within an aeromag signature that visually resembles an "eye" which is often symbolic of a layered igneous complex, and a classic target for Ni-Cu-PGE mineralisation (as seen along the Great Dyke in Zimbabwe).

However, the "eye" is a recent feature that is only visible in aeromag, as there are few surface indications. The area resembles an almost featureless fairly flat plain consisting of classic WA red mud/clay that is well irrigated in the wet season and covered with relatively dense variegated bush.

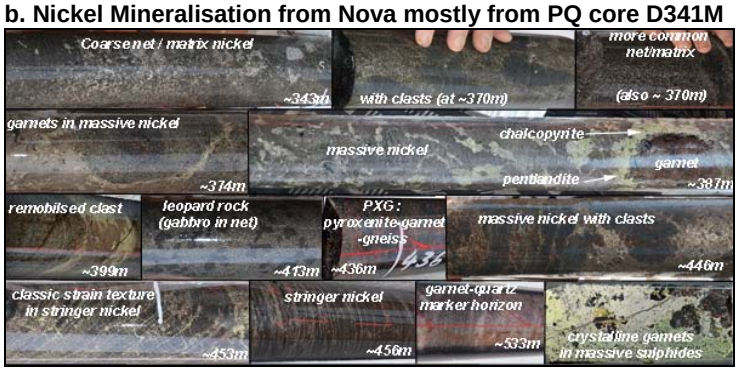
Newmont in a JV with WMC and Anglo American targeted the Fraser Range margin for Canadian type nickel orebodies between 1966 and 1970 on the basis of the mega ones like Thomson (120mt @ 2.1%Ni) that occur along or near the Archean Craton margin of Canada shown in Figure 2a. Although the JV discovered anomalous nickel in 1967 south of the Eyre highway, it was in the westernmost unit, close to the craton margin (about 5 units have been defined from east to west across the Fraser Range consisting of a metamorphosed mix of garnet amphibolite, anorthosite, norite, gabbros, pyroxenes etc).

Figure 2. Mega Canadian Nickel Deposits on/near a Craton Margin, Nova Ni Mineralisation mostly from D341

a. Mega Canadian Ni Deposits on/nr a Craton Margin



b. Nickel Mineralisation from Nova mostly from PQ core D341M



In 1979, Skylab fell to earth near Fraser Range and Mark Creasy went searching for pieces of it and also collected various samples. From 1995, Mark Creasy began collecting geochem samples in the Fraser Range that highlighted an anomaly over the Nova area. In 2000 the GSWA collected regional geochem samples that separately identified an anomaly over the Nova area. In the early 2000's INCO and Falconbridge also separately recognised the similarities between the Fraser Range and Canada's nickel belt and both undertook broad reconnaissance of the region, but were themselves taken over.

In 2009, the GSWA published a regional aeromag survey over the Fraser Range area to aid explorers and it identified a number of "eyes" of which Nova with its coincident nickel anomaly appeared to be the largest. The tenements were vended by Mark Creasy into Croesus/Sirius in 2009 and 2010 and the Nova discovery occurred in July 2012 as covered on page 2 of this report.

The drill core shown in Figure 2b is mostly from a PQ (thick diamond core for metallurgical purposes) drillhole which shows that the nickel mineralisation at Nova is completely different to most of the nickel orebodies in WA, mostly because of the garnets and crystalline minerals pentlandite, pyrrhotite and chalcopyrite which have been interpreted to result from a particular magmatic stage.

The nickel mineralisation at Sirius' Nova apparently resembles that from the NE/SW striking Thompson nickel belt complex in Canada, which has been estimated to have a total resource (including production) of ~ 120mt to 150mt @ 2.1% to 2.4%Ni, 0.1% to 0.2%Cu and 0.04% to 0.05%Co.The nickel sulphide mineralisation at Thompson has been described as massive, semi-massive, matrix and stringers composed of pyrrhotite-pentlandite with minor chalcopyrite, and brecciation including clasts of wall-rocks, with 6 stages of folding along an ~6km length to a depth of at least 1500m, in a gneiss with quartz, garnets and feldspar. It apparently has some boudinage (sausage-like) features plus ultramafic blocks and deformed pillow basalts.

We/ERA have not visited or seen Thompson-type nickel ore, but according to available information there appears to be a number of similarities such as garnets, gneiss, metamorphism, possible folding and orebody thickness. A comparison between Canadian/Nova type and typical WA nickel type deposits (such as at Kambalda and Widgiemooltha) is shown in Table 1, with Sirius' current resource in Table 2.

Table 1. Comparison Between Canadian / Nova type Nickel deposits and Typical WA Nickel Deposits

Nickel Deposits	Size	Grade	Metal Content	Metals	Shape	Tpvm	Capex	Operating Cost
Canadian Deposits/Nova	**Large**	Moderate/High	**50kt to 2Mt**	Ni, Cu, Co, PGE	Simple thick pods or lenses	High	**Low**	**Low**
Typical WA Deposits	Small	Moderate	50kt to 200kt	Mostly Ni	Thin often complex ribbons	Low	High	High

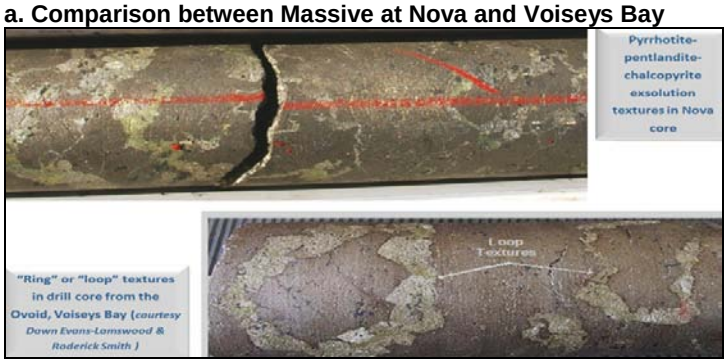
Table 2. Sirius' Current Resource as at July 2013

Resources (July 2013)	Mt	Ni%	Ni kt	Mt	Ni%	Ni kt	Mt	Ni%	Ni kt	Cu%	Cu kt	Co%	Co kt
(>0.6% Ni Equiv)	Indicated Resource			Inferred Resource			Total Resource						
Nova	9.3	2.5%	231	1.0	1.5%	14	10.2	2.4%	**245**	1.0%	101	0.08%	7.8
Bollinger	2.4	2.6%	63	2.0	0.9%	18	4.4	1.9%	**81**	0.8%	33	0.08%	3.3
Total	**11.7**	**2.5%**	**294**	**2.9**	**1.1%**	**32**	**14.6**	**2.2%**	**326**	**0.9%**	**134**	**0.08%**	**11**

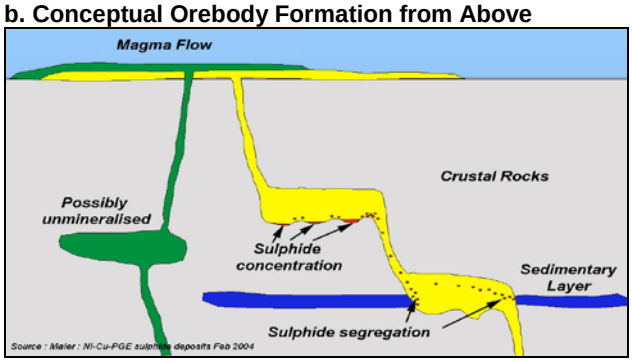
Comparisons have also been made between the massive nickel core from Nova and that from Voisey's Bay as representing similar magmatic states, as shown in Figure 3a, and they both have about the same age at ~1300 Million years ago. The individual orebodies in such Ni-Cu-PGE deposits can be connected by feeder pipes or shoots as shown conceptually in Figure 3b. The feeder pipe or shoot and the resulting "pooling" of mineralisation typically due to some feature such as a sedimentary layer (subsequently metamorphosed) or different rock unit can be fed from above or below. Interestingly the 124mt @ 1.66%Ni resource at Voisey's Bay is only spread over ~6km, highlighting that the tonnage in this style of mineralisation usually has much thicker widths than WA's usual nickel (Kambalda etc) ore deposits.

Figure 3. Comparison between Massive at Nova and Voisey's Bay, and Conceptual Orebody Formation

a. Comparison between Massive at Nova and Voiseys Bay



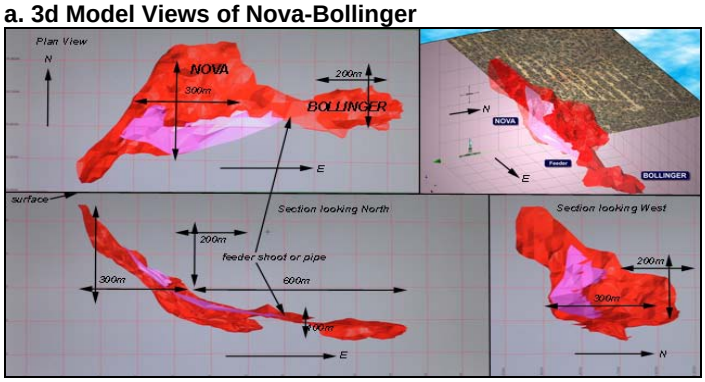
b. Conceptual Orebody Formation from Above



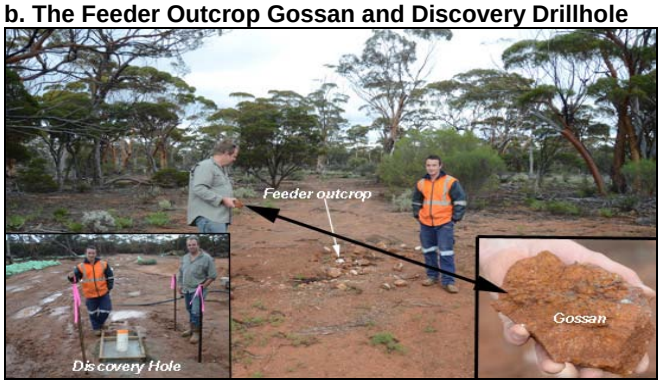
The nickel mineralisation at Nova has been described as a modified mafic intrusive/associated magmatic sulphide deposit, within a host rock of hypersthene-augite-garnet-hornblende-labradorite-quartz gneiss; interpreted to represent a strongly metamorphosed mafic-ultramafic precursor of predominantly gabbroic composition. The current Nova-Bollinger ore resource is about 900m long by 350m wide by 400m high, with the bulk of the orebody in a 100m high interval over 600m long as shown in Figure 4a. Nova and Bollinger are linked by a feeder pipe or shoot, and there is a low grade feeder connection through to the surface with an easily overlooked feeder outcrop gossan (discovered after drilling) as shown in Figure 4b.

Figure 4. 3d Model Views of Nova-Bollinger, and the Feeder Outcrop Gossan and Discovery Drillhole

a. 3d Model Views of Nova-Bollinger



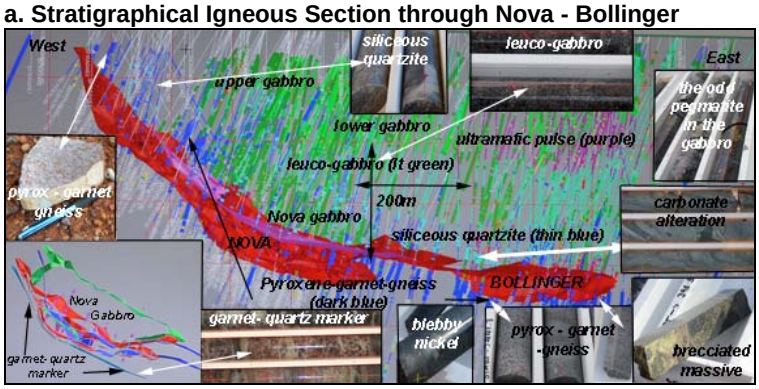
b. The Feeder Outcrop Gossan and Discovery Drillhole



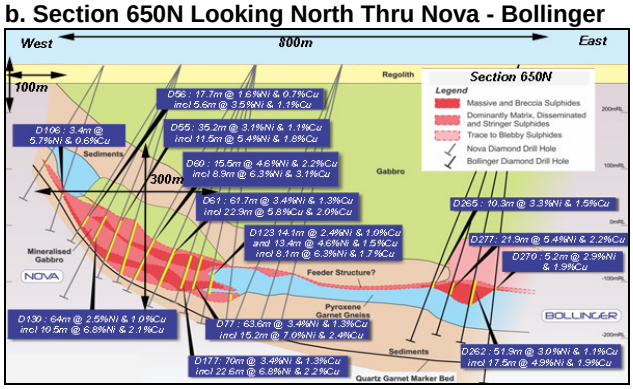
Studying the drill cores has enabled the Sirius geologists to derive a "stratigraphical" or layered igneous rock table with distinctive marker horizons that are representative at Nova - Bollinger as shown in Figure 5a, and result in the typical sections as shown in Figure 5b with its encouraging intersections, ***such as 70m @ 3.4%Ni & 1.3%Cu, including 22.6m @ 6.8%Ni & 2.2%Cu***.

Figure 5. Sections through Nova-Bollinger : Stratigraphical Igneous, and Schematic with Intersections

a. Stratigraphical Igneous Section through Nova - Bollinger



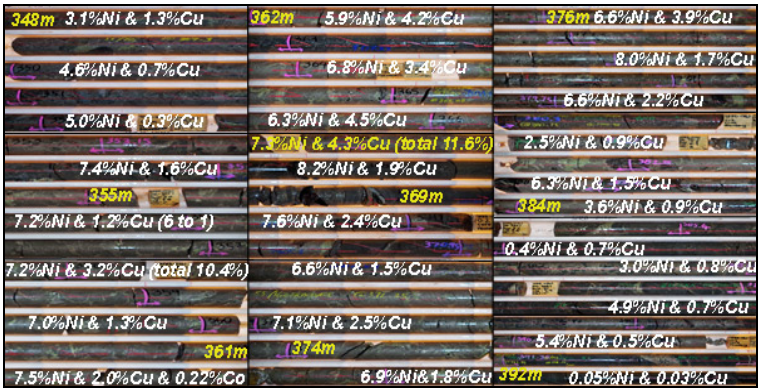
b. Section 650N Looking North Thru Nova - Bollinger



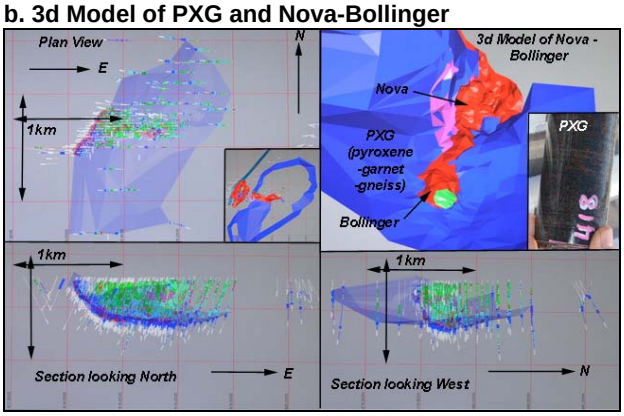
The nickel mineralisation has been subdivided into massive, matrix / net, stringer, and blebby (which resembles droplets of nickel sulphide) as shown in Figures 2b and 5a, and there often appears to be good grade continuity within the massive nickel mineralisation along individual drillholes as shown in Figure 6a of SFRD (Sirius Fraser Range Diamond) 0161. The mineralised nickel sections are often not visually continuous and can be separated by various "rafts" of different styles of mineralisation as in Figure 2b.

Figure 6. Massive Nickel Grade ~1m Intersections in Drillhole D161, & 3d Model of PXG and Nova-Bollinger

a. Massive Nickel Grade ~1m Intersections in Drillhole D161



b. 3d Model of PXG and Nova-Bollinger

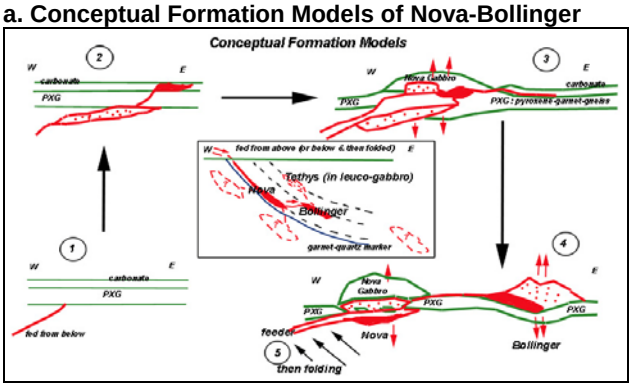


Initial indications from drill intersections through Nova reflected disseminated nickel mineralisation (possibly averaging ~0.9%Ni & 0.7%Cu), then net or stringer/breccia (~1.6%Ni & 0.7% to 0.8%Cu), passing into matrix mineralisation (possibly closer to 3% to 5%Ni), then massive (~5% to ~8%Ni, with the Ni/Cu mineralisation being about a maximum combined up to ~12% metal). In most cases the **Ni/Cu ratio** appears to be **~2.5 :1** (but as shown in Figure 6a, can range from ~2 to >6 :1, for example 5%Ni may have ~0.9% to 2.5%Cu, or 1.6%Ni may have ~0.2% to 0.8%Cu). **Cobalt** grades have typically been ~ 0.1% to 0.5%Co, and **may average an ~30 :1 ratio with nickel**, (eg 5%Ni has [0.5/30] or 0.016%Co).

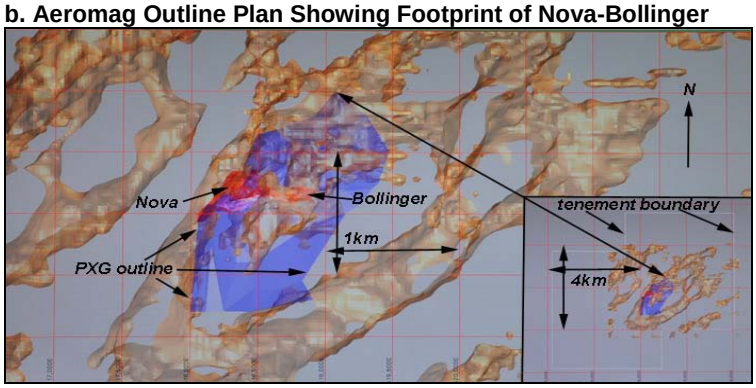
Although Bollinger is on a similar elevation to Nova, there are a number of differences between them. The massive nickel at Bollinger has been described as having a slightly lower tenor (grade) of ~5% to 5.5%Ni compared to the ~6.5% to 8%Ni at Nova and appears to be less disturbed. Bollinger is higher up in the sequence as shown in Figure 5b, with the garnet-milky quartz marker horizon up to ~200m below Bollinger, yet only up to ~50m below Nova. Nova has a specific gabbro (called the Nova gabbro) in its hangingwall that narrows in thickness as Nova pinches out towards the north. Another controlling feature currently appears to be the pyroxene-garnet-gneiss [which could have been a clayey sedimentary layer before metamorphism and folding] shown coloured dark blue in the sections and which is located in the hangingwall of Nova (where it is present near surface) and in the footwall of Bollinger, shown in Figure 6b.

Figure 7. Conceptual Formation Models, and Aeromag Outline Plan Showing Footprint of Nova-Bollinger

a. Conceptual Formation Models of Nova-Bollinger



b. Aeromag Outline Plan Showing Footprint of Nova-Bollinger



These differences have resulted in the conceptual schematic models shown in Figure 7a, because the question is although ~325,000tNi have been discovered already, which is enough for a stand-alone mine, ***where is the "rest"?*** It's similar to a "chicken and egg" story, as in did the "eye" form because of Nova or was the "eye" already there and Nova was emplaced in it, with the odds favouring the former. If so, the size of Nova-Bollinger appears to be too small to have resulted in the size of the "eye" as shown by its footprint in the aeromag outline plan in Figure 7b.

Aside from erosion, there are a number of possibilities for the "rest", such as (in no particular order):

- **Further north of Nova**: the EM plate was modelled NW/SE and the pinch out could be at the top of a "cliff" with a feeder deeper further north.
- **Conductor 2** on the "eye's" eastern side does have some sulphides similar to those in Bollinger, so the "boat-shape" could continue and the other side of the "boat" come to surface at Conductor 2.
- **West of Nova** : The two original anomalies identified were above Nova, and further west.
- **The extremities of the "eye"** : North East and South West both have anomalous nickel.

- **Alternatively, at depth**: The EM plates have only been identified within ~200m of a drillhole (a drillhole ~250m from Bollinger failed to EM plate it, but one 150m away did). The drillhole through Bollinger was originally planned to be ~1200m but was distracted when Bollinger was discovered. Deep drillholes are still planned for possible repetitions above & below the garnet-quartz marker.
- Possibly **lastly: almost anywhere associated with the PXG** - pyroxene-garnet-gneiss horizon

Other Prospects

Sirius expects to drill its two other Ni-Cu "eye-shaped" Fraser Range targets in the coming year, initially at **Yardilla** as shown in Figure 1a where an ~3km long EM plate has been identified striking NE/SW, and at Buningonia which is a **Ni-Cu-Cr-PGE target**. **Buningonia** apparently has a number of chrome bands in outcrop - (we have seen a sample of the ~42% chrome & it resembles hard lumpy chrome [ie the usually payable ore, depending on quantity]). However, the focus also has to be what are the PGE grades? Sirius also has a number of drill ready gold targets: in the Fraser Range and its previous exploration at Polar Bear. (Sirius has divested its assets / options at Collurabbie, Youanmi and in Canada).

Mining and Treatment - Mining

A possible reserve size of ~13mt infers that the throughput/treatment rate could be ~1.2mtpa to 1.5mtpa (for an 8 to 12-year design mine life), which is similar to Sandfire's recently completed ~1.3mtpa to 1.5mtpa ~$400m copper-gold project at DeGrussa in WA. The plant could be designed to have a throughput rate of 1.2mtpa (and then use the usual ~20% design allowance to achieve ~1.4mt - 1.5mtpa).

Given the style of the orebody, the **most logical mining method** would be sub-level open-stoping (with paste fill for maximum extraction), as has been applied in a number of Australian mines for example Avoca/Alacer's Higginsville and Panoramic's (PAN's) Savannah. Since the Nova orebody only really starts >100m below surface, there would be no open-cut, just a box-cut and then decline that may level out at ~350m to 400m. Although there would be little ongoing decline development (depending on any other discoveries), there would be fairly extensive lateral development, possibly even another ventilation shaft.

Treatment

Recovery rates have been achieved of ~93% to 99% in both nickel and copper, however, this would have been using fresh water, whereas the process water is expected to be saline/salty. The closest style of mineralisation that we have seen compared to Nova is PAN's Savannah in that the matrix of its lower orebody (see Figure 5a of our Aug 2008 PAN report on www.eagleres.com.au) resembles Nova's net/matrix ore. PAN had recoveries in our last 2010 model of Ni(88%), Cu(96%) & Co(90%), but its nickel ore grades were much lower than Nova at ~1.2%Ni to 1.5%Ni. Consequently we have assumed SIR's Nova Ni recoveries to be 90% (although ~93% may be achieved), with Cu at ~95% & Co at ~90%.

We have also assumed that a split con(centrate) is produced and not a bulk con due to Nova's higher grades and typical industry payability charges (for smelting etc). Payability and smelting charges for a bulk con could be 68%Ni, 50%Cu, 45%Co, however for a split they con could be at least **70%Ni & 90% (to 95%) Cu,** especially as Nova's cons should be relatively clean of deleterious/gangue products. Nova's Ni con may also command a premium due to its high iron and low MgO content making it ideal for blending. It is possible for some of the possible stopes to **average ~5%Ni & ~2%** (2.5 to 1) copper based on Figure 6a and computer sections that we have seen showing drillhole to drillhole grade continuity. We have also not considered treating the background grades of typically ~0.6%Ni in the Fraser Range, but accept that they could be treatable, such as using Bioheap like Talvivaara on much lower nickel grades in Finland.

Infrastructure

There are no nearby power lines so like DeGrussa, SIR would probably need to have its "own" diesel power station on similar terms of supplying diesel and paying for power. The water table is ~46m below surface, and there are a number of palaeochannels which may contain water sources. While Nova would need its own airstrip and camp, one of the key issues is going to be the road to site (to transport the cons) and whether it is sealed for the ~35km to the main Eyre highway, and then ~ 320km to Esperance.

Financial Considerations

SIR appears to have net cash of ~$40m as at the end of June 2013. Assuming that capex is ~$400m to $450m, we have assumed that Mark Creasy loans his 30% or ~$120m to $135m, leaving say ~$300m to finance. We have assumed free cashflow financing, although Sirius would probably raise some finance. The model shown is for 100% of the Nova project, adjusted for SIR's attributable 70% NPAT & cashflow.

The nickel price has fallen from ~$17,500/t since Jan 2013 to ~$14,000t in June 2013 (or 7.5%NPVs of **$3.79 to $2.56** respectively). For our modelling analysis shown in Table 3, we have used a base nickel price of US$15,000/t (or ~US$6.80/lb) and applied sensitivities of ~US$2000/t (~US$1/lb). Base metal prices have weakened in 2013 based on a slowing (lesser GDP) China, but appears to have overlooked the international joint venture developments that China is undertaking as reflected in the firm demand in copper and zinc as reported by MMG on 23 July 2013. ***It should be recognised that this production scenario is an ERA scenario, and is just one of a number of possible scenarios that could occur.***

Table 3. Production and Cashflow Estimate for Sirius' Nova Operation

We have used a base price of $15,000/t (~$6.80/lb) for nickel...

..and yet only in Jan 2013 it was ~$17,500t ($7.95/lb)

Nickel grades in some years could average ~3%, with some months possibly much higher than that

We have assumed recoveries of 90% for Ni, 95% for Cu & 90% for Co..

...with split con payabilities of 70% for Ni, 90% for Cu & 45% for Co

Our mining costs could be conservatively too high depending on the amount of SLOS (sub-level open stope) contributions

We have not provided for dividends, although SIR could have a payout ratio of ~50%...

...and we have not provided for any equity finance...

...though some seems likely at some stage

Sirius Resources		**2014f**	**2015f**	**DH15f**	**JH16f**	**2016f**	**2017f**	**2018f**	**2019f**
Prices	**$2.60**					1	2	3	4
Nickel Price	US$/lb	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81
	US$/t	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**	**15000**
	A$/t	16667	16667	16667	16667	16667	16667	16667	16667
Copper Price	US$/lb	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29
	US$/t	7250	7250	7250	7250	7250	7250	7250	7250
	A$/t	8056	8056	8056	8056	8056	8056	8056	8056
Cobalt Price	US$/lb	13.61	13.61	13.61	13.61	13.61	13.61	13.61	13.61
	US$/t	30000	30000	30000	30000	30000	30000	30000	30000
	A$/t	33333	33333	33333	33333	33333	33333	33333	33333
A$ Exchange Rate	A$/US$	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900
Produced									
Nickel in situ	Ni t			1000	8750	9750	28000	33600	32400
Nickel in Cons	Ni t			850	7613	8463	25200	30240	29160
Payable Nickel	**Ni t**			**595**	**5329**	**5924**	**17640**	**21168**	**20412**
Payable Nickel	**Ni Mlbs**			**1.3**	**11.7**	**13.1**	**38.9**	**46.7**	**45.0**
Copper in Cons	Cu t			360	3255	3615	10640	12768	12312
Payable Copper	Cu t			324	2930	3254	9576	11491	11081
Payable Cobalt	Co t			12	114	126	378	454	437
Production									
Tonnes milled	000t			50	350	400	1000	1200	1200
Ni Grade	%			2.00%	2.50%	2.44%	2.80%	2.80%	2.70%
Ni Recovery	%			85.0%	87.0%	86.8%	90.0%	90.0%	90.0%
Ni contained in cons	t			850	7613	8463	25200	30240	29160
Payable Ni	t			595	5329	5924	17640	21168	20412
Cu Grade	%			0.80%	1.00%	0.98%	1.12%	1.12%	1.08%
Cu contained in cons	t			360	3255	3615	10640	12768	12312
Co contained in cons	t			27	254	280	840	1008	972
Costs (u/g mining 50, milling 25, haulage 11, port 9, admin & fill 15)									
Operating Costs	A$/t			110.1	110.1	110.1	110.1	110.1	110.1
Royalties (2.5%Ni; 5%Cu if sep co	A$m			0.5	4.5	5.0	14.8	17.7	17.1
By-prod credits	A$m			-3.0	-27.4	-30.4	-89.7	-107.7	-103.8
Operating Cash Costs	A$m			3.0	15.6	18.6	35.1	42.1	45.3
per Payable Ni lb	**US$/lb**			**1.71**	**0.85**	**0.94**	**0.47**	**0.47**	**0.56**
Revenues									
Payable Ni Sales Rev	A$m			9.9	88.8	98.7	294.0	352.8	340.2
By-product Rev	A$m			3.0	27.4	30.4	89.7	107.7	103.8
Sales Revenue	**A$m**			**12.9**	**116.2**	**129.1**	**383.7**	**460.5**	**444.0**
Costs									
- Operating	A$m			3.0	15.6	18.6	35.1	42.1	45.3
- D & A	A$m			2.2	20.0	22.2	66.1	79.3	76.5
Total Costs of Sales (incl inv)	A$m			5.2	35.6	40.8	101.2	121.4	121.8
Gross Profit (Ni Rev - Tot Cost)	**A$m**			**4.7**	**53.2**	**57.9**	**192.8**	**231.4**	**218.4**
Exploration w/off	A$m	-4.0	-4.0	-2.0	-2.0	-4.0	-5.0	-5.0	-5.0
Corporate Costs	A$m	-4.0	-4.0	-3.0	-3.0	-6.0	-6.0	-6.0	-6.0
Other Net Interest	A$m	1.0	-0.9	-6.7	-6.7	-13.4	-8.4	-4.4	6.0
Effective NPBT (attrib 70%)	**A$m**	**-7.0**	**-8.7**	**-6.4**	**27.6**	**21.2**	**71.8**	**92.4**	**92.5**
Income Tax	A$m	0.0	0.0	0.0	0.0	0.0	21.5	27.7	27.8
Tax %	%	0%	0%	0%	0%	0%	30%	30%	30%
NPAT	**A$m**	**-7.0**	**-8.7**	**-6.4**	**27.6**	**21.2**	**50.3**	**64.6**	**64.8**
EPS	c	-3.1	-3.4	-2.5	10.7	8.2	19.2	24.5	24.6
Simple Cashflow	A$m	-7.0	-8.7	-4.8	41.6	36.7	96.5	120.2	118.3
CFPS	c	-3.1	-3.4	-1.9	16.1	14.2	36.9	45.6	44.9
No Shares	M	226.3	256.0	257.9	258.0	258.0	261.5	263.7	263.7

Cashflow		**2014f**	**2015f**	**DH15f**	**JH16f**	**2016f**	**2017f**	**2018f**	**2019f**
Sales Revenue	A$m	0.0	0.0	12.9	116.2	129.1	383.7	460.5	444.0
+ Equity Raised	A$m	0.8	17.9	1.1	0.1	1.2	0.7	0.0	0.0
+ Borrowings M Creasy's 30%	A$m	0.0	135.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Borrowings Other	A$m	0.0	50.0	250.0	0.0	250.0	0.0	0.0	0.0
+ Interest Received	A$m	1.0	4.0	2.0	2.0	4.0	5.0	5.0	10.0
Total Receipts	**A$m**	**1.8**	**206.9**	**266.0**	**118.3**	**384.3**	**389.4**	**465.5**	**454.0**
- Corporate Costs	A$m	-4.0	-4.0	-3.0	-3.0	-6.0	-6.0	-6.0	-6.0
- Operating Costs	A$m	0.0	0.0	-5.5	-38.5	-44.0	-110.1	-132.1	-132.1
- Royalty Costs	A$m	0.0	0.0	-0.5	-4.5	-5.0	-14.8	-17.7	-17.1
- Interest Paid	A$m	0.0	-4.9	-8.7	-8.7	-17.4	-13.4	-9.4	-4.0
- Explorn & Evaln	A$m	-35.0	-20.0	-10.0	-10.0	-20.0	-25.0	-25.0	-25.0
- Tax Paid	A$m	0.0	0.0	0.0	0.0	0.0	-21.5	-27.7	-27.8
- Pty Plant Equipment	A$m	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub-total	A$m	-39.5	-24.9	-24.7	-61.7	-86.4	-184.8	-211.9	-205.9
- Capitalised development	A$m	0.0	0.0	0.0	0.0	0.0	-15.0	-15.0	-15.0
- Major Capex	A$m	0.0	-180.0	-210.0	-40.0	-250.0	-20.0	0.0	0.0
- Sustaining Capex	A$m	0.0	0.0	-1.5	-1.5	-3.0	-3.0	-3.0	-3.0
- Divs Paid	A$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Loans Repaid	A$m	0.0	0.0	0.0	0.0	0.0	-100.0	-100.0	-135.0
= Expenditures	A$m	-39.5	-204.9	-236.2	-103.2	-339.4	-284.8	-311.9	-340.9
- Other (inventories etc)	A$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Expenditures	**A$m**	**-39.5**	**-204.9**	**-236.2**	**-103.2**	**-339.4**	**-284.8**	**-311.9**	**-340.9**
Net Cash Flow	A$m	-37.7	1.9	29.8	15.1	44.9	104.7	153.6	113.1
Less M Creasy's 30%	A$m		-7.8	-12.9	-8.4	-21.3	-40.7	-55.4	-43.2
Attrib Net cash for NPV	**A$m**	**0.0**	**0.0**	**0.0**	**0.0**	**20.0**	**64.0**	**98.2**	**69.9**

		Yrs	A$m	**A$ps**	No shares (m)
NPV	**7.50%**	12	767	**2.91**	264

Table 4. Sensitivity Analysis of Sirius Resources

The sensitivities show that SIR's NPV increases by ~$0.75 per $1/lb increase in the nickel price...

...and even minor increases in the nickel grade...

...can materially increase profits and the NPV

Sensitivity Analysis	**Year**	**NPV**	**NPV**	**2016e**	**2017e**	**2018e**	**2016e**	**2017e**	**2018e**
Base Nickel Price		**A$m**	**A$ps**	**A/tax Profit (A$m)**			**Earnings per Share (Ac)**		
~US$15,000/t (US$6.80/lb)	**15000**	767	2.91	21.2	50.3	64.6	8.2	19.2	24.5
~US$16,000/t (US$7.25/lb)	16000	859	3.26	26.2	60.8	77.2	10.2	23.2	29.3
~US$18,000/t (US$8.15/lb)	18000	1044	3.96	36.3	81.7	102.4	14.1	31.3	38.8
~US$20,000/t (US$9.10/lb)	20000	1229	4.66	46.4	102.7	127.6	18.0	39.3	48.4
~US$14,000/t (US$6.35/lb)	14000	674	2.56	16.1	39.8	52.1	6.3	15.2	19.7
Base Nickel Grade		**A$m**	**A$ps**	**A/tax Profit (A$m)**			**Earnings per Share (Ac)**		
Base	**0.00%**	767	2.91	21.2	50.3	64.6	8.2	19.2	24.5
0.2% higher	0.20%	914	3.47	27.0	58.6	74.6	10.5	22.4	28.3
0.4% higher	0.40%	1061	4.02	32.9	66.8	84.5	12.7	25.6	32.1
Operating Costs		**A$m**	**A$ps**	**A/tax Profit (A$m)**			**Earnings per Share (Ac)**		
Base	**0%**	767	2.91	21.2	50.3	64.6	8.2	19.2	24.5
5% lower	-5%	795	3.02	22.7	53.0	67.9	8.8	20.3	25.7
10% lower	-10%	824	3.12	24.3	55.7	71.1	9.4	21.3	27.0
Base A$/US$ Exchange Rate		**A$m**	**A$ps**	**A/tax Profit (A$m)**			**Earnings per Share (Ac)**		
Base US$0.90	**0.90**	767	2.91	21.2	50.3	64.6	8.2	19.2	24.5
US$0.95	0.95	683	2.59	16.6	40.8	53.2	6.4	15.6	20.2
US$1.00	1.00	616	2.34	12.5	46.0	43.0	4.8	17.6	16.3
Higher Production		**A$m**	**A$ps**	**A/tax Profit (A$m)**			**Earnings per Share (Ac)**		
Base rate	**0**	767	2.91	21.2	50.3	64.6	8.2	19.2	24.5
Additional 50ktpa	50	810	3.07	21.2	53.4	67.8	8.2	20.4	25.7
Additional 100ktpa	100	854	3.24	21.2	56.5	70.9	8.2	21.6	26.9
Sensitivity Analysis	**Year**	**NPV**	**NPV**	**2016e**	**2017e**	**2018e**	**2016e**	**2017e**	**2018e**

Upside Potential

Sirius' current share appears to contain little for its other nickel-copper (possibly PGE) prospects in the Fraser Range such as Yardilla and Buningonia, yet alone its original prospects at Polar Bear. There could quite easily be further extensions and discoveries in the vicinity of the "eye", as there are a number of targets, and Mark Creasy could vend some of his other Fraser Range tenements into the joint venture.

Management

Board of Directors

Jeff Dowling – Non-Executive Chairman since 2013. Jeff has over 40 years' experience with Ernst & Young in audit, risk, finance and corporate transactions, most recently as the Managing Partner of their Western Region. Jeff is also a non-exec director of Atlas Iron and is Deputy Chairperson of the Metropolitan Redevelopment Authority.

Mark Bennett – MD & CEO since 2009. Mark is a geologist with over 25 years' experience mainly in gold, nickel and base metals and was Prospector of the Year in 2003. Mark has worked in Europe, West Africa and Australia having held Chief Geologist positions mainly for WMC Resources (Kambalda Nickel and St Ives Gold) and LionOre, and contributed to the discovery of the Thunderbox Gold and Waterloo Nickel mines.

Jeff Foster – Exploration Director since 2012. Jeff is a geologist with over 25 years' experience and a renowned national and international knowledge of nickel deposits. Jeff was a nickel specialist with BHP, and is a consultant to Anglo American. Jeff was also an Assoc Prof of the University of Tasmania, & was a Non-Exec Director of and has been consulting to Sirius since 2009.

Anna Neuling – Non-Executive Director & Company Secretary since 2012. Anna is a Chartered Accountant with over 12 years' experience who was formerly an auditor at Deloitte's. Anna has extensive experience from being a financial controller, CFO &/or Company Secretary of several ASX listed companies. Anna has been CFO & Company Secretary of Sirius since 2009.

Terry Grammer – Non-Executive Director since 2010. Terry is a geologist with over 35 years' experience. Terry was the AMEC 2000 Prospector of the Year for his role in the 1997 discovery of Jubilee's Cosmos nickel mine, and was co-founder of Western Areas in 1999 and was exploration manager until retirement in 2004. Terry was also Chairman of South Boulder Mines.

Neil Warburton – Non-Executive Director since 2013. Neil is a mining engineer with over 35 years' experience. Neil replaces Stephen Lowe on the board of SIR as Mark Creasy's nominee. Neil was prev (to Mar 2012) CEO of Barminco, one of Australia's largest underground mining contractors. Prior to Barminco, Neil was MD of Coolgardie Gold. Neil also has other directorships.

JV Partner

Mark Creasy – since 2008. Mark has over 40 years' experience and is a renowned prospector and entrepreneur whose Land Cruiser is in Kalgoorlie's Hall of Fame. Mark discovered the Bronzewing gold mine and was the inaugural 1993 Prospector of the Year. Mark holds 30% of the JV and is free-carried through to the completion of the BFS. Mark also holds ~20% of Sirius.

Senior Management

Martin Reed - COO since 2013. Martin is a mining engineer with over 40 years' experience. Martin was previously COO of Sandfire and Project Manager of its DeGrussa copper project. Martin has held numerous senior roles as COO, project manager, general manager, mine manager & underground manager in : gold, nickel, copper, uranium and vanadium.

Grant Dyker - CFO since 2013. Grant is a Chartered Accountant with over 23 years' experience having held a number of senior finance positions in listed mining and manufacturing companies. Prior to Sirius, Grant has been CFO of a number of companies during their project development, construction and commissioning phase, the last being Doray Minerals.

David English – Project Manager since 2013. David is a mechanical engineer with over 30 years' experience. David was previously construction manager for Sandfire's DeGrussa project, and has held numerous management operational roles at TiWest JV, BHP's Mt Keith nickel operations, Kwinana refinery & Windamurra Vanadium project.

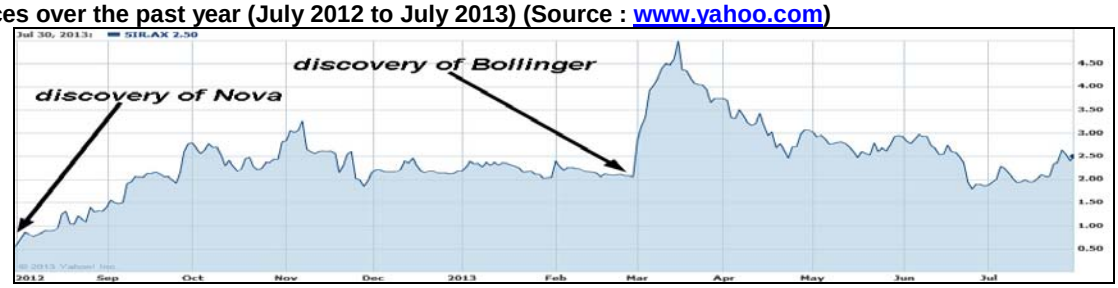
Bill Cunningham – **Product Marketing & Offtake Advisor** since 2013. Bill has over 50 years' offtake and marketing experience and was most recently with Sandfire covering its marketing and offtake products. Bill has extensive experience from CRA's lead-zinc division, and the nickel divisions of : WMC, Jubilee, Western Areas & LionOre.

Andy Thompson – **General Manager Resources and Geology** since 2012. Andy is a geologist with over 20 years' experience, who is ex-WMC and was formerly superintendent of LionOre's Thunderbox gold mine and Silver Swan nickel mine. Andy was most recently geology manager of the Wiluna gold mine.

Chart of Sirius Resources over the past year (July 2012 to July 2013) (Source : www.yahoo.com)

SIR's share price has appreciated on the basis of its discoveries...

...with the scoping study and PFS heading for completion in 2013



Disclosure

Sirius Resources NL commissioned Keith Goode (who is a Financial Services Representative with Taylor Collison Ltd ACN 008 172 450, and is a consultant with Eagle Research Advisory Pty Ltd ACN 098 051 677) to compile this report, for which Eagle Research Advisory Pty Ltd has received a consultancy fee. At the date of this report Keith Goode and his associates held interests in shares issued by Sirius Resources NL. At the date of this report, Taylor Collison Limited or their associates within the meaning of the Corporations Act, may hold interests in shares issued by Sirius Resources NL.

Disclaimer