

# 28 April 2016



VISION | COMMITMENT | RESULTS

ASX: PAN

# **Quarterly Report for the period ending 31 March 2016**

# Significant Points

### GROUP

- Safety Group LTI Frequency Rate at zero after recording 397 days without an LTI
- Liquid Assets \$27 million (including ~\$6 million of nickel in concentrate)

### **NICKEL**

### Savannah

- Production 2,861t Ni in concentrate, a new quarterly production record
- Costs aggregate site costs down, payable cash costs down to A\$3.48/lb Ni (inclusive of royalties), C1 Cash Cost A\$2.09/lb
- Operational changes decision made to stop capital development and to put the project onto care and maintenance in May 2016 due to low US\$ nickel price
- Savannah North positive Scoping Study released
- Exploration 2016 Savannah North drill programs commenced, with excellent intersections in seven of the first eight holes

### Lanfranchi

Lower Schmitz – maiden Resource of 131,000t @ 5.1% Ni for 6,700t Ni contained

### GOLD

### **Gum Creek**

- Positive Scoping Study released
- Optimisation work continuing in conjunction with the sale process
- Fourteen new geophysical targets identified along the Wilsons shear zone

### PGM

### Panton

Evaluation and research studies continuing

### Thunder Bay North (TBN)

- Rio completed its winter drilling program at TBN as part of the C\$20 million farm-in over 5 years to earn 70%
- Semi-airborne HeliSAM<sup>TM</sup> magnetics survey to be undertaken over the project area in June 2016

### CORPORATE

- Renounceable Pro-rata Entitlement Offer closed on 26 April 2016 with a take-up from eligible shareholders of approximately 77.8% - shortfall fully underwritten
- Hedging nickel hedging in place to cover quotational period (QP) pricing risk on remaining concentrate shipments



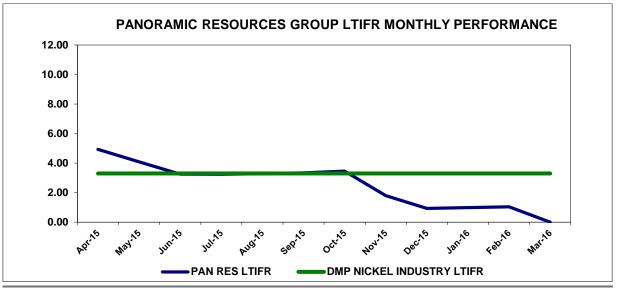


# Group Summary

# <u>Safety</u>

No lost time injuries (LTI) were recorded at the operations.

The 12 month moving average Group LTI Frequency Rate (LTIFR) has dropped to zero (down from 0.93). This is after recording 397 days without an LTI across the Group. Figure 1 shows the Group actual LTIFR against the 2014/15 WA Nickel Industry Average LTIFR of 3.30, as published by the WA Department of Mines and Petroleum (DMP). Figure 2 shows the Group Hazard and Incident Reports over the last 12 months. Hazards reported and the number of incidents fell during the quarter.





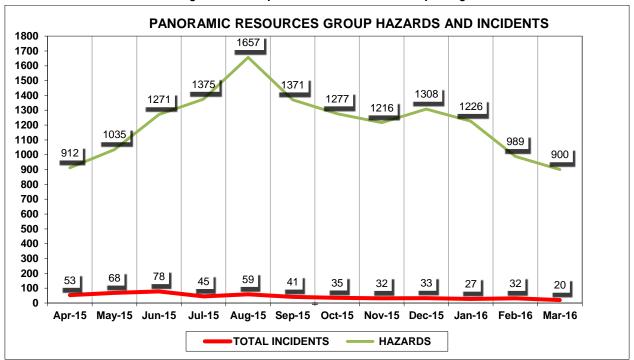


Figure 2 – Group Hazards and Incidents Reporting



## **Environment**

There were no significant environmental incidents recorded and the operations were conducted within all statutory, regulatory and licence conditions.

# Nickel – Savannah Project

## General

The Savannah Project produced 2,861t Ni, 1,816t Cu and 139t Co contained in concentrate. This result was a new quarterly production record.

Total ore mined dropped by 9% to 236,370t, as a result of completing mining the Copernicus open pit early in February. Both total ore milled and nickel head grade increased by 5% to 251,456t and 1.33% respectively.

The record nickel production, lower site aggregate costs (excluding redundancy costs) and the higher average milled nickel head grade resulted in a 38% decrease in the quarterly payable cash costs to A\$3.48lb (*Table 2*).

Four concentrate shipments for a combined 2,901t contained nickel were exported. At 31 March 2016, there was 570t of contained nickel in concentrate on hand valued at ~\$6 million.

Area	Details	Units	3 mths ending 31 Mar 2016	3 mths ending 31 Dec 2015	2015/16 YTD	2014/15 Full Year
Mining	Ore mined	dmt	236,370	259,581	735,313	865,660
	Ni grade	%	1.34	1.26	1.28	1.18
	Ni metal contained	dmt	3,172	3,273	9,407	10,258
	Cu grade	%	0.79	0.67	0.73	0.66
	Co grade	%	0.06	0.06	0.06	0.06
Milling	Ore milled	dmt	251,456	238,637	717,479	854,794
	Ni grade	%	1.33	1.26	1.28	1.18
	Cu grade	%	0.78	0.67	0.73	0.66
	Co grade	%	0.06	0.06	0.06	0.06
	Ni Recovery	%	85.5	86.0	86.0	86.4
	Cu Recovery	%	92.7	92.7	93.2	94.1
	Co Recovery	%	89.4	87.8	88.4	88.5
<b>Concentrate Production</b>	Concentrate	dmt	38,141	36,387	109,449	119,084
	Ni grade	%	7.50	7.14	7.21	7.33
	Ni metal contained	dmt	2,861	2,599	7,887	8,726
	Cu grade	%	4.76	4.05	4.48	4.46
	Cu metal contained	dmt	1,816	1,475	4,905	5,314
	Co grade	%	0.36	0.34	0.35	0.37
	Co metal contained	dmt	139	122	380	443
Concentrate Shipments	Concentrate	dmt	39,498	38,285	105,509	122,262
	Ni grade	%	7.34	7.12	7.25	7.31
	Ni metal contained	dmt	2,901	2,727	7,649	8,936
	Cu grade	%	4.57	4.20	4.48	4.39
	Cu metal contained	dmt	1,807	1,608	4,732	5,368
	Co grade	%	0.34	0.33	0.34	0.36
	Co metal contained	dmt	136	125	357	445



# Payable Cash Costs

	Units	Savannah 3mths ending 31 Mar 2016	Savannah 3mths ending 31 Dec 2015
Costs Per Pound Payable Nickel			
Mining	A\$ per lb	2.25	3.52
Milling	A\$ per lb	1.22	1.46
Administration	A\$ per lb	0.73	1.20
Payable Operating Cash Costs (Mine Gate)	A\$ per lb	4.20	6.18
Haulage	A\$ per lb	0.35	0.31
Port Charges/Shipping	A\$ per lb	0.26	0.35
Ore Treatment	A\$ per lb	-	-
Net By-product Credits	A\$ per lb	(1.67)	(1.59)
Royalties	A\$ per lb	0.34	0.36
Total Payable Operating Cash Costs <sup>(a)</sup>	A\$ per lb	3.48	5.61
Total Payable Operating Cash Costs <sup>(b)</sup>	US\$ per lb	2.51	4.04

## Table 2 – Savannah Project Payable Cash Costs (including Copernicus)

(a) Savannah capital development cash cost for the quarter was A\$0.16/b. This cost is not included in Table 2. Capital development costs represent capitalised mining cash costs for deposits in production. These costs do not include any pre-production costs for deposits being developed for future mining.

(b) Average March 2016 quarter RBA US\$/A\$ settlement rate of US\$0.7209 (Average December 2015 quarter exchange rate was US\$0.7202).

## Care and Maintenance

On 27 January 2016, the Company announced that due to the weak US\$ nickel price and uncertainty around the timing of a price recovery, the Project was to (1) immediately stop developing new stoping areas and (2); begin a transition onto care and maintenance. On 26 February 2016, the Company updated on discussions with key stakeholders and the work on site to maximise ore production and mill throughput in an efficient and safe manner until the operation is put onto care and maintenance in mid-May 2016.

The net cost to place Savannah onto care and maintenance will depend on revenue received from production until mid-May and the ability to run down inventories of consumables and extinguish outstanding creditor payments over that period. The remaining employee redundancy costs to place the Savannah site onto care and maintenance are approximately \$8.6 million

By taking this decision, the remaining Savannah Resource will be preserved until the US\$ nickel price returns to a sustainable level where the mining of the Savannah orebody, mostly likely in conjunction with the development of Savannah North, provides an acceptable return to shareholders.

### Restart Plan

The remaining Mining Inventory at Savannah, after the operations are placed onto care and maintenance, can be readily accessed with little new capital development. The Company believes that the free cash flow generated from the ore remaining in the Savannah orebody could underpin commencing the Savannah North capital investment.

The plan during the care and maintenance period is to complete the Feasibility Study on Savannah North and to undertake additional exploration to continue testing the strike and width dimensions of Savannah North, and grow the Resource base.

### Savannah North Scoping Study

As previously reported (*refer to the Company's ASX announcements of 27 January 2016 and 26 February 2016*), the Savannah North Scoping Study demonstrates there is potential to add significant mine life at Savannah through the development of Savannah North. The key operating metrics from the Scoping Study are summarised in Table 3.



Operating Metric	Result
Mineral Resource	6.88Mt @ 1.59%Ni, 0.77% Cu, 0.11% Co containing 109,600t Ni, 52,900t Cu, 7,800t Co
Mining Inventory	6.07Mt @ 1.26% Ni, 0.64% Cu, 0.09% Co containing 76,500t Ni, 38,600t Cu, 5,300t Co
Mine Life	7.75 years
Life-of-mine production (metal in concentrate)	66,200t Ni, 36,700t Cu, 5,000t Co
Annual production (metal in concentrate)	9,500tpa Ni, 5,300tpa Cu, 700t Co at full production

#### Table 3 – Savannah North - Resource and Production Summary

#### **Cautionary Statement**

The Savannah North Scoping Study referred to in this announcement is based on low-level technical and economic assessments, and is insufficient to support the estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised.

There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

All material assumptions underpinning the production target, and forecast financial information derived from the production target, in the Company's ASX announcements of 27 January 2016 and 26 February 2016, continue to apply and have not materially changed.

The Scoping Study is based on mining Savannah North via conventional long-hole open stoping with paste fill, processing the ore through the existing Savannah plant to produce a bulk nickel/copper/cobalt concentrate. The Scoping Study demonstrates a relatively low initial capital investment of \$42 million to achieve full production (on a stand-alone basis), with the existing mine, processing plant and supporting infrastructure of the Savannah operation. Forecast average C1 cash costs (nickel-in-concentrate after by-product credits) are at the lower end of the industry cost curve at US\$2.20/lb Ni over the life of the project. Table 4 summarises the financial outcomes of the Scoping Study at various US\$ nickel prices and a flat US\$:A\$ 0.70 exchange rate.

Financial Metric	Units	US\$5.00/lb	US\$6.00/lb	US\$7.00/lb	US\$8.00/lb
Revenue	A\$M	892	1,032	1,179	1,319
Initial Capital (Pre-production and ramp-up)	A\$M	42	42	42	42
LOM Capital (inclusive of initial capital)	A\$M	137	137	137	137
Operating costs plus royalties	A\$M	700	708	715	722
Pre-tax cashflow	A\$M	54	187	327	460
Pre-tax NPV (11% discount rate)	A\$M	6	80	158	232
IRR	%	14	47	82	118
C1 and and (Ni in concentrate basis)	A\$/lb Ni	3.14	3.14	3.14	3.14
C1 cash cost (Ni in concentrate basis)	US\$/lb	2.20	2.20	2.20	2.20
Payable Ni cash costs	A\$/lb Ni	5.19	5.26	5.29	5.36
rayable in cash cosis	US\$/lb	892         1,032         1,179         1,319           42         42         42         42         42           137         137         137         137         137           700         708         715         722           54         187         327         460           6         80         158         232           14         47         82         118           3.14         3.14         3.14         3.14           2.20         2.20         2.20         2.20	3.75		

Table 4 – Savannah North - Financial summary for a range of US\$ nickel prices (US\$:A\$ = 0.70)



As part of the Scoping Study, Panoramic identified the following enhancement opportunities which could add significant additional value to the Project:

- Future Resource growth less than 30% of the potential 2km mineralisation footprint has been tested by drilling;
- Mining Inventory upgrade potential to convert further Resources into Mining Inventory by optimising the mine plan;
- **Optimised mine plan** opportunity to lower unit costs, increase production rates and/or improve mined grades by optimising mining methods, stope shapes and cut-off grades;
- Improved mine scheduling opportunities to bring forward zones of high grade mineralisation and defer some development to a "just-in-time" schedule;
- Increased production rates potential to increase production rates through refinement of mining methods, further additions to the Mining Inventory, and shaft versus decline haulage;
- **Optimisation of plant throughput and recoveries** a number of opportunities have been identified to improve metallurgical performance of Savannah ore that are expected to be directly applicable to the Savannah North mineralisation;
- Alternative products assess the amenability of Savannah North mineralisation to produce separate nickel and copper concentrates, co-processing of Panoramic's Panton PGM mineralisation to produce a PGM-rich bulk concentrate, and matte production via mini-smelting technology (e.g. top submerged lance); and
- **Power** the Scoping Study is based on utilising the existing diesel fired power station. If an alternative fuel source such as gas is available, or solar/wind systems are viable, power costs could be reduced.

The Company is targeting the completion of a Feasibility Study on Savannah North during the December 2016 quarter.

# Nickel – Lanfranchi Project

## **General**

The Lanfranchi Project has been on care and maintenance since November 2015. FY2016 production before mining ceased is shown in Table 5.

Area	Details	Units	3mths ending 31 Dec 2015	3mths ending 30 Sep 2015	2015/16 YTD	2014/15 Full Year
Mining	Ore mined	dmt	-	43,692	43,692	468,491
	Ni grade	%	-	2.33	2.33	2.26
	Ni metal contained	dmt	-	1,019	1,019	10,575
	Cu grade	%	-	0.18	0.18	0.20
Ore Delivered	Ore delivered	dmt	-	46,279	46,279	470,322
	Ni grade	%	-	2.27	2.27	2.26
	Ni metal contained	Ni metal contained dmt		1,051	1,051	10,611
	Cu grade	%	•	0.18	0.18	0.20

Table 5 – Lanfranchi Project Operating Statistics

## Lower Schmitz

The maiden Lower Schmitz Resource Statement was completed and is summarised in the Exploration Section of this report.

## Native Title

In November 2014, the Federal Court made a Determination of native title in favour of the Ngadju People, the consequence of which was that the Company's tenements at the Lanfranchi Nickel Project were invalid to the extent that they were inconsistent with the continued existence, enjoyment or exercise of native title rights held by the Ngadju People. The Determination was subsequently appealed by some of the Respondents to the Determination, and the Company joined as a non-participating Respondent Party to the appeal.

On 29 March 2016, the Full Federal Court handed down its decision in the appeal, which overturned the initial decision and confirmed the validity of the relevant tenements. The Company understands that the Ngadju People have filed an application for special leave to appeal to the High Court.

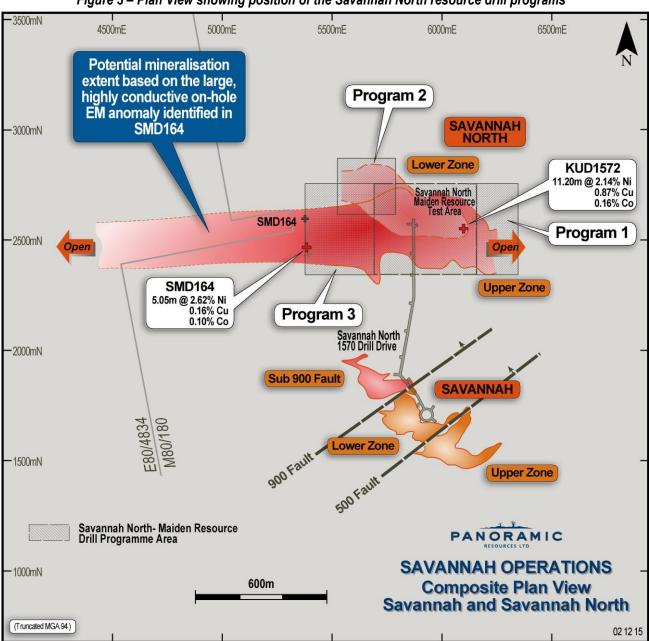


# **Base Metal Exploration**

# Savannah and East Kimberley Regional

### Savannah and Savannah North Project

As previously reported (refer to the Company's ASX announcements of 26 February 2016 and 21 March 2016), the resumption of Resource drilling at Savannah North from late February involves three programs (Figure 3).





• Program 1 – Savannah North Up-Dip to the East (High Priority)

The Scoping Study has highlighted that the time and capital development required to access the first ore at Savannah North could be reduced significantly if the Savannah North Resource extends up-dip towards the existing Savannah mine levels. A program of up to 20 diamond holes comprising approximately 8,000m is in progress to determine the proximity of the Savannah North mineralisation to the existing Savannah mine levels. If successful, it should lead to an increase in the Resource.



• Program 2 – Lower Zone infill high grade Inferred area (High Priority)

Preliminary Savannah North mine designs completed as part of the Scoping Study have highlighted the significant contribution delivered by the deeper levels of the high-grade Savannah North Lower Zone Resource. This zone is essentially constrained by the limited number of drill intersections. In order to de-risk the mine designs in this area, greater Resource confidence is required and a ten hole program comprising approximately 7,300m is planned to infill this area.

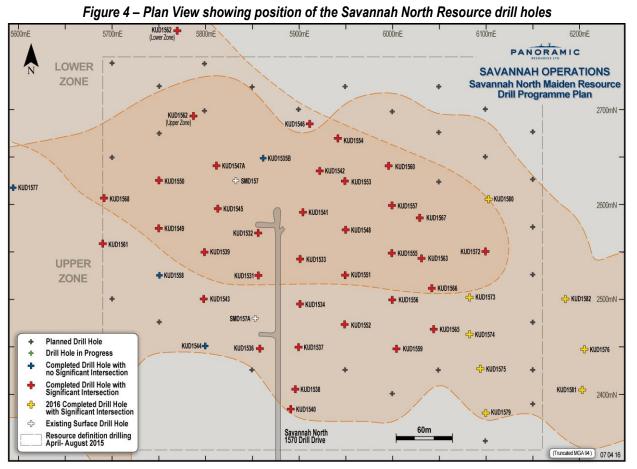
• Program 3 – Upper Zone western extension

Prior to ceasing the Savannah North Maiden Resource drill program in August 2015, it had been intended to infill (on a 100m by 100m spacing) the area between the western edge of the Maiden Resource test area (5700mE) and surface hole SMD164, a distance of ~300m (*Figure 4*). A significant portion of the existing Inferred Resource and Unclassified mineralisation in this area could be converted to Indicated category and a 10 hole drill program comprising 5,800m is now planned. The program is also designed to provide a clearer picture of the shape and grade of the Resource in this area, which in turn could be applied to the unclassified mineralisation that has been modelled to extend for a further 1km to the west from SMD164. The results should provide a better understanding of the resource potential of Savannah North.

Results for the first seven holes of Program 1, which were targeted at Sections 6100mE and 6200mE, were very positive with significant widths and grades of mineralisation. The results are summarised below (*refer to Figure 4 for hole locations and Figures 5 and 6 for sectional views*):

- 22.97m @ 1.79% Ni, 0.75% Cu, 0.13% Co(KUD1573);
- 15.20m @ 1.76% Ni, 0.60% Cu, 0.13% Co (KUD1574);
- 16.40m @ 1.78% Ni, 0.96% Cu, 0.14% Co (KUD1575);
- 23.03m @ 2.09% Ni, 1.10% Cu, 0.14% Co and 4.95m @ 2.29% Ni, 0.67% Cu, 0.15% Co (KUD1576);
- 9.80m @ 1.33% Ni, 0.34% Cu, 0.09% Co (KUD1579);
- 3.38m @ 0.72% Ni, 0.22% Cu, 0.05% Co (KUD1580); and
- 12.35m @ 1.32% Ni, 0.28% Cu, 0.09% Co (KUD1581).

Note: all intersections are down-hole lengths and not true-widths. The drill hole details and JORC Compliance Tables are contained in Appendix 2.



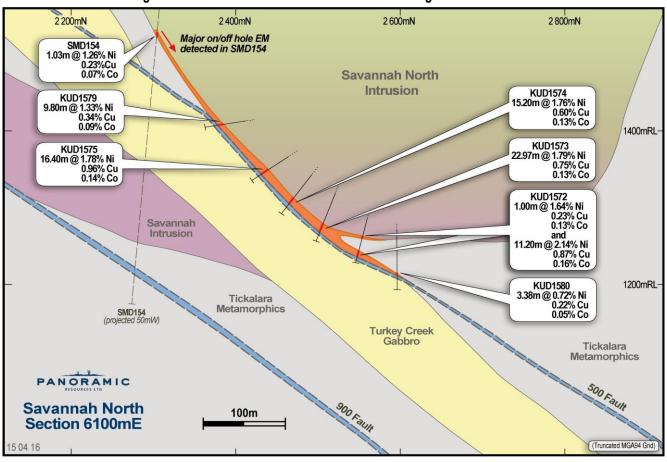
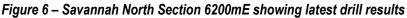
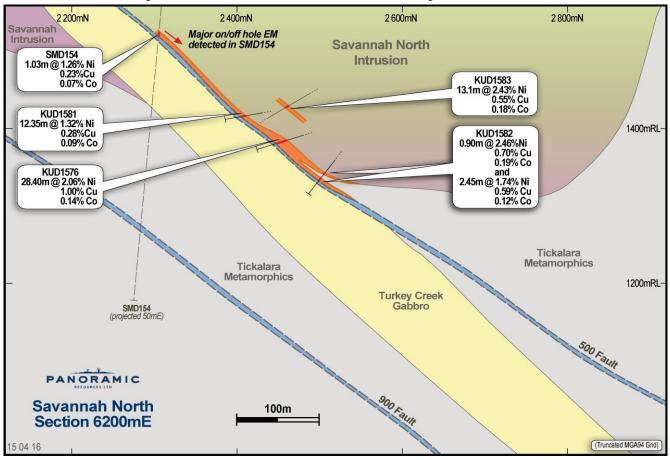


Figure 5 – Savannah North Section 6100mE showing latest drill results

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The intersections in KUD1576, KUD1581 and KUD1582 are significant as they are located 50m to the east of the existing Savannah North Resource thereby confirming the continuation of the Savannah North mineralisation up dip to the east, as predicted by the geological model.

#### **Dave Hill and Wilsons Intrusions**

An initial drill test of the Dave Hill and Wilsons Intrusions located to the south of Savannah was completed during February. Two holes, SMD165 and 166 were completed (*Figure 7*). The program was in part funded by a State Government Co-funded drilling grant of up to \$150,000. The first hole of the program (SMD165) was drilled in to the Dave Hill intrusion and was completed at 751m depth. The second hole of the program, SMD166 targeting the Wilsons intrusion, was completed at 697m. Both holes encountered broad zones of mafic to ultramafic lithologies, similar in many respects to the Savannah and Savannah North intrusions.

Encouragingly, low tenor disseminated sulphide mineralisation was intersected in both holes, confirming the potential of these intrusions to host nickel sulphide mineralisation. Both holes were also EM surveyed but no significant off-hole conductors were identified. Further exploration work on the Dave Hill and Wilsons areas is justified and will be considered in the future.

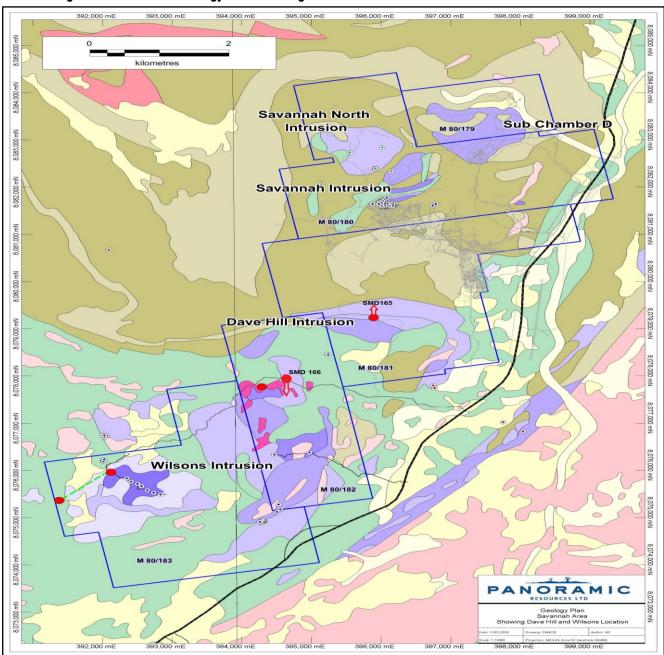


Figure 7 – Savannah Geology Plan showing Dave Hill and Wilsons Intrusions and drill hole locations



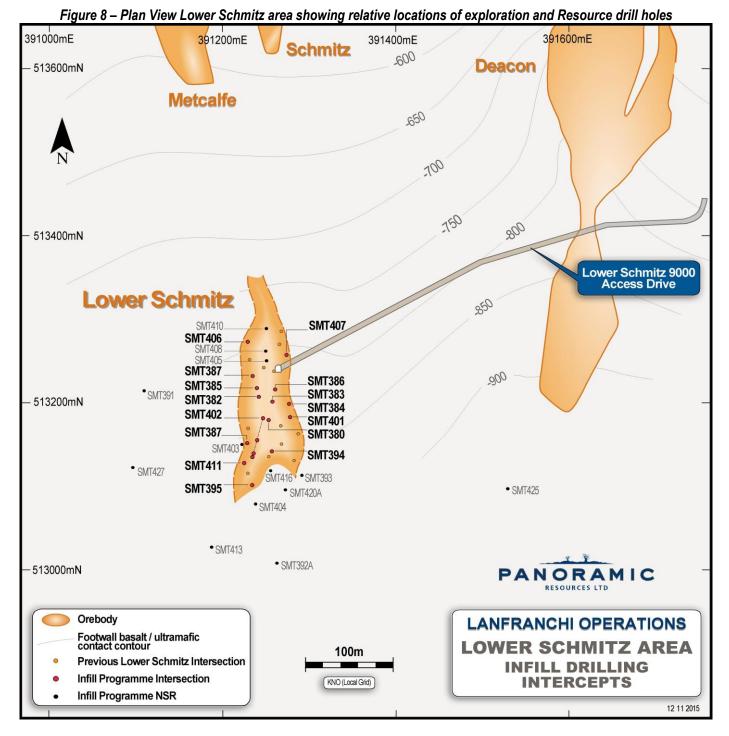


# <u>Lanfranchi</u>

### Overview

In January 2015, the Company announced the discovery of high-grade mineralisation at Lower Schmitz in drill hole SMT373A (*refer to ASX announcements of 21 and 23 January* 2015). Since the discovery, the sole exploration focus at Lanfranchi has been directed towards evaluating the Lower Schmitz area. Drilling to evaluate Lower Schmitz was initially conducted from the base of the Schmitz Decline and the Schmitz 4510 drill drive. This program finished in late July 2015 with completion of drill hole SMT380. A second, smaller infill Resource definition program was undertaken following the completion of the 9000 exploration/access drive in September 2015 (*Figure 8*).

The infill Resource drill program, which involved a total of 28 drill holes for 4,765 drill metres was completed in mid-November 2015.







#### Lower Schmitz – Maiden Mineral Resource Estimate

Following the completion of the infill program in November 2015, work commenced on the estimation of a maiden Mineral Resource for Lower Schmitz.

The maiden Lower Schmitz Mineral Resource Estimate was completed by Payne Geological Services Pty Ltd (PayneGeo). The results (*Table 6*) and following summary of the estimation process is taken from an extract from the PayneGeo Resource Report. A plan and sectional view, showing the shape of the Resource are presented in Figures 9 and 10. Details of the drill holes used to estimate the Resource and JORC Compliance Tables are contained in Appendix 1.

#### Summary of Payne Geological Services Report

"The Lower Schmitz ("LS") nickel deposit lies within the Lanfranchi Nickel Mine ("LNM") which is wholly owned by Panoramic Resources Limited ("PAN"). PAN acquired the mine in 2004 and operated it until late 2015 before placing the operation on care and maintenance.

The deposit lies approximately 400m to the south, and 200m vertically below the previously mined Schmitz orebody. It was discovered in 2015 by drill testing of an EM conductor down plunge of the Schmitz orebody and has now been delineated by 30 drill holes which have been drilled from a number of underground development headings. The Mineral Resource estimate is summarised in Table 6.

Classification	Tonnes (t)	Ni (%)	Cu (%)	Co (%)	Ni (t)	Cu (t)	Co (t)
Measured	-	-	-	-	-	-	-
Indicated	51,000	5.6	0.4	0.10	2,900	200	50
Inferred	79,000	4.8	0.3	0.09	3,800	300	70
Total	131,000	5.1	0.4	0.09	6,700	500	120

#### Table 6: Lower Schmitz – February 2016 Mineral Resource Estimate @ 1.0% Ni Cut-Off

The LS mineralisation is typical of many Kambalda nickel sulphide ("NiS") deposits, with massive and matrix sulphides occurring within a ribbon-like channel on the basal contact of the ultramafic unit. The true thickness of the LS deposit averages 2.6m, but is up to 6.4m thick in places.

The Mineral Resource has been defined by underground diamond drill holes over a length of 240m with an average width of 70m. The upper limit of the defined mineralisation is at a depth of 1,100m below surface and extends over a vertical extent of 170m.

The typical intersection spacing is approximately 20m by 20m in the central portion of the deposit. Initial holes drilled from the Schmitz mine area have intersected the LS mineralisation at a close angle. Later holes were drilled from a dedicated drill drive and have more optimal intersection angles.

A single mineralisation wireframe was prepared by PAN geologists based on detailed geological interpretation. A nominal cut-off grade of 1.0% Ni was used, but the majority of contacts are based on logged sulphide accumulations displaying sharply defined contacts. Due to highly variable intersection angles of the drilling, vein composites were prepared for each drill hole, to provide a single composite per hole. Length and density weighting of the raw sample data was used to prepare the composites. Grade estimation was carried out using inverse distance squared ("ID2") interpolation with the ellipsoid oriented down the plunge of the mineralisation.

Density in the block model was based on a regression formula derived from the raw sample data within the wireframes.

The portion of the deposit defined by drill spacing of 20m or less and lying in the highly tabular base of the interpreted channel was classified as Indicated Mineral Resource. The remainder of the deposit was classified as Inferred Mineral resource.

The deposit remains open down plunge. If economic potential of the defined Mineral Resource can be demonstrated, further drilling is warranted to test the extent of the high grade mineralisation at depth. Future estimates should consider the use of separate estimation domains for massive/matrix and disseminated sulphide mineralisation".





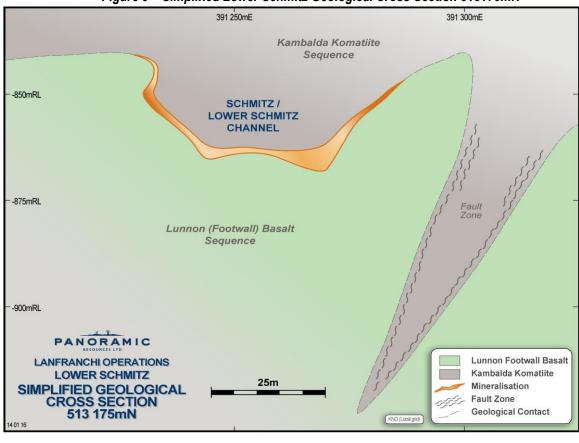
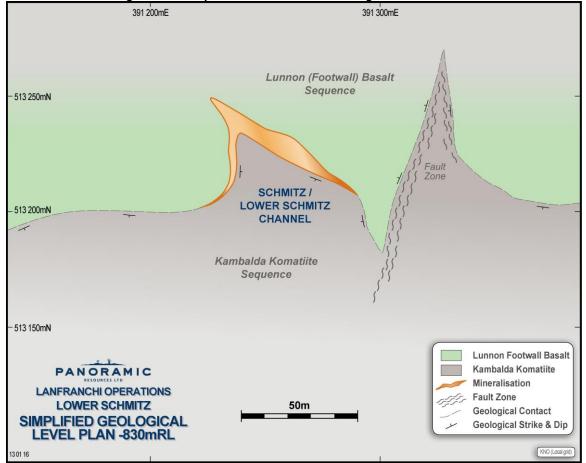


Figure 9 – Simplified Lower Schmitz Geological Cross Section 513175mN

Figure 10 – Simplified Lower Schmitz Geological Level Plan -830mRL





# Cowan Nickel Project, WA (Panoramic holds 100% nickel rights)

The Company withdrew from Cowan Nickel Project during the quarter.

## Drake Resources Exploration Alliance - Scandinavia

During the quarter, Panoramic withdrew from the alliance with Drake Resources Limited ("Drake") that was set up to identify, explore and develop base and precious metal opportunities across Scandinavia.

# Gold – Gum Creek Project

### **Updated Scoping Study**

An updated Scoping Study on the Gum Creek Gold Project (previously known as the Gidgee Gold Project) was released in March and is based on the processing of free milling open-pit Resources only (*refer to the Company's ASX announcements of 18 March 2016 and 22 March 2016*). The Study demonstrates a robust Project at an A\$1,700/oz Base Case gold price (*Table 7*), with the potential for further enhancement from adding other free milling and/or refractory material to the production profile, reduced capital and operating costs via an optimisation of the flowsheet, and more competitive mining contract and plant construction costs.

The Study is based on mining open pit Resources from the Swan, Swift and Howards Resources and processing it through a new 800ktpa Carbon in Leach ("CIL") processing plant to produce approximately 290koz gold over an initial six year mine life at an all in sustaining cost of A\$1,209/oz gold. The Study assumes a maximum cash drawdown of A\$62 million which includes construction of a new processing facility, associated infrastructure and open pit pre-development. Based on A\$1,700/oz gold (equivalent to US\$1,275/oz gold and an US\$:A\$ FX rate of US\$0.75), the Project generates a pre-tax cashflow of \$82 million (after royalties).

The aim of the Study was to focus on production from free milling Resources only to reduce the initial construction capital whilst retaining optionality of production from the Wilsons refractory Resource at a later date. Historic production of gold from free milling sources was in excess of one million ounces at high metallurgical recoveries. This information, together with testwork done by the Company, provides support for the metallurgical recoveries used in the Study.

The results from the Study demonstrate a Project with attractive economic outcomes and future optionality for production from either other free milling or refractory Resources.

Operating Metric	Assumption/Result						
Gold Price and Exchange Rate	<b>A\$1,700/oz</b> (US\$1,275/oz and A\$1:US\$0.75)						
Mining inventory	4.9Mt @ 1.94g/t Au for 309,000oz contained gold						
Mining Method	Open Pit						
Project life (processing)	5.8 years						
Life of Mine ("LOM") production	290,000oz Au (average ~60,000oz for years 1-4)						
Pre-production capital cost	\$62M						
Average LOM All-in sustaining costs ("AISC")	A\$1,209/oz Au						
LOM processing recovery	95%						
LOM strip ratio	9.4:1						
Pre-tax IRR	30%						
LOM Revenue	A\$496M						
LOM EBITDA	A\$149M						
LOM Pre-tax cash flow	A\$82M						
LOM Pre-tax NPV	A\$37M (11% real), A\$47M (8% real)						
Construction period	~12 months						

#### Table 7- Key Outcomes of the Study



#### Cautionary Statement

The Gum Creek Scoping Study referred to in this announcement is based on low-level technical and economic assessments, and is insufficient to support the estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised.

There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target referred to above will be realised.

Table 8- Sensitivity to A\$ Gold Price and Discount Rate									
Pre-tax cashflows and NPVs at various	A\$/oz Gold Price								
gold prices	1,6001,7001,8001,9002,000yalties (A\$M)5382110139168								
Cashflow after royalties (A\$M)	53	82	110	139	168				
NPV 11% after royalties (A\$M)	17	37	57	77	97				
Project NPVs at various discount rates	5%	6%	7%	8%	9%	10%	11%		
Pre Tax NPV (A\$M) at A\$1,700/oz	58	54	51	47	43	40	37		

The Mineral Resources underpinning the above production target have been prepared by a Competent Person or persons in accordance with the requirements of the JORC Code, (refer to the Company's ASX announcement of 30 September 2015).

The Company is continuing to review the option of enhancing shareholder value through the sale of Gum Creek, or by retaining and developing the Project in-house.

#### Exploration

In 2015, Panoramic completed detailed ground gravity and airborne electromagnetic (EM) survey over the Gum Creek Project. The geophysical data collected was subsequently integrated with existing magnetic surveys, geological mapping and the drill hole database to identify new exploration targets. A limited drill program on these targets has recently commenced.

Concurrently with this work, the shear zone associated with the Wilsons gold deposit has been defined geo-physically with 14 new targets along this zone identified for follow up exploration.

# Gold – WA Exploration Projects (ex-Magma)

Under the Laverton Farm-in Agreement between Poseidon Nickel Limited (Poseidon) and Magma Metals Pty Ltd (100% owned by Panoramic), Poseidon has the sole and exclusive right to earn a 60% interest in the tenements by sole funding an additional \$2,700,000 in expenditure on the tenements within the period of three years commencing on 3 June 2014. At least 75% of the \$2,700,000 must be incurred on activities within the Target Area. Poseidon is required to contribute not less than \$700,000 to expenditure after 14 July 2014 before it is able to withdraw from the Agreement.



# PGM – Thunder Bay North Project

The Thunder Bay North (TBN) Project is located near Thunder Bay in northwest Ontario, Canada. The advanced exploration project claims cover an aggregate area of 40,816 hectares. The TBN Project Resource contains **10.4Mt at 1.13g/t Pt and 1.07g/t Pd for** ~0.4Moz Pt and ~0.4Moz Pd (refer to the Company's ASX announcement of 30 September 2015 for disclosures on the TBN Resource) with exploration potential at depth and along strike.

On 30 July 2014, Panoramic announced that its wholly owned subsidiary, Panoramic PGMs (Canada) Limited (PANP), had signed an Earn-in with Option to Joint Venture Agreement (Agreement) with Rio Tinto Exploration Canada Inc. (RTEC), a wholly owned subsidiary of Rio Tinto, to consolidate their respective Platinum Group Metal (PGM) projects in northwest Ontario, Canada. RTEC holds a single tenement called Escape Lake (EL) within the core of the TBN tenement package. PANP and RTEC have recognised that the best way of realising value from both Projects is to combine TBN and EL into a single project (Consolidated Property).

In January 2015, the Company announced that RTEC had exercised its right under the Agreement by electing to move into the Earn-in Option Phase (Phase 2) of the Agreement. Under the terms of Phase 2, RTEC can earn a 70% interest in the TBN Project by sole funding C\$20 million of expenditure over a five year period (minimum spend of C\$5 million before RTEC can withdraw). During this period, RTEC will be responsible for managing the Consolidated Property and ensuring the tenements are kept in good standing. If RTEC does not earn its 70% interest, PANP has certain rights to purchase 100% of EL.

The 2015 RTEC diamond drilling program on the Project commenced in July and was completed in early November after drilling 11 holes, totalling 4,955 drill metres. The results of the 2015 program were encouraging and a follow-up winter drill program using two diamond drill rigs commenced in mid-January 2016. The winter program was completed in April after drilling 10 holes, totalling 4,832 drill metres. RTEC are still waiting to receive a large number of assay results from the drill hole samples.

In June 2016, Gap GeoPhysics is to undertake a semi-airborne HeliSAM<sup>™</sup> magnetics survey over the Escape Lake and Beaver Lake portions of the Project. If the results of the HeliSAM<sup>™</sup> survey are positive, the survey could be expanded to cover the 025 Intrusion, Steepledge Lake Intrusive Complex and northern Current Lake Intrusive Complex areas.

# PGM – Panton Project

Panton is located 60km south of the Savannah Nickel Project in the East Kimberley region of Western Australia. **Panton is a significant PGM Resource containing ~1.0Moz Pt at 2.2g/t and ~1.1Moz Pd at 2.4g/t** (refer to the Company's announcement of ASX Announcement of 30 September 2015 on "Mineral Resources and Ore Reserves at 30 June 2015" for disclosures on the Resource) with exploration potential at depth and along strike.

Panoramic considers the Panton Project to be a quality PGM development asset which fits within the Company's commodity diversification and growth strategy. In March 2012, the previous owner announced the results of a review of the 2003 Bankable Feasibility Study Review (2012 BFS Review).

During the quarter, the Company met with representatives from the Minerals Research Institute of Western Australia (MRIWA) as part of the Company's sponsored research with Curtin University on alternative PGM leaching methods applicable to Panton ore.

# Corporate

## Liquid Assets and Debt

Liquid assets at the end of the quarter totalled \$27 million, comprising \$20 million in cash, \$1 million of trade receivables and ~\$6 million of nickel in concentrate which was ready to be shipped at 31 March.

The movement in liquid assets was primarily due to:

- ~\$2 million redundancy costs at Lanfranchi, Savannah;
- the continuing weakness in the US\$ nickel price impacting on sales revenue and requiring the Company to refund ~\$2 million for final invoice quotational period (QP) pricing adjustments; and
- ~\$6 million in proceeds from the sale of MLX shares (total of ~\$15 million received in the half year).

Aggregate movements in the Group Cash balance over the quarter are shown in Figure 11.

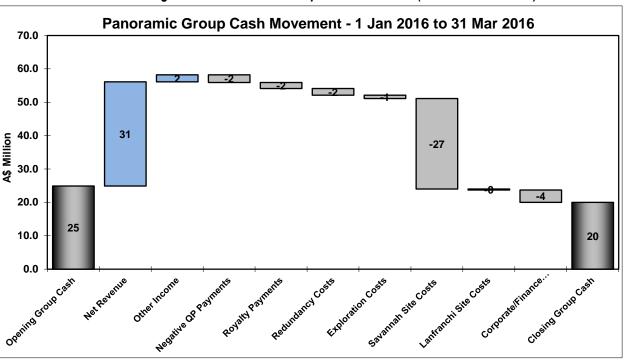


Figure 11 – Panoramic Group Cash Movement (March 2016 Quarter)

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Group finance leases on mobile equipment and insurance premiums at 31 March 2016 totalled \$1.8 million.

## Renounceable Pro-Rata Entitlement Offer

On 31 March 2016, the Company announced a fully underwritten, pro-rata renounceable one (1) for three (3) rights issue at \$0.10 per share to raise \$10.7 million before costs (*refer to the Company's ASX announcements of 31 March 2016 and 28 April 2016*). The Entitlement Offer ("Offer") closed on Tuesday, 26 April 2016.

Entitlements not taken up by shareholders on a pro-rata basis or under the Top-Up Facility totalled 23,790,653 shares ("Shortfall"). The Shortfall is fully underwritten by Zeta Resources Limited and GMP Securities Australia Pty Ltd. The quotation of new shares issued under the Offer and the mailing of holding statements are both expected to occur on 4 May 2016. The funds raised under the Offer will be used primarily to support the Company's objectives for Savannah North, evaluation studies on other projects and for working capital.

### <u>Hedging</u>

During and since the end of the quarter, the Company has added the following short term nickel hedging to cover the US\$ quotational period (QP) price risk on the remaining concentrate shipments:

- Sold forward on an unsecured basis, 130t of nickel hedge contracts at a forward price of US\$8,500/t (US\$3.85/lb) for delivery in April 2016;
- Sold forward on an unsecured basis, 300t of nickel hedge contracts at an average weighted forward price of US\$8,400/t (US\$3.85/lb) for delivery in May 2016;
- Purchased 181t of nickel put options at US\$8,310/t (US\$3.77/lb) for delivery in April 2016 if exercised by the Company; and
- Purchased 200t of nickel put options at US\$8,288/t (US\$3.76/lb) for delivery in May 2016 if exercised by the Company.

Commodity	Mark-to-Market 31 Dec 2015
US\$ Nickel Forwards	-
Bought us\$ Nickel Put Options	-
Bought US\$ Diesel Call Options	-
Total Mark-to-Market	-

### Table 9 – Group Hedge Book – A\$ Mark-to-Market Valuation as at 31 March 2016



Tuble To Croup Houge Book										
Commodity	Quantity 30 Apr 2016	Average Price/Rate 30 Apr 2016								
<u>Diesel</u> – Bought Diesel Call Options (delivery April 2016-June 2016)	500,000litres/mth	US\$0.55/litre								
<u>Nickel</u> – Nickel Forwards (delivery April 2016)	130t	US\$8,500/t US\$3.85/lb								
Nickel Forwards (delivery May 2016)	300t	US\$8,400/t US\$3.81/lb								
Bought Nickel Put Options (delivery April 2016)	181	US\$8,310/t US\$3.77/lb								
Bought Nickel Put Options (delivery May 2016)	200t	US\$8,288/t US\$3.756/lb								

#### Table 10 – Group Hedge Book – Delivery Profile as at 30 April 2016

#### **About the Company**

Panoramic Resources Limited (**ASX code: PAN**) is a Western Australian mining company formed in 2001 for the purpose of developing the Savannah Nickel Project in the East Kimberley. Panoramic successfully commissioned the \$65 million Savannah Project in late 2004 and then in 2005 purchased and restarted the Lanfranchi Nickel Project, near Kambalda. In FY2014, the Company produced a record 22,256t contained nickel and produced 19,301t contained nickel in FY2015. The Lanfranchi Pproject was placed onto care and maintenance in November 2015.

Following the successful development of the nickel projects, the Company diversified its resource base to include gold and platinum group metals (PGM). The Gold Division consists of the Gum Creek Project located near Wiluna. The PGM Division consists of the Panton Project, located 60km south of the Savannah Project and the Thunder Bay North Project in Northern Ontario, Canada, in which Rio Tinto is earning 70% in the project by spending up to C\$20 million over five years.

Panoramic has been a consistent dividend payer and has paid out a total of \$114.3 million in fully franked dividends since 2008. At 31 March 2016, Panoramic had \$20 million in cash and no bank debt.

The Company's vision is to broaden its exploration and production base, with the aim of becoming a major, diversified mining company in the S&P/ASX 100 Index. The growth path will include developing existing resources, discovering new ore bodies, acquiring additional projects and is being led by an experienced exploration-to-production team with a proven track record.

For further information contact: Peter Harold, Managing Director +61 8 6266 8600

The information in this release that relates to Exploration Targets and Exploration Results is based on information compiled by John Hicks. Mr Hicks is a member of the Australasian Institute of Mining and Metallurgy (AusIMM) and is a full-time employee and shareholder of Panoramic Resources Limited. Mr Hicks also holds performance rights in relation to Panoramic Resources Limited.

The information in this report that relates Mineral Resources (specifically Lower Schmitz) is based on information compiled by Mr Paul Payne. Mr Payne is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM) and consultant working for Payne Geological Services Pty Ltd (PayneGeo).

Both the aforementioned have sufficient experience that is relevant to the style of mineralisation and type of target/deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Both Mr Hicks and Mr Payne consent to the inclusion in this report of the matters based on the information in the form and context in which it appears.





# No New Information or Data

This announcement contains references to exploration results and Mineral Resource estimates, all of which have been cross referenced to previous market announcements made by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

# **Forward Looking Statements**

This announcement may contain certain "forward-looking statements" which may not have been based solely on historical facts, but rather may be based on the Company's current expectations about future events and results. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward looking statements are subject to risks, uncertainties, assumptions and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks include, but are not limited to metals price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks in the Countries and States in which we operate or sell product to, and governmental regulation and judicial outcomes. For a more detailed discussion of such risks and other factors, see the Company's Annual Reports, as well as the Company's other filings. The Company does not undertake any obligation to release publicly any revisions to any "forward-looking statement" to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.





# <u>Appendix 1</u>

# Lanfranchi Project – Tabulation of Lower Schmitz Drill Hole Assay Results and 2012 JORC Compliance Tables

	East	North	RL	Dip	Azi	EOH	From	То		Cu	Со	SG
Hole	(m)	(m)	(m)	(°)	(°)	(m)	(m)	(m)	Intercept	(%)	(%)	g/cm³
SMT373A	391916.4	6513685.0	-800.0	-2.3	230.5	626.46	449.72	452.46	2.74m @ 1.19 %	0.09	0.02	2.96
							482.90	489.94	7.04m @ 5.29 %	0.39	0.11	3.53
							497.00	498.62	1.62m @ 1.06 %	0.11	0.03	2.99
							525.30	532.10	6.80m @ 5.53 %	0.44	0.10	3.53
ļ							550.54	557.04	6.50m @ 6.63 %	0.36	0.12	3.71
SMT377	391470.6	6513874.2	-442.3	-33.5	174.4	490.80			Abandoned			
SMT377A	391470.6	6513874.2	-442.3	-33.5	174.4	821.40	700.80	715.40	14.60m @ 3.19 %	0.10	0.05	3.18
						including	701.80	706.41	4.61m @ 6.67 %	0.13	0.10	3.41
SMT377B	391470.6	6513874.2	-442.3	-33.5	174.4	703.80	675.64	680.85	5.21m @ 2.96 %	0.26	0.06	3.22
SMT377C	391470.6	6513874.2	-442.3	-33.5	174.4	680.30	599.15	600.25	1.10m @ 1.31 %	0.06	0.02	2.94
							651.40	661.20	9.80m @ 6.12 %	0.33	0.11	3.52
SMT378	391451.4	6514040.6	-503.2	-29.4	170.6	715.89	678.98	689.70	10.72m @ 6.15 %	0.46	0.10	3.62
						including	679.17	687.53	8.36m @ 7.24 %	0.54	0.12	3.79
SMT378A	391451.4	6514040.6	-503.2	-29.4	170.6	649.80			NSR		0.10	
SMT378B	391451.4	6514040.6	-503.2	-29.4	170.6	827.70	668.95	675.89	6.94m @ 7.64 %	0.50	0.13	3.85
							733.80	734.80	1.00m @ 1.00 %	0.07	0.02	3.04
01470700	004454.4	0544040.0	500.0	00.4	470.0	054.05	754.84	766.07	11.23m @ 7.58 %	0.56	0.12	3.59
SMT378C	391451.4	6514040.6	-503.2	-29.4	170.6	654.05	641.12	644.70	3.58m @ 4.44 %	0.20	0.08	3.39
SMT378D	391451.4	6514040.6	-503.2	-29.4	170.6	722.70	684.69	701.20	16.51m @ 4.87 %	0.43	0.10	3.40
SMT378E	391451.4	6514040.6	-503.2	-29.4	170.6	including	684.69 685.42	689.77 693.62	5.08m @ 10.51 %	0.95 0.51	0.22	4.25
						719.70			8.20m @ 6.69 %		0.11	3.70
SMT379 SMT381	391504.4	6514044.1	-467.1	-43.1	171.9	671.43	651.47	652.72	1.25m @ 1.74 % No SGs available	0.13	0.03	3.02
	204520.2	0540475.0	007.4	45.7	002.2	407.00	70.00	70 55		0.00	0.00	0.07
SMT382	391539.3	6513475.2	-867.1	15.7	203.3	127.80	73.20	79.55	6.35m @ 3.85 %	0.26	0.06	3.37
SMT383	391539.9	6513475.7	-867.3	15.7	188.8	101.10	73.94	77.66	3.72m @ 7.10 %	0.55	0.12	3.75
SMT384	391540.4	6513475.9	-867.3	17.6	174.2	98.10	76.16	81.79	5.63m @ 7.60 %	0.49	0.15	3.87
SMT385	391533.8	6513473.0	-866.1	24.7	204.6	111.00	87.00 62.33	88.38 64.99	1.38m @ 1.11 % 2.66m @ 2.88 %	0.08	0.02	3.02 3.17
									Ţ			
SMT386 SMT387	391539.9 391534.2	6513475.6 6513472.9	-866.7 -867.5	26.6 5.4	189.0 196.3	88.92 149.00	65.33 122.39	69.83 123.58	4.50m @ 5.65 % 1.19m @ 12.00 %	0.65 1.22	0.09	3.54 4.59
3111307	391534.Z	0515472.9	-007.5	5.4	190.5	149.00	122.39	125.56	1.84m @ 2.21 %	0.22	0.20	3.14
0147000	004500.0	0540475.5	007.7	5.4	400.0	400.05			Ţ			
SMT388	391539.9	6513475.5	-867.7	5.4	189.0	133.95	93.11	94.78	1.67m @ 5.87 %	0.37	0.12	3.60
SMT391	391532.5	6513475.0	-867.1	13.2	248.4	197.03	117.00 183.35	119.00 184.84	2.00m @ 1.08 % 1.49m @ 2.53 %	0.10 0.15	0.02	2.98 3.10
									-			
SMT392A	391562.0	6513485.1	-869.1	-23.4	184.5	347.79	96.70	97.87	1.17m @ 1.20 %	0.11	0.02	2.94
							122.14	126.37	4.23m @ 2.25 %	0.08	0.03	3.08
							153.20	156.22	3.02m @ 1.72 %	0.13	0.02	2.64
CMT202	201525 7	6512472.0	060.1	E 1	160.2	160.75	167.13	168.24	1.11m @ 1.23 %	0.08	0.02	2.98
SMT393	391535.7	6513473.2	-868.1	-5.1	169.3	162.75	400.04	400 50	NSR	0.50	0.40	0.70
SMT394	391535.0	6513472.9	-868.2	-7.2	184.0	164.16	126.84	133.59	6.75m @ 5.96 %	0.52	0.12	3.73
SMT395	391534.6	6513472.8	-868.1	-5.7	190.2	205.10	167.05	172.39	5.34m @ 6.56 %	0.41	0.15	3.73
SMT397	391533.1	6513473.5	-865.1	36.6	218.8	91.00	60.28	65.32	5.04m @ 4.56 %	0.34	0.08	3.47
SMT401	391535.6	6513473.6	-867.4	9.4	169.4	103.95	87.85	94.48	6.63m @ 5.38 %	0.32	0.11	3.58
							98.30	100.09	1.79m @ 1.37 %	0.10	0.03	2.96
SMT402	391534.6	6513472.8	-867.6	4.3	190.6	154.56	88.70	102.37	13.67m @ 6.26 %	0.36	0.10	3.57
							115.52	118.93	3.41m @ 6.61 %	0.67	0.13	3.74
0147400	004504.0	0540470.0	007.7	5.4	407.0	404.00	132.24	139.12	6.88m @ 6.66 %	0.30	0.12	3.49
SMT403	391534.2	6513472.9	-867.7	5.4	197.8	164.00			NSR			
SMT404	391535.0	6513472.9	-868.4	-13.9	184.0	222.87			NSR			
SMT405	391626.6	6513534.9	-868.4	28.3	230.0	166.72	404 57	400 70	NSR	0.40	0.00	0.47
SMT406	391626.3	6513534.9	-868.5	26.3	243.7	181.98	161.57	162.70	1.13m @ 5.09 %	0.12	0.09	3.47
SMT407	391626.6	6513534.3	-867.8	36.3	226.1	160.82	138.34	143.01	4.67m @ 2.47 %	0.22	0.06	3.17
SMT408	391626.5	6513534.7	-868.0	33.7	236.3	170.00	i		NSR			
SMT410	391626.5	6513535.0	-867.5	42.7	246.9	172.97	140.04	140.04	NSR	0.00	0.07	0.07
SMT411	391534.4	6513472.9	-867.9	-1.4	195.4	187.23	143.81	148.91	5.10m @ 3.99 %	0.30	0.07	3.37



Hole	East (m)	North (m)	RL (m)	Dip (°)	Azi (°)	EOH (m)	From (m)	To (m)	Intercept	Cu (%)	Co (%)	SG g/cm³
SMT413	391534.4	6513472.9	-868.3	-11.1	194.9	300.90			NSR			
SMT416	391535.2	6513473.0	-868.3	-11.4	180.4	167.18			NSR			
SMT420A	391535.5	6513473.2	-868.4	-15.8	173.5	195.60			NSR			
SMT425	391564.3	6513486.2	-868.5	-7.5	127.7	311.43			NSR			
SMT426	391536.1	6513473.6	-868.5	-19.2	160.1	62.34			NSR			
SMT427	391533.2	6513474.1	-867.8	0.7	225.0	246.30	218.84	224.47	5.63m @ 1.04 %	0.08	0.03	3.07

Notes:

- Intervals are down-hole lengths, not true-widths 1.
- 2. 3. Parameters: 1.0% Ni lower cut-off
- Intercepts < 1.5 % m not included
- 4. Intercepts grades based on length weighting incorporating sample SG values
- 5. NSR – no significant result

#### Lanfranchi Project – Table 1, Section 1 - Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary		
Sampling techniques	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	Virtually all sampling for exploration and resource estimation purposes a the Lanfranchi Nickel Mine (LNM) is based on diamond drill core. Sample selection is based on geological core logging. Individual samples typically vary between 0.2m and 1.2m in length.		
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.			
	Aspects of the determination of mineralisation that are Material to the Public Report.			
	In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.			
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	Diamond drilling at LNM is typically NQ2 or LTK60 size. Occasionally BQ and HQ core size holes have been drilled.		
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	loss is determined and recorded as part of the geological logging process		
	Measures taken to maximise sample recovery and ensure representative nature of the samples.			
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No relationship exists between core recovery and grade.		
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	All core is geologically and geotechnically logged to a standard appropria for exploration and mineral resource estimation purposes. Core is logg from start to end of hole without gaps. Core photography is not undertake Drill holes are logged using Excel <sup>TM</sup> templates that are code restricted		
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	ensure that only approved data can be entered. The Excel <sup>™</sup> templates are then uploaded to the Lanfranchi SQL Server drill hole database via Datashed <sup>™</sup> .		
	The total length and percentage of the relevant intersections logged.			



Criteria	JORC Code explanation	Commentary		
Sub-sampling techniques and	If core, whether cut or sawn and whether quarter, half or all core taken.	All diamond core is cut using electric core saw and half core sampled for assay. Quarter core samples are sent as part of the LNM QAQC process		
sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	for check assaying. Sample intervals typically vary between 0.2m and 1.2m and are positioned as to not cross geological boundaries.		
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.			
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.			
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.			
	Whether sample sizes are appropriate to the grain size of the material being sampled.			
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	All LNM drill hole samples are analysed by Kalassay Group. The Laboratory process for LNM samples involves: Crush sample to <3mm, pulverise to 90% passing 75um (lab blanks introduced and pulverised at this point). From the pulverised sample, a 0.2g assay aliquot is taken and weighed then digested by 4-Acid digest and analysed by ICP-OES instrument. Laboratory QA/QC is performed on standards, blanks and duplicates. The LNM policy is to scrutinize the results for QA/QC standards and blanks when assay jobs are reported and to request re-runs if result are $\pm$ 1SD from the expected value.		
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	No other geophysical or analytical tools have been used to estimate grade. Certified Reference Material (QAQC) samples are routinely inserted during		
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	all sampling at LNM. In addition samples are routinely sent for che analysis at a different Laboratory. The QAQC results indicate that the		
Verification of sampling and	The verification of significant intersections by either independent or alternative company personnel.	Significant intersections are calculated by mine geologists and verified/reported on a monthly basis by the Geology Manager.		
assaying	The use of twinned holes.	Twinning of drillholes is not performed at LNM		
	Documentation of primary data, data entry procedures, data	Assay data are imported directly from the Kalassay assay files and QA/QC validated via Datashed™ to the LNM SQL drillhole database.		
	verification, data storage (physical and electronic) protocols.	No adjustment to assay data is made.		
	Discuss any adjustment to assay data.			
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	Drill hole collars are accurately surveyed for X,Y,Z and azimuth and dip by site Surveyors using "Total Station" control. Older holes may/may not have collar azimuth/dip measurements. Down-hole surveys are generally conducted using single shot or reflex multishot tools at 15m, 30m and every 30m thereafter.		
	Specification of the grid system used.	The LNM drill hole database contains both MGA94 and local mine grid		
	Quality and adequacy of topographic control.	(KNO) coordinates. All site geological and mine planning work is performed in the local KNO grid system.		
		Conversion from KNO grid to MGA GDA94 Zone 51 is based on a two point transformation:		
		389084.61E, 513790.88N = 389351.47E, 6513980.38N		
		389044.77E, 513543.54N = 389313.70E, 6513732.77N		
Data spacing and distribution	Data spacing for reporting of Exploration Results.	LNM resource estimation drill holes are typically drilled on a regular grid spacing that varies according to the size and consistency of the resource being drilled. Due to the consistent grade and low Coefficient of Variation of nickel mineralisation generally, resource definition drilling at LNM is more for volume estimation purposes than grade estimation.		



Criteria	JORC Code explanation	Commentary		
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	Data spacing is deemed to be sufficient for Mineral Resource estimation and reporting.		
		LNM exploration holes are not drilled on regular grid pattern.		
	Whether sample compositing has been applied.	No sample compositing is undertaken; all core samples are logged and analysed in full.		
Orientation of data in relation to geological	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Underground drill sites are not always ideally positioned for resourc definition drilling however no sampling orientation bias is evident. The N grade is typically very consistent within individual resource domains an		
structure	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.			
Sample security	The measures taken to ensure sample security.	All diamond core samples are taken directly from site to Kalassay for analysis via a local courier service. Sample security is considered adequate.		
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No recent audit of the sampling techniques and procedures at LMN has been undertaken.		
		All the LNM Mineral Resource estimates are audited by independent consultants BM Geological Services. Minor adjustments to model dimensions, geostatistical analysis and application of top-cuts (where required) and adjustments to search parameters have been made on occasions following this audit process.		

## Lanfranchi Project – Table 1, Section 2 – Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	The Lanfranchi Nickel Mine (LNM) is an operating mine secured by a contiguous block of 35 Mineral Leases, 1 Mining Lease and 1 Prospecting Licence, covering the Tramways Dome 40km south of Kambalda in WA. All tenure is current and in good standing. Panoramic Resources Limited (Panoramic) has the right to explore for and mine all commodities within the tenements other than gold.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The LNM is an operating mine with all statutory approvals and licences in place to operate. The mine operates under an off-take agreement to mine and deliver nickel ore to BHP-Billiton's Nickel West Kambalda concentrator.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The LNM tenements were purchased by Panoramic in 2004 from WMC Resources Ltd. WMC had held the Lanfranchi Tramways tenements and explored the region since 1967. WMC commenced mining at the LNM in 1976.
Geology	Deposit type, geological setting and style of mineralisation.	Panoramic mines nickel sulphide rich ore from several deposits at Lanfranchi. All deposits belong to the "classic' Kambalda style, komatiite hosted, nickel sulphide class of deposits.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	Panoramic routinely drills surface and/or underground exploration holes about the Tramways Dome in search of additional nickel sulphide mineralisation. Details of the LNM exploration holes mentioned in this accompanying document can be found in Table 1 of the document.
Data	In reporting Exploration Results, weighting averaging	Sample length weighted average grades are typically calculated using the



JORC Code explanation	Commentary				
techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.	Intercept Calculator within the DBMS DataShed <sup>™</sup> for most publicly reported LNM exploration drill hole data. Parameters used are a1.0% Ni lower cut-off, minimum reporting intercept of 1m, and a maximum internal waste of 1.5 consecutive metres.				
Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	For Lower Schmitz drill hole intercepts the process is essentially the same except the individual sample SG values are also incorporated in to the weighting calculation.				
The assumptions used for any reporting of metal equivalent values should be clearly stated.					
These relationships are particularly important in the reporting of Exploration Results.	All LNM exploration drilling is conducted on the KNO local grid system. For public reporting purposes drill hole coordinates are expressed in				
If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	MGA94 coordinates in accordance with JORC 2012 requirements. Where the geometry of the mineralisation is known the estimated true width o mineralisation will be reported. Where the mineralisation geometry is no				
If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	sufficiently known the down-hole intersection length of mineralisation i				
Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Based on the material nature of the LNM exploration results being reported on, the diagram in the body of the accompanying report is considered sufficiently appropriate.				
Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	Based on the material nature of the LNM exploration results being reported on in the accompany document, the report is considered to be sufficiently balanced.				
Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	No other exploration data is considered material to this report at this stage.				
The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not	Routine exploration drilling is ongoing at the LNM. The results reported herein will, at least in the short term, have a material effect on the planned exploration programs currently underway at the LNM. Immediate follow-up programs are being developed to undertake further work in the subject area of this release.				
	techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and				

## Lanfranchi Project – Table 1, Section 3 – Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>Data was captured electronically to prevent transcription errors.</li> <li>Validation included comparison of assay results to logged geology to verify mineralised intervals.</li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>A site visit was not undertaken due to the project being on care and maintenance</li> </ul>
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>The confidence in the geological interpretation is considered to be good due to the well understood and readily identifiable stratigraphy which is a key control on mineralisation position</li> <li>The mineralisation is highly continuous and is defined by good quality drilling.</li> <li>The deposit consists of a moderately plunging channel hosting matrix, massive and disseminated nickel sulphides</li> </ul>



Criteria	JORC Code explanation	Commentary
		which have been interpreted based on logging and assay data from samples taken at regular intervals from underground diamond drill holes.
Dimensions	<ul> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower imits of the Mineral Resource</li> </ul>	The Lower Schmitz Mineral Resource area extends over a strike length of 240m, a width of 70m and has a vertical
Estimation and modelling techniques	<ul> <li>surface to the upper and lower limits of the Mineral Resource.</li> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul> <li>extent of 170m commencing at 1100m below surface.</li> <li>A mineralisation envelope representing the massive/matrix nickel sulphides was used to define the deposit.</li> <li>Vein composites were generated for each of the 30 holes passing through the envelope.</li> <li>Inverse distance squared interpolation was used for estimation of Ni, Cu and Co with the ellipsoid oriented down the plunge of the mineralisation.</li> <li>No high grade cuts were applied.</li> <li>Surpac software was used for the estimation.</li> <li>The parent block dimensions used were 10m NS by 8m EW by 8m vertical with sub-cells of 0.625m by 0.5m by 0.5m. The parent block size was selected on the basis of being approximately 50% of the average drill hole spacing in the better drilled part of the deposit.</li> <li>There has been no mining at the deposit, although extensive production has occurred up-plunge of this mineralisation.</li> <li>No previous resource estimates have been completed.</li> <li>No assumptions have been made regarding recovery of by-products.</li> <li>No estimation of deleterious elements was carried out.</li> <li>An initial interpolation pass was used with a maximum range of 40m and extended to 80m for the unfilled blocks.</li> <li>A minimum of 2 and a maximum of 5 composites were used.</li> <li>Strong correlation between Ni and Co was observed.</li> <li>For validation, trend analysis was completed by comparing the interpolated blocks to the sample composite data within 20m northing intervals and by 20m vertical intervals.</li> </ul>
Moisture	<ul> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	• Tonnages and grades were estimated on a dry in situ basis. No moisture values were reviewed.
Cut-off parameters	<ul> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	• The Mineral Resource has been reported at a 1% Ni cut-off based on local operating parameters.
Mining factors or assumptions	<ul> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul> <li>Extensive underground production has been carried out upplunge of this deposit and it is assumed that this deposit will be mined using identical methods.</li> <li>The deposit is considered to have sufficient grade and continuity to be considered for underground mining.</li> <li>No mining parameters or modifying factors have been applied to the Mineral Resource.</li> </ul>
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	<ul> <li>Metallurgical testing has not yet been compiled but the mineralogy is identical to deposits mined at the Lan Franch operation prior to mine closure.</li> </ul>
Environmental factors or assumptions	<ul> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental</li> </ul>	<ul> <li>Any development of the deposit will be part of the Lan Franchi project for which environmental permitting and waste management procedures are already in place.</li> </ul>



Criteria	JORC Code explanation	Commentary
	impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>Bulk density determinations were made on samples from drill core using the weight in air/weight in water method.</li> <li>Results were used to prepare a robust regression equation based on Ni grade. This was used to apply density in the block model.</li> </ul>
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012). The Mineral Resource was classified as Indicated and Inferred Mineral Resource on the basis of data quality, sample spacing, and lode continuity.</li> <li>The Indicated portion of the Mineral Resource was defined where good continuity of mineralisation was evident and where hole spacings were 20m by 20m or less.</li> <li>The remaining portions of the deposit were classified as Inferred Mineral Resource.</li> <li>The definition of mineralised zones is based on sound geological understanding producing a robust model of mineralised domains. This model is very similar to previously mined deposits at the project.</li> <li>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	No audit of the estimate was carried out.
Discussion of relative accuracy/ confidence	<ul> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>The Lower Schmitz Mineral Resource estimate is considered to be reported with a high degree of confidence. The consistent lode geometry and continuity of mineralisation is reflected in the Mineral Resource classification. The data quality is good and the drill holes have detailed logs produced by qualified geologists.</li> <li>The Mineral Resource statement relates to global estimates of tonnes and grade.</li> </ul>



# Appendix 2

## Savannah Project – Tabulation of Drill Hole Assay Results and 2012 JORC Compliance Tables

Hole	East (m)	North (m)	RL (m)	Dip (°)	Azi (°)	EOH (m)	From (m)	To (m)	Intercept	Cu (%)	Co (%)
KUD1573	395885.5	8082589.8	1450.4	-37.1	111.9	304.30	267.18	290.15	22.97m @ 1.79 %	0.75	0.13
KUD1574	395885.1	8082589.5	1450.8	-29.3	124.5	350.00	265.50	280.70	15.20m @ 1.76 %	0.60	0.13
KUD1575	395885.4	8082588.9	1450.9	-18.2	129.6	294.70	270.30	286.70	16.40m @ 1.78 %	0.96	0.14
KUD1576	395885.4	8082589.8	1451.3	-10.8	111.5	385.90	333.90	356.95	23.05m @ 2.09 %	1.10	0.14
							362.95	367.90	4.95m @ 2.29 %	0.67	0.15
KUD1579	395885.4	8082588.7	1451.3	-8.6	132.3	327.30	302.80	312.60	9.80m @ 1.33 %	0.34	0.09
KUD1580	395885.6	8082590.9	1450.4	-45.7	83.9	381.30	321.90	325.28	3.38m @ 0.72 %	0.22	0.05
KUD1581	395885.5	8082589.5	1451.5	-4.7	118.1	386.40	358.55	370.90	12.35m @ 1.32 %	0.28	0.09

Notes:

Intervals are down-hole lengths, not true-width

Parameters: 0.50% Ni lower-cut off, maximum internal waste 4.0m, minimum intercept 0.5m

NSR – no significant result; NS – no sample

## Savannah Project – Table 1, Section 1 - Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>The Savannah deposit and surrounding exploration areas are typically sampled by diamond drilling techniques. Over 1500 holes have been drilled for a total in excess of 220,000m. The majority of holes were drilled from underground drill platforms.</li> <li>About the mine the drillhole spacing is a nominal 25x25m grid spacing over the extent of the mineralisation.</li> <li>All drillhole collars were surveyed using Leica Total Station survey equipment by a registered surveyor. Downhole surveys were typically performed every 30 metres using either "Reflex EZ Shot" or "Flexit Smart Tools".</li> <li>All diamond core is geologically logged with samples (typically between 0.2 metre to 1 metre long) defined by geological contacts. Analytical samples include a mix of full and sawn half core samples. Sample preparation typically involves pulverising the sample to 90% passing 75 µm followed by either a 3 or total 4 acid digest and analysis by either AAS or ICP OES.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul> <li>A mix of LTK60 and NQ2 sized diamond drilling has been used to obtain &gt;90% of the data in the mine database. Exploration holes are typically NQ2 size. Some RC drilling has been used historically for the upper part of the mine.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>Diamond core recoveries are logged and recorded in the database. Overall recoveries are &gt;99% and there are no apparent core loss issues or significant sample recovery problems.</li> <li>Depths checked against core blocks, regular rod counts, driller breaks checked by fitting core together.</li> <li>No relationship exists between sample recovery and grade</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> </ul>	<ul> <li>All holes have been geologically logged in full. Geotechnical logging was carried out on all diamond drill holes for recovery and RQD. Number of defects (per interval) and roughness was carried out around the ore zones. Structure type, alpha angle, infill, texture and healing is stored in the structure table of the database.</li> </ul>



Criteria		Commentary
	<ul> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> </ul>	<ul> <li>Logging of diamond core RC samples recorded lithology, colour, mineralisation, structural (DDH only) and other features. Core was photographed wet.</li> </ul>
	<ul> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	All drill holes were logged in full.
Sub-sampling techniques and	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> </ul>	<ul> <li>Analytical core samples included a mix of full and sawn half core samples.</li> </ul>
sample preparation	<ul> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> </ul>	All samples from core
	<ul> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	<ul> <li>All core sampling and sample preparation followed industry best practice.</li> </ul>
	<ul> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>	<ul> <li>QC involved the addition of Savannah derived CRM assay standards, blanks, and duplicates. At least one form of QC was inserted in most sample batches.</li> </ul>
	<ul> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> </ul>	<ul> <li>Original versus duplicate assay results have always shown strong correlation due to massive sulphide rich nature of the orebody.</li> </ul>
	• Whether sample sizes are appropriate to the grain size of the material being sampled.	<ul> <li>Sample sizes are considered appropriate to represent the Savannah style of mineralisation.</li> </ul>
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	• The Savannah Nickel Mine (SNM) standard analytical technique is a 3- acid digest with an AAS finish. The method best approaches total dissolution for most minerals. Exploration samples sent off-site are analysed using a 4-acid digest with either ICP OES or AAS finish (AAS for ore grade samples).
	<ul> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> </ul>	No other analytical tools or techniques are employed.
	<ul> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>The onsite laboratory carries out sizing checks, uses internal standards, duplicates, replicates, blanks and repeats. A selection of roughly 10% of pulps was sent to external laboratories for repeat analysis and sizing checks. No bias has been identified.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> </ul>	<ul> <li>Drilling and sampling procedures at the SNM have been inspected by many stakeholders since the project began.</li> <li>Throughout the life of the mine, there have been several instances</li> </ul>
	<ul> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> </ul>	<ul> <li>where holes have been twinned, confirming intersections and continuity</li> <li>Holes are logged into Excel<sup>™</sup> templates on laptops, data is then entered into MS Access<sup>™</sup> database with user data entry front end built in. Data is ultimately transferred to SQL server from Perth office. Data periodically validated by site personnel.</li> </ul>
	Discuss any adjustment to assay data.	No adjustments have been made to assay data.
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> </ul>	<ul> <li>All diamond drill hole collars were surveyed using Leica Total Station survey equipment by a registered surveyor. "Reflex EZ Shot" or "Flexit Smart Tool" was used for downhole surveys at approximately every 30m. Visual inspection in a 3D graphics environment using Surpac software failed to identify any obvious errors regarding the spatial</li> </ul>
	Specification of the grid system used.	<ul> <li>position of drillhole collars or downhole surveys</li> <li>The mine grid is a truncated 4 digit (MGA94) grid system.</li> <li>Conversion from local grid to MGA GDA94 Zone 52 is calculated by applying truncated factor to local coords:</li> <li>E: +390000, N: +8080000N</li> </ul>
	Quality and adequacy of topographic control.	<ul> <li>Topographic control is of a high quality and is adequate for the resource estimation process</li> </ul>
Data spacing	Data spacing for reporting of Exploration Results.	Nominal drill hole spacing of 25m (easting) by 25m (RL)
and distribution	<ul> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve</li> </ul>	<ul> <li>The mineralised domains delineated by the drill spacing show enough continuity to support the classification applied under the 2012 JORC Code.</li> </ul>
	estimation procedure(s) and classifications applied.	
	Whether sample compositing has been applied.	No sample compositing has been undertaken.



Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>Drill hole orientation was largely perpendicular to the orebody with the exception of the western extent where drill platform positions allowed only for oblique intersections.</li> <li>No orientation sampling bias has been identified.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Samples transported to onsite lab by SNM staff. Samples sent off site are road freighted (Nexus transport) and tracked using spreadsheets onsite.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>No audits/reviews of the sampling techniques have been undertaken in recent time. The procedures used are considered to be industry standard. Mine to mill reconciliation records throughout the life of the Savannah Project provide confidence in the sampling procedures.</li> </ul>

### Savannah Project - Table 1, Section 2 - Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The Savannah Nickel Mine (SNM) is an operating mine secured by 5 contiguous Mining Licences. All tenure is current and in good standing. SNM has the right to explore for and mine all commodities within the mine tenements.</li> <li>The SNM is an operating mine with all statutory approvals and licences in place to operate. The mine has a long standing off-take agreement to mine and deliver nickel sulphide concentrate to the Jinchuan Group in China.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>Since commissioning in 2004, SNM has conducted all recent exploration on the mine tenements.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The SNM is based on mining ore associated with the Savannah Intrusion; a palaeo-proterozoic mafic/ultramafic magma conduit. The Ni- Cu-Co rich massive sulphide mineralisation occurs as "classic" magmatic breccias developed about the more primitive, MgO rich ores basal parts of the conduit.</li> </ul>
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	a "4 digit" truncated MGA grid. Conversion from local to MGA GDA94 Zone 52 is calculated by applying truncated factor to local coords: E: +390000, N: +8080000. RL equals AHD + 2,000m
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Weighted averages were calculated using parameters of 0.5% Ni lower cut-off, minimum reporting length of 1m and maximum internal waste of 7m.</li> <li>Cu and Co grades were determined by the defined Ni grade interval, ie they are not calculated independently.</li> <li>For all Savannah North Maiden Resource drill hole intercepts the process is essentially the same except the individual sample SG values are also incorporated in to the weighting calculation.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>The geometry of the mineralisation reported herein with respect to the drill holes being reported has not been established.</li> <li>All intersection lengths reported in this accompanying release are downhole lengths and not true widths.</li> </ul>



Criteria	JORC Code explanation	Commentary
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul> <li>Based on the limited level of data currently available for this area at Savannah it was deemed that a simplified plan and section view showing the location of the exploration drill results in relation to the main areas of the SNM operation was appropriate.</li> </ul>
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul> <li>Based on the fact that exploration results reported herein are from several drill holes, located well away from other mine drill holes, the report is considered to be sufficiently balanced.</li> </ul>
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul> <li>No other exploration data is considered material to this release at this stage.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>The exploration results reported herein are for the Savannah North Project. Work is ongoing and further results will be reported if and when they become available.</li> </ul>