

Nickel


PANORAMIC
RESOURCES LTD



Cobalt

Investor Presentation

February 2019

Copper



No New Information or Data

This presentation contains references to Production Targets, exploration results, and Mineral Resource and Ore Reserve 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 Production Targets, Mineral Resources and Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

Forward Looking Statements

This presentation 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.

Capital Structure and Enterprise Value

Index	S&P/All Ordinaries
ASX Ticker	ASX:PAN
Shares on issue	494.5M
Share Price	\$0.45 (18 February 2019)
Market Cap	~\$220M
Cash	\$19.2M (31 December 2018)
Listed Investments	~\$8.5M (Horizon Gold, GME, others)
Bank debt	\$23.5M (drawn-down at 31 December 2018)
Enterprise Value	~\$220M

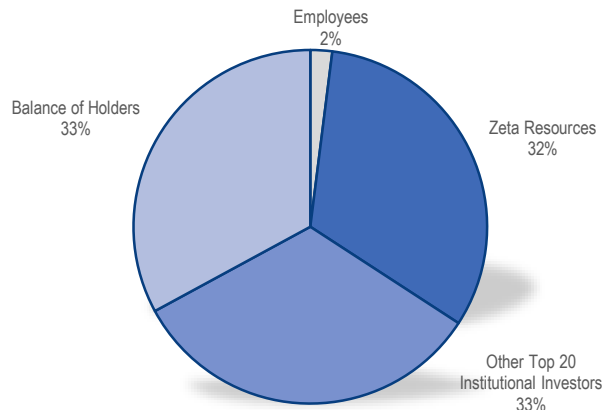
Metrics

30-day average daily volume	341,000
90-day average daily volume	400,000
52 week Low-High	\$0.335 - \$0.67

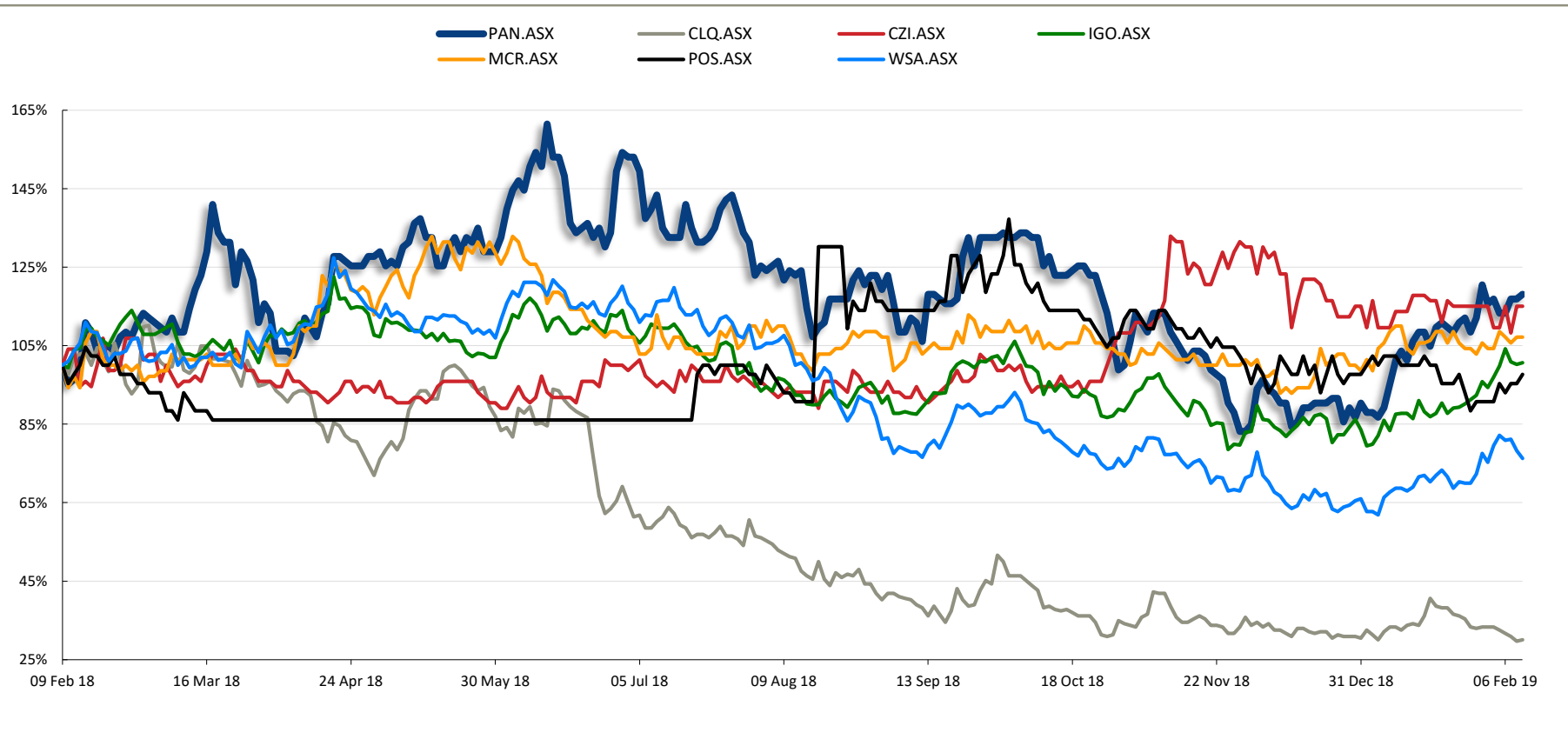
Board

Brian Phillips	Non Executive Chairman
Peter Harold	Managing Director
John Rowe	Non Executive Director
Peter Sullivan	Non-Executive Director
Nicholas Cernotta	Non-Executive Director
Rebecca Hayward	Non-Executive Director
Trevor Eton	CFO/Company Secretary

Top 100 Shareholder spread +50% institutional



12 Month Peer Group Performance



SAVANNAH



Savannah Feasibility Study Metrics

SAVANNAH MINE LIFE



8.3 YEARS

PRODUCTION PER ANNUM



**10,800t Ni
6,100t Cu
800t Co**

NPV



IRR 200%

SUSTAINING CASH COSTS



**US\$3.50/lb
payable Ni**

JOB CREATION



**~250
NEW JOBS**

COMMITMENT



**SAFELY HOME
EVERY DAY**

Long mine life with excellent potential for mine life extension through exploration success

Average annual production forecast*

10,800t Ni
6,100t Cu
800t Co

Pre-production ramp up capital ~\$A36M

Operating cash costs
US\$2.40/lb payable Ni

Sustaining cash costs
US\$3.50/lb payable Ni

Impressive financials
\$380M NPV and 200% IRR at US\$6.75/lb Ni

Major infrastructure in place

- » Mining fleet
- » 200 person village
- » 1Mtpa process plant
- » Underground mine

Job creation
~250 new jobs

Cautionary Statement

Approximately 1.1% of nickel in the Production Target is from material classified as Inferred Resource. 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.

*Refer Company ASX announcement dated 27 October 2017 titled "Updated Savannah Feasibility Study. Enhances fundamentals for a decision to restart"

Robust Project Economics

- Based on updated Feasibility Study Oct 2017
- Economics at Base Case and Long Term US\$ commodity prices and US\$:A\$ FX rates



Savannah Mill

Financial Metrics	Units	Base Case Prices	Long Term Prices*
Commodity Price Assumption - Ni	US\$/lb	5.50	6.75
Commodity Price Assumption - Cu	US\$/lb	3.10	2.72
Commodity Price Assumption - Co	US\$/lb	28.00	26.00
US\$:A\$ Exchange Rate Assumption	US\$	0.78	0.75
Revenue	A\$M	1,470	1,720
Up-front Capital (<i>pre-production</i>)	A\$M	36	32
LOM Capital (<i>inclusive of up-front capital</i>)	A\$M	240	230
Operating costs plus royalties	A\$M	900	920
Pre-tax cash flow	A\$M	330	570
Pre-tax NPV (8% discount rate)	A\$M	210	380
IRR	%	100	200
C1 cash costs (<i>Ni in concentrate basis</i>)	A\$/lb Ni	1.90	2.10
	US\$/lb	1.50	1.60
Operating cash costs (<i>payable Ni basis</i>)	A\$/lb Ni	3.10	3.40
	US\$/lb	2.40	2.60
Sustaining cash costs (<i>operating cash costs plus sustaining capital, payable Ni basis</i>)	A\$/lb Ni	4.50	4.80
	US\$/lb	3.50	3.60

* The Long Term (LT) Real (2017\$) US\$ nickel and copper prices and the US\$:A\$ FX rate were consensus forecasts sourced from UBS Global I/O Miner Price Review, dated 5 October 2017. The LT Real (2017\$) US\$ cobalt price was sourced from Macquarie Bank Limited Research Report titled "Price Forecast Changes", dated 9 October 2017



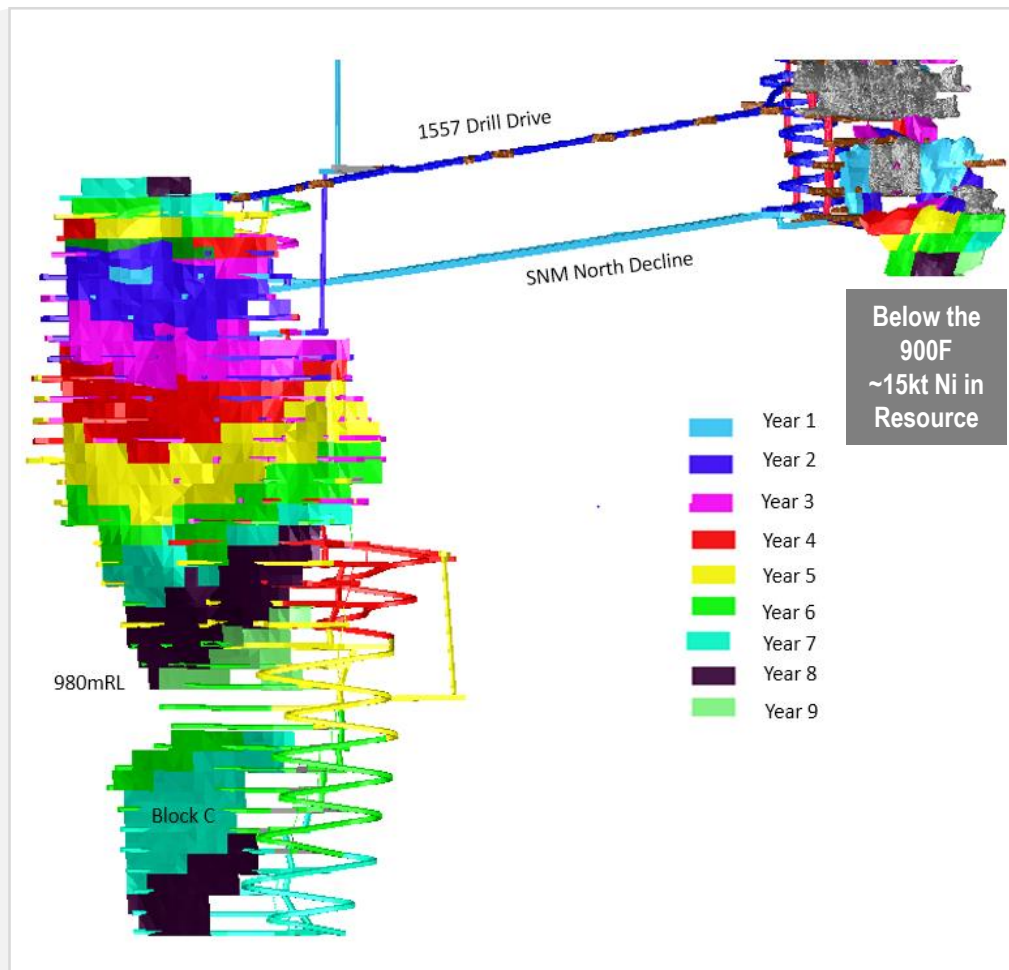
Simple Mine Plan

Savannah Orebody

- Forecast mine production of **1.68Mt @ 1.18% Ni for 19,800t Ni contained**
- Restart mining 100% Savannah ore then transition to Savannah North
- Resources below 900 Fault not included in mine plan (**0.90Mt @ 1.65% Ni for 14,900t Ni**)

Savannah North Orebody

- Forecast mine production of **5.97Mt @ 1.49% Ni for 88,900t Ni contained**
- Commence development on re-start
- First ore 9 months after commencing access development and full production after 15 months



Savannah Project Simplified Mine Plan



Significant Metal Production

Product

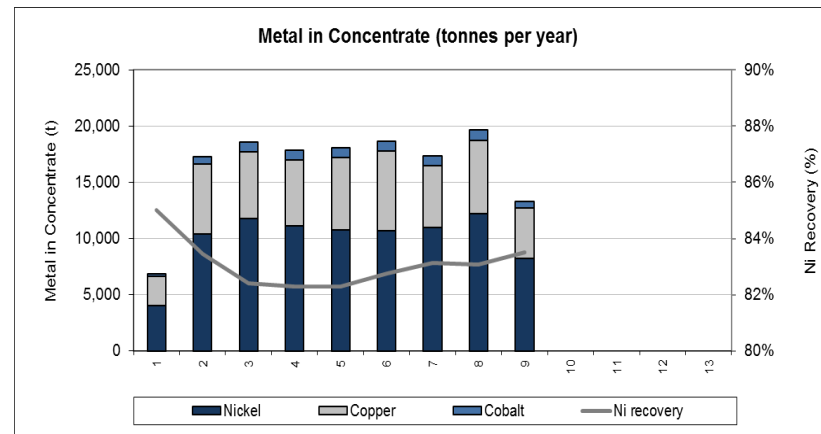
- **Bulk Ni-Cu-Co concentrate**
Average grade 8% Ni, 5% Cu, 0.6% Co
- Low impurities and attractive Fe:MgO and Ni:Fe ratios
- Ideal feed for Ni smelters

Annual metal in concentrate

- 10,800t Ni
- 6,100t Cu
- 800t Co

LOM metal in concentrate

- 90,200t Ni
- 50,700t Cu
- 6,700t Co



Loading concentrate in the Wyndham Shed



Competitive Offtake Agreement

- **Term** - Four years
- **Buyer** - Sino Nickel (JV between Jinchuan and Sino Mining)
- **Quantity** - 100% of annual production
- **Metal Payabilities** - improved payabilities for certain contained metals compared to previous Sales Agreement
- **Previous Agreement** - superceded by new Agreement
- **General terms:**
 - **Product** - sulphide concentrate with a typical specification of 8% Ni, 4.5% Cu, 0.6% Co, 46% Fe, <1.0% MgO
 - **Load Port** - Wyndham, Western Australia
 - **Payable metals** - Ni, Cu and Co
 - **Price basis**
 - agreed % of LME cash price for Ni and Cu
 - agreed % of Metal Bulletin Co price



Between 2004 and 2016, Panoramic shipped
>1.2Mdm of nickel-copper-cobalt
concentrate worth \$1.4 billion

- **Project Loan**
 - **Principal** – up to A\$40 million
 - **Margin** – competitive margin
 - **Availability** – drawn progressively Dec 2018-Feb 2019
 - **Repayment Schedule** – quarterly from Mar 2020-Dec 2021
 - **Loan Covenants and project ratios** – customary for this size of facility
- **Hedging**
 - For delivery between February 2019 and June 2021:
 - 7kt Ni with following profile:
 - FY2019 – 732t Ni at an average forward price of A\$8.48/lb
 - FY2020 – 2,086t Ni at an average forward price of A\$8.50/lb
 - FY2021 – 2,438t Ni at an average forward price of A\$8.52/lb
 - FY2022 – 1,744t Ni at an average forward price of A\$8.24/lb
 - 3kt Cu at average forward price of A\$3.71/lb
 - The volume of Ni and Cu hedged represents ~20% of contained metal produced



Official signing of the Savannah Financing Facility Documentation

Recent Milestones Achieved at Savannah

- **July 2018** - \$40M debt facility secured with Macquarie Bank and 4 year offtake secured with Sino Nickel/Jinchuan
- **November 2018** - Mine production commenced from the Savannah orebody
- **Mid December 2018** - First ore through the mill
- **Mid January 2019** - Mill throughput exceeding 2,000 tonnes ore per day with recoveries approaching 80% Ni, 90% Cu, 80% Co
- **Mid January 2019** - Savannah North ventilation rise pilot hole completed, reaming commenced
- **13 February 2019** - First concentrate shipment departed Wyndham Port



Operations at Savannah



MV Heemskerkgracht at Wyndham

Activities undertaken prior to re-start



Rehabilitation of Underground



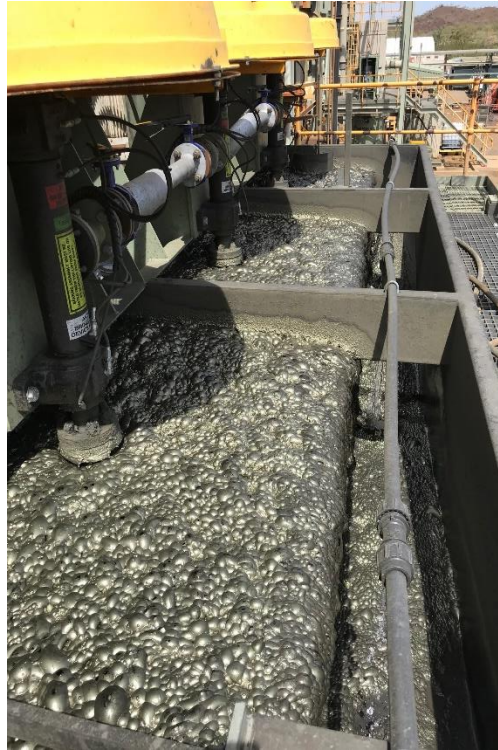
Refurbishment of tails thickener



Savannah North raise bore rig and platform



Tailings Dam 3 metre lift completed



Flotation cells in operation again



Refurbished SAG Mill

First Shipment away 14 February 2019



Wyndham Storage Facility - loading concentrate for shipment



Loading concentrate onto ship



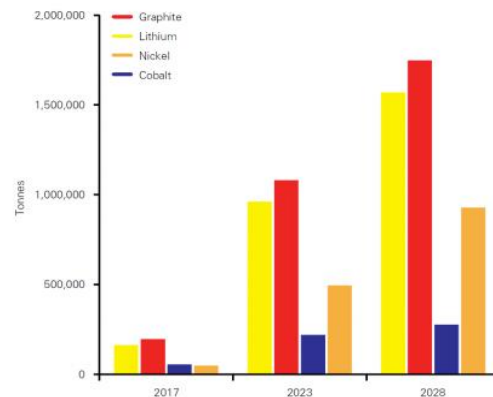
MV Heemskerkgracht at Wyndham

Nickel and cobalt demand outlook

Megafactories could up Ni demand in batteries 19 fold

- Lithium ion battery production capacity for the period 2019-2028 has risen from 289GWh to 1,549GWh, equivalent of 23-24M sedan-sized electric vehicles
- Current lithium ion battery megafactories under construction:
 - **2019 70 (46 based in China)**
 - **2017 17**
- Megafactories are being built almost exclusively to make lithium ion battery cells using two chemistries:
 - **nickel-cobalt-manganese (NCM); and**
 - **nickel-cobalt-aluminium (NCA).**
- **Nickel demand expected to rise by 19 times, and cobalt demand will rise four-fold between 2019-2028**

Lithium ion Battery Megafactory Raw Material Demand (tonnes) at 100% Utilisation Rate

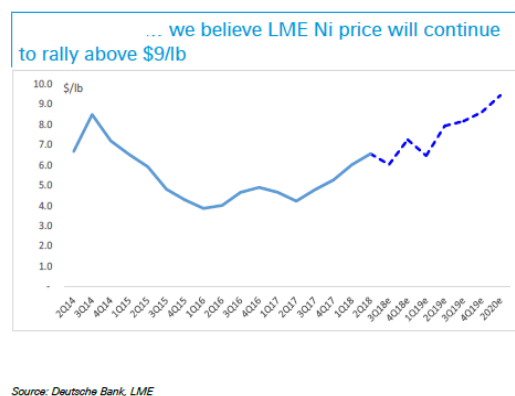
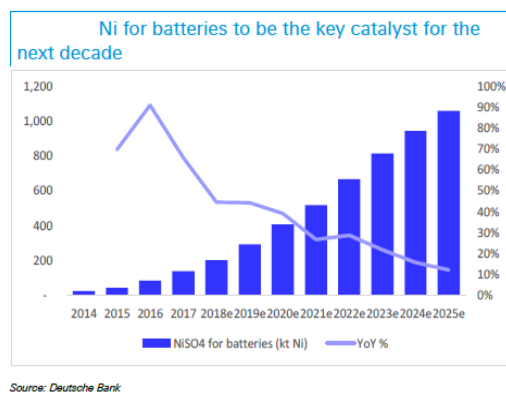
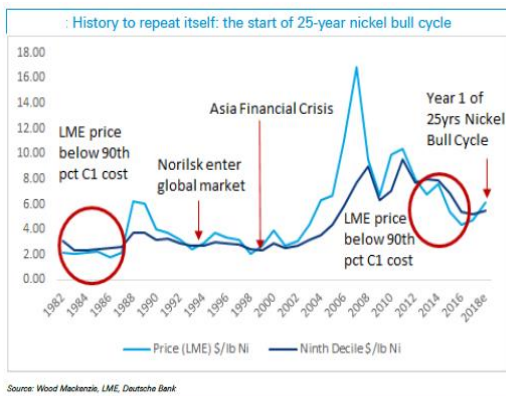


Source: Benchmark Mineral Intelligence

"Nickel demand from EV batteries is set to grow by between 30-40% a year, making it the fastest growing battery raw material."

Leveraged to Nickel Price

– is this the start of a 25 year Nickel Bull Cycle?



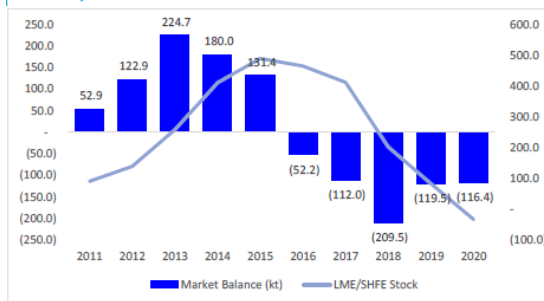
History to repeat itself: Year 1 of 25 year Nickel Bull Cycle – Deutsche Bank (Nov 18)

“Based on the study of historical nickel pricing in the past 37 years, 2018 will be the start of the 25 years Nickel Bull Cycle.

“We are now at the first year of a bull Nickel cycle, with the apparent shortage of high grade nickel products (class 1) while strong demand from Electric Vehicles' Batteries will be the strongest catalyst for years to come. History will likely repeat itself for another 25-year of Nickel Bull Cycle. We expect price to average US\$18k/t (US\$8/lb) in 2019”

Source: Deutsche Bank - Nov 2018

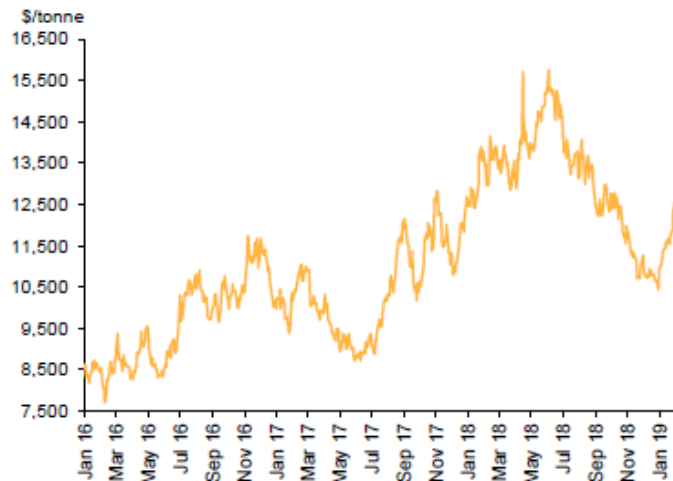
DB expects massive Ni S&D deficit over the next 3 years



Leveraged to Nickel Price

– Nickel price forecasts

LME nickel prices reverse



Source: LME, Macquarie Strategy, February 2019

Macquarie Nickel Price Forecast (Dec 18)

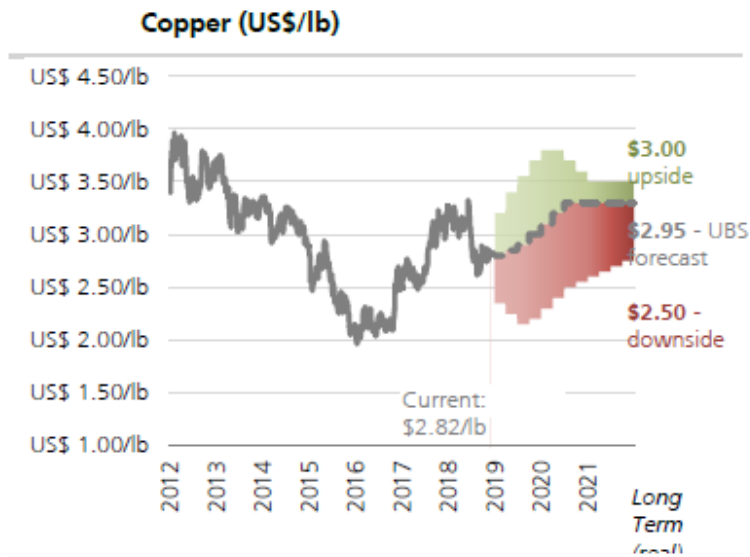
■	2019	\$ 7.98/lb
■	2020	\$ 8.92/lb
■	2021	\$ 9.36/lb
■	2022	\$10.18/lb
■	2023	\$10.76/lb

Nickel prices on the rebound – Macquarie Bank (Feb 19)

“Nickel remains the base metal with the largest deficit between supply and demand and a significant deficit should remain in place this year”

“Structurally higher use of secondary nickel in stainless steel is reducing the overall growth rates for nickel use in stainless but this is being offset by ongoing strong growth from nickel in batteries. Even though this remains a small application (3-4% of total nickel demand) it is growing rapidly (30-40% a year) due to the phenomenal growth in electric vehicles and increasing nickel intensity in lithium ion batteries.”

Leveraged to Copper Price



Source: Bloomberg & UBS estimates.

UBS Copper Price Forecasts (Dec 18)

- 2019 \$2.89/lb
- 2020 \$3.20/lb
- 2021 \$3.30/lb
- 2022 \$3.30/lb

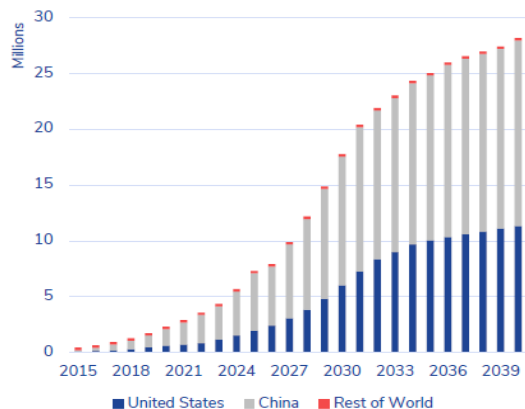
UBS Global IO Miners Price Review (Dec 18)

“Copper poised to lift trade war ceasefire & Chinese infrastructure stimulus:
China's demand eased through 1H18 but is set to lift through 2019e on China stimulus. Very low mine disruption has seen strong supply YTD. But scrap supply is being disrupted by China's moves to clean up imports.”

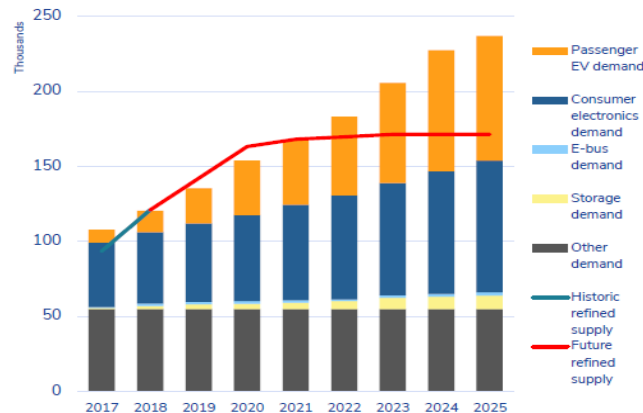
“China stimulus should keep the market tight & lift prices through 2019e”

Leveraged to Cobalt Price

Forecast Annual passenger EV sales by region



Cobalt Supply & Demand – Metric Tons



Macquarie Cobalt Price Forecasts

- 2018 \$33.00/lb
- 2019 \$17.80/lb
- 2020 \$18.50/lb
- 2021 \$24.30/lb
- 2022 \$36.50/lb

Cobalt 27 Capital Corp comments

- Cobalt demand in lithium-ion batteries forecast to grow from 105kt to 190kt by 2025 (30% CAGR)
- Supply currently concentrated in the DRC (68% of 2017 mine output)
 - Relatively politically unstable country
 - Lack of infrastructure
 - ~15% of DRC output from unregulated artisanal mining

Sources:

Macquarie Research – Mar 2018

Cobalt 27 Capital Corp - corporate presentation - Feb 2019

First Cobalt – Feb 2019

Nickel Price and FX Rate NPV Matrix for Savannah North

Strongly leveraged to nickel price and US\$:A\$



US\$1.00/lb increase in nickel price adds **~A\$160M** to pre-tax NPV



US\$0.05 cent decrease in the US\$:A\$ exchange rate adds **~A\$50M** to pre-tax NPV

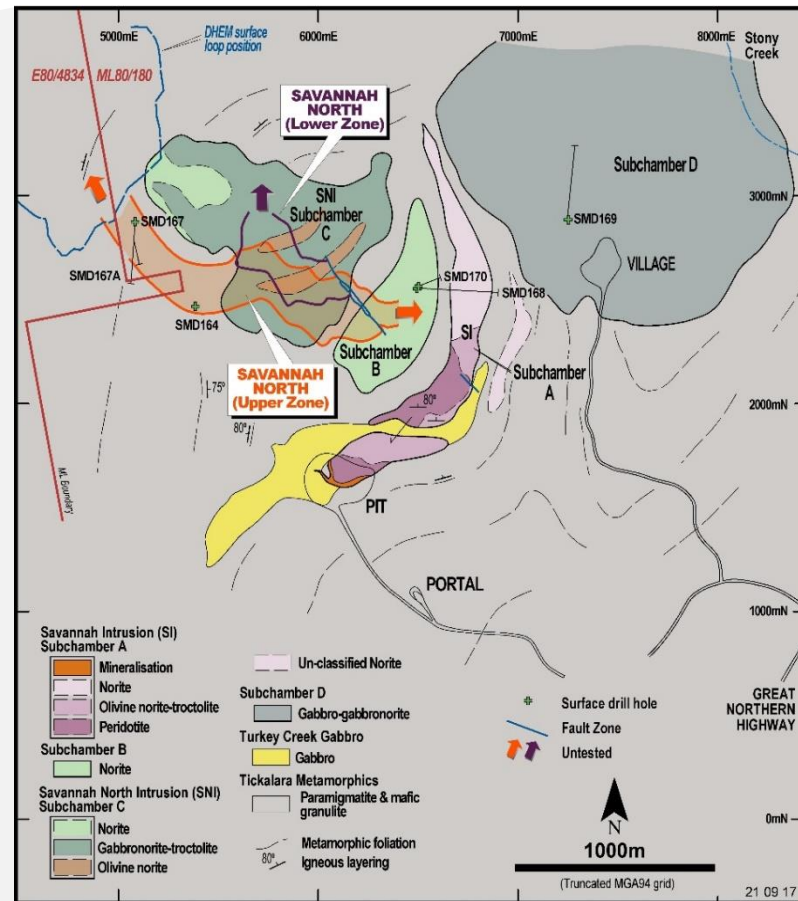
Based on updated Feasibility Study
October 2017

Pre-tax NPV ₈ (\$'M)		Nickel Price US\$/lb)					
		5.00	6.00	7.00	8.00	9.00	10.00
US\$:A\$ FX Rate	0.65	270	453	635	790	946	1,102
	0.70	207	377	546	690	835	979
	0.75	153	312	469	604	739	874
	0.80	105	254	401	528	654	781
	0.85	63	203	342	461	580	699



Leveraged to Savannah North Exploration Success

- **Resource open** - Savannah North Resource drilling programs have not closed off the mineralisation
- **Potential strike length of the Upper Zone is ~2km** based on the large, highly conductive on-hole EM responses identified in surface drill holes:
- SMD164, Section 5400mE
- SMD167 & SMD167A, Section 5100mE
- **Only half of the potential Upper Zone mineralisation has been tested by resource drilling**
- **The Lower Zone Resource remains open down dip to the northwest**



Savannah Plan showing major intrusions and Savannah North mineralisation trend

Savannah to deliver value to shareholders

RESOURCES

218,300t Ni
99,100t Cu
14,900t Co

- Savannah is a significant Australian base metal project
- Ore production commenced December 2018
- First shipment of bulk Savannah concentrate departed 13 February 2019

PROJECT FINANCIALS



Updated Oct 2017 Feasibility Study

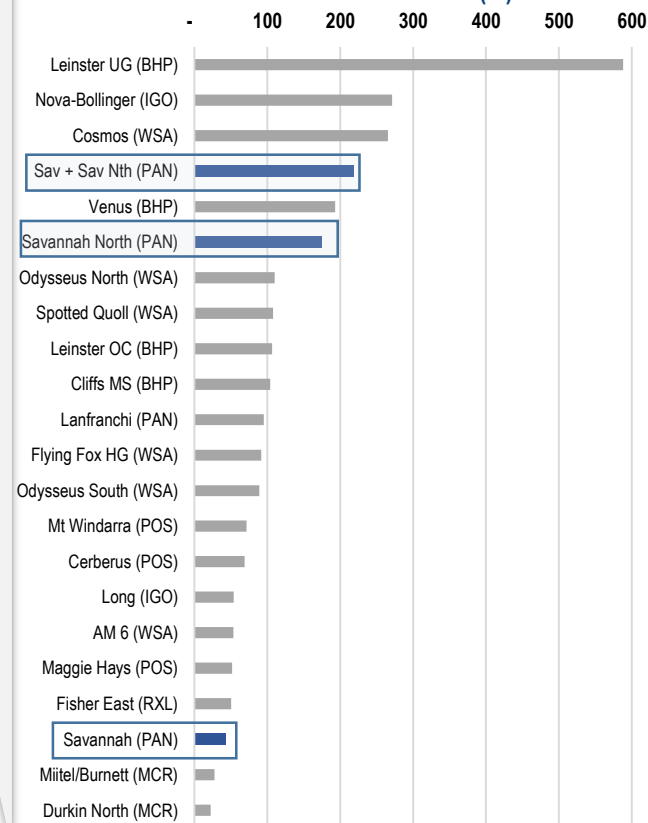
- +8 year mine life
- Robust at current commodity prices and US\$:A\$ FX
- Competitive operating **cash costs of US\$2.40/lb payable Ni**
- Highly leveraged to nickel, copper and cobalt prices

EXPLORATION



- Excellent potential for further exploration success and mine life extension

Selected Australian Medium to High Grade
Nickel Sulphide Deposits
Contained Nickel in Resource (kt)



OTHER ASSETS



Gum Creek Gold Project - 51% of Horizon Gold (ASX:HRN)

RESOURCE



PRODUCTION



EXPLORATION



IPO of Horizon, spun out from Panoramic

- Shares on issue 76.5M
- Market capitalisation \$13M
- Cash (31 December 2018) \$4.1M
- Panoramic interest 51%

Location - 640km NE of Perth, Western Australia

Historic production - >1Moz gold

Large Resource Base - 1.25Moz Au

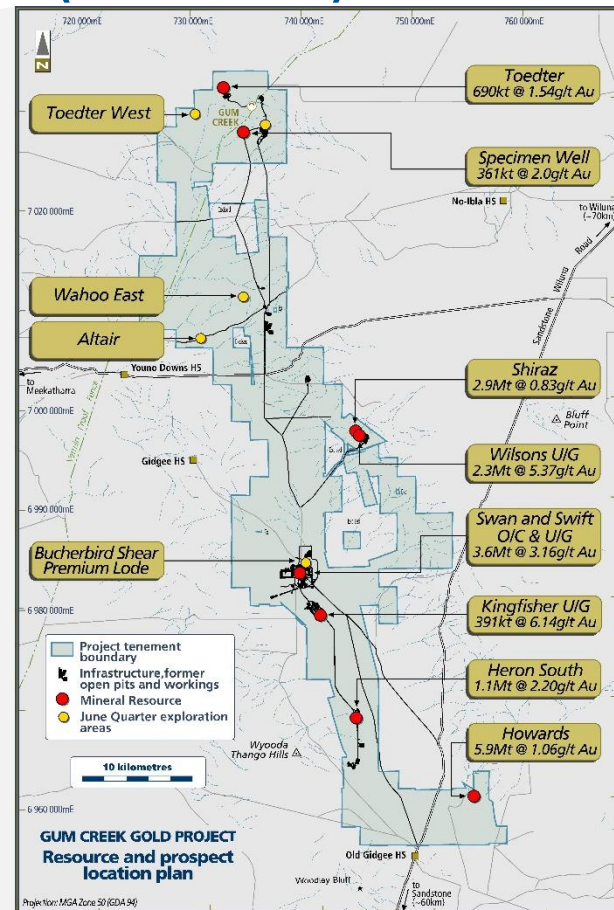
Large tenement package - 80km of strike length along the Gum Creek Greenstone belt

Exploration Targets

- Swan Premium 30,000oz to 100,000oz*
- Butcherbird Shear 270,000oz to 810,000oz*

Recent Exploration

- Butcherbird Shear 8m @ 19.7g/t Au**
- Altair 55m @ 3.32% Zn & 0.52% Cu***



Gum Creek Gold Project Resource and prospect location plan

Horizon Gold – Altair Zn prospect

History

- new structural and stratigraphic model commissioned by PAN, previous owners intersected broad zones of possible supergene Cu mineralisation

Geology

- volcanic-associated base metal sulphide style mineralisation with black shales & intermediate volcanics

Drilling by HRN

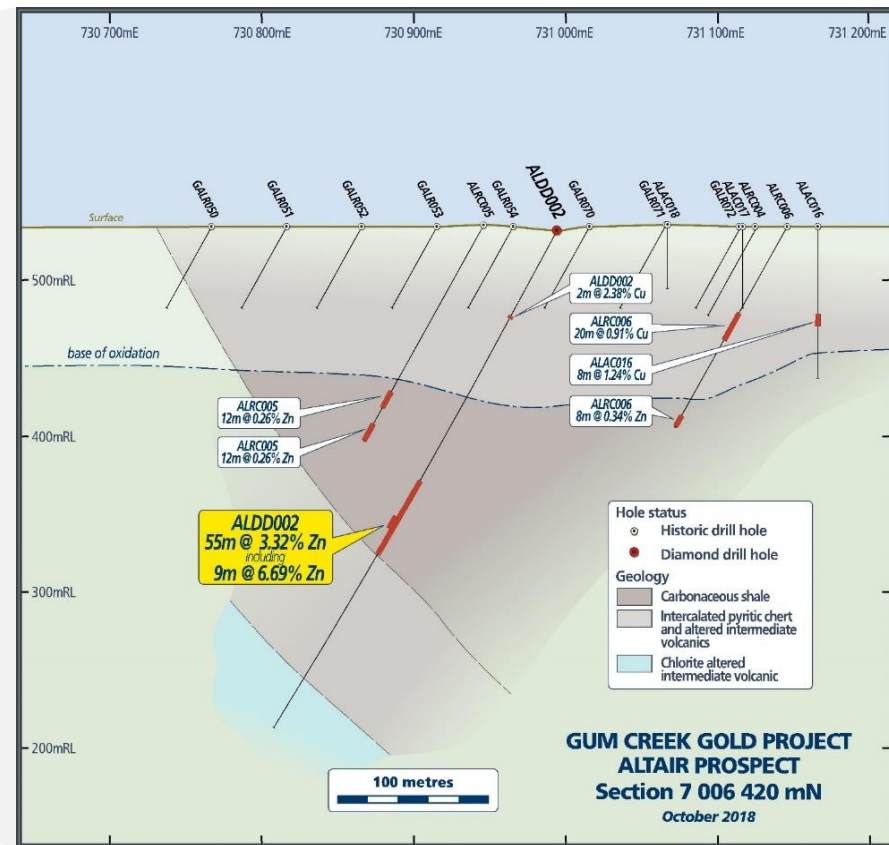
- 55m @ 3.32% Zn, 0.52% Cu from 184m;
*including 9m @ 6.69% Zn & 1.0% Cu (Hole ALDD002)**

Significance

- has the hallmarks of a polymetallic, hydrothermal VHMS/SEDEX mineralising event, being also anomalous in gold, silver, lead, cobalt, tin and other minor metals
- ALDD002 is well below the depth of all historical drilling and consequently the mineralisation is open in all directions

Further exploration

- 7 hole diamond program completed Dec 2018
- 10 hole program now underway



Gum Creek Gold Project – Altair Prospect

*Refer to HRN ASX Announcement dated 31 Oct 2018

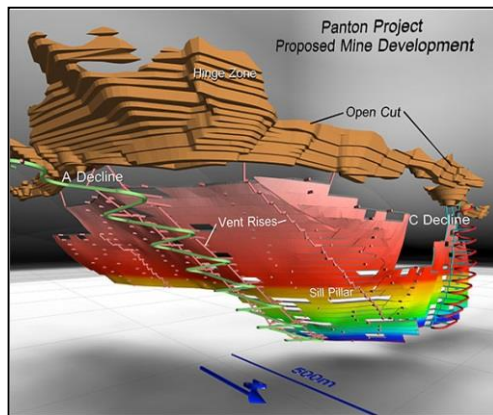
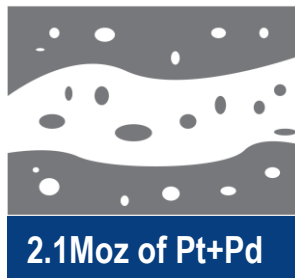
Panton

- Located 60km from Savannah
- BFS completed by previous owners

Recent positive test work by Panoramic

- Improved recovery and higher grade PGM concentrate
- Potential for Cr by-product
- Further testwork required to confirm Cr concentrate
- Scoping Study next step

RESOURCE



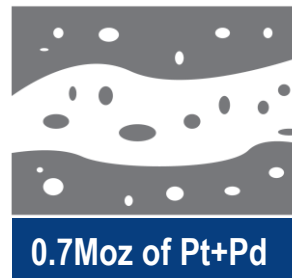
Thunder Bay North

- Located in Ontario, Canada
- PEA completed by previous owner

Rio Tinto earn in and JV option

- Consolidates PAN's Thunder Bay North Project and Rio's Escape Lake Project
- Rio spending up to C\$20M over 5½ years to earn 70% interest
- Rio has exceeded minimum expenditure commitment
- Discussions ongoing with Rio regarding future strategy

RESOURCE



FY2019 Goals

**Ramp up Production
from Savannah**

**Study value adding
options for Savannah**

**Further drilling at
Savannah North**



Operate safely

Advance PGM projects

Make a difference

APPENDICES





1. INFERRED RESOURCES IN SAVANNAH MINE PLAN

Material in Updated Savannah FS mine plan

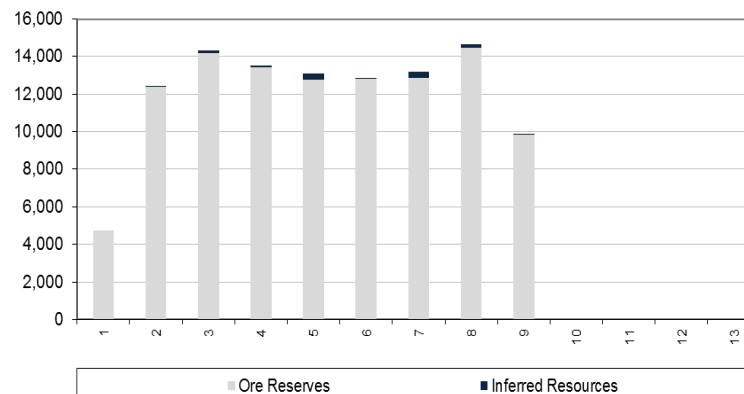
Classification	Tonnage Mt	Grade Ni%	Grade Cu%	Grade Co%	Contained Ni (t)	Contained Cu (t)	Contained Co (t)
Ore Reserves	7.58	1.42	0.68	0.09	107,500	51,200	7,200
Inferred Resource	0.06	1.91	0.69	0.13	1,200	400	100
Total	7.65	1.42	0.68	0.10	108,700	51,700	7,300

The Updated FS mine plan has only ~1.1% material classified as Inferred Resource

Cautionary Statement

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.

Contained Nickel in Mining Plan by JORC Category (tonnes per year)





2. RESOURCES AND RESERVES

No New Information or Data

The Mineral Resource and Ore Reserve estimates tabled below have been previously reported, and the relevant market announcements cross referenced. 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 and Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

Nickel, Copper, Cobalt – Resources at 30 June 2018

Resource	Equity	Metal	JORC Compliance	Measured		Indicated		Inferred		Total		Metal Tonnes
				Tonnes	(%)	Tonnes	(%)	Tonnes	(%)	Tonnes	(%)	
Savannah Project												
Savannah (above 900)	100%	Nickel	2012	1,275,000	1.51	759,000	1.20	-	-	2,034,000	1.39	28,300
		Copper			0.87		0.90		-		0.88	17,900
		Cobalt			0.07		0.07		-		0.07	1,400
Savannah (below 900)	100%	Nickel	2012	780,000	1.64	125,000	1.72	-	-	905,000	1.65	14,900
		Copper			0.76		0.75		-		0.76	6,900
		Cobalt			0.10		0.09		-		0.10	900
Savannah North (Upper)	100%	Nickel	2012	-	-	4,229,000	1.64	1,759,000	1.25	5,987,000	1.53	91,300
		Copper			-		0.65		0.49		0.60	36,100
		Cobalt			-		0.12		0.10		0.11	6,800
Savannah North (Lower)	100%	Nickel	2012	-	-	2,697,000	1.96	853,000	2.02	3,549,000	1.97	70,100
		Copper			-		0.98		0.93		0.97	34,400
		Cobalt			-		0.14		0.13		0.14	4,900
Savannah North (Other)	100%	Nickel	2012	-	-	242,000	2.22	493,000	1.67	735,000	1.85	13,600
		Copper			-		0.50		0.53		0.52	3,800
		Cobalt			-		0.14		0.11		0.12	900
Lanfranchi Project												
Cruikshank	100%	Nickel	2004	-	-	2,018,000	1.42	611,000	0.79	2,629,000	1.28	33,600
Deacon	100%	Nickel	2012	89,000	2.99	-	-	134,000	1.70	224,000	2.22	5,000
Gigantus	100%	Nickel	2004	-	-	-	-	652,000	1.63	652,000	1.63	10,600
Helmut South Ext	100%	Nickel	2012	21,000	4.54	29,000	2.87	-	-	50,000	3.59	1,800
John	100%	Nickel	2004	-	-	-	-	291,000	1.42	291,000	1.42	4,100
Lanfranchi	100%	Nickel	2012	40,000	4.12	55,000	4.40	63,000	3.49	158,000	3.97	6,300
Martin	100%	Nickel	2012	-	-	47,000	3.58	7,000	4.16	54,000	3.66	2,000
McComish	100%	Nickel	2004	-	-	-	-	992,000	1.49	992,000	1.49	14,800
Metcalfe	100%	Nickel	2012	-	-	280,000	1.99	111,000	1.35	391,000	1.81	7,100
Schmitz	100%	Nickel	2012	30,000	4.92	23,000	3.93	16,000	2.95	69,000	4.14	2,900
Lower Schmitz	100%	Nickel	2012	-	-	51,000	5.60	79,000	4.80	131,000	5.11	6,700
Winner	100%	Nickel	2004	-	-	14,000	4.40	-	-	14,000	4.40	600
Total (Equity)		Nickel										313,600
		Copper										99,100
		Cobalt										14,900

Nickel, Copper, Cobalt – Resources at 30 June 2018

Qualifying Statement and Notes

Notes:

- *Figures have been rounded and therefore may not add up exactly to the reported totals*
- *All resources are inclusive of reserves*
- *Savannah Project Resource cutoff grade is 0.50% Ni*
- *Lanfranchi Project Resource cutoff grade is 1.00% Ni*

Cross references to previous Company ASX announcements:

- *Savannah (above 900) - refer to ASX announcement of 30 September 2016, titled "Mineral Resources and Ore Reserves at 30 June 2016"*
- *Savannah (below 900) - refer to ASX announcement of 30 September 2015, titled "Mineral Resources and Ore Reserves at 30 June 2015"*
- *Savannah North – refer to ASX announcement of 24 August 2016, titled "Major Resource Upgrade for Savannah North"*
- *Cruickshank - refer to ASX announcement of 28 April 2011, titled "Cruickshank Resource Upgraded 26% to 33,560t Ni"*
- *Deacon, Helmut South Ext, Lanfranchi, Metcalfe - refer to ASX announcement of 30 September 2016, titled "Mineral Resources and Ore Reserves at 30 June 2016"*
- *Gigantus, John, McComish, Winner - refer to ASX announcement of 12 October 2011, titled "Business Review 2011"*
- *Martin - refer to ASX announcement of 13 September 2013, titled "Resources and Reserves at 30 June 2013 and Exploration Update"*
- *Schmitz - refer to ASX announcement of 30 September 2015, titled "Mineral Resources and Ore Reserves at 30 June 2015"*
- *Lower Schmitz - refer to ASX announcement of 28 April 2016, titled "Quarterly Report for the period ending 31 March 2016"*

No New Information or Data

The Mineral Resource estimates tabled above have been previously reported, and the relevant market announcements cross referenced. 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.

Nickel, Copper, Cobalt – Reserves at 30 June 2018

Reserve	Equity	Metal	JORC Compliance	Proven		Probable		Total		Metal Tonnes
				Tonnes	(%)	Tonnes	(%)	Tonnes	(%)	
Savannah Project										
Above 900 Fault	100%	Nickel	2012	1,365,000	1.15	194,000	1.24	1,558,000	1.16	18,100
		Copper			0.66		1.28		0.74	11,500
		Cobalt			0.06		0.07		0.06	900
Savannah North	100%	Nickel	2012	-	-	6,650,000	1.24	6,650,000	1.42	94,500
		Copper			-		1.28		0.61	40,900
		Cobalt			-		0.10		0.10	6,700
Lanfranchi Project										
Deacon	100%	Nickel	2012			42,000	2.67	42,000	2.67	1,100
Metcalfe	100%	Nickel	2012			113,000	1.57	113,000	1.57	1,800
Lanfranchi	100%	Nickel	2012			11,000	2.56	11,000	2.56	300
Schmitz	100%	Nickel	2012			15,000	2.96	15,000	2.96	500
Helmut Sth Ext	100%	Nickel	2012			27,000	2.19	27,000	2.19	600
Total (Equity)		Nickel								116,800
		Copper								52,400
		Cobalt								7,600

Notes:

- Figures have been rounded and therefore may not add up exactly to the reported totals
- Savannah Project Reserve cutoff grade is 0.80% Ni
- Lanfranchi Project Reserve cutoff grade is 1.00% Ni except for airleg mining which is 2.00% Ni

Cross references to previous Company ASX announcements:

- Refer to ASX announcement of 30 September 2016, titled "Mineral Resources and Ore Reserves at 30 June 2016"
- Refer to ASX announcement of 2 February 2017, titled "Savannah Feasibility Study. Ten year life with minimal restart capital requirements"

No New Information or Data

The Nickel Ore Reserve estimates tabled above have been previously reported, and the relevant market announcements cross referenced. 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 the estimates of Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed

Platinum Group Metals – Resources at 30 June 2018

Resource	Equity	JORC Compliance	Tonnage	Grade									Contained Metal	
				Pt (g/t)	Pd (g/t)	Rh (g/t)	Au (g/t)	Ag (g/t)	Cu (%)	Ni (%)	Co %	Pt-Eq (g/t)	Pt (oz ,000)	Pd (oz ,000)
Thunder Bay North														
Open Pit	100%	2004												
Indicated			8,460,000	1.04	0.98	0.04	0.07	1.50	0.25	0.18	0.014	2.13	283	267
Inferred			53,000	0.96	0.89	0.04	0.07	1.60	0.22	0.18	0.014	2.00	2	2
Underground	100%	2004												
Indicated			1,369,000	1.65	1.54	0.08	0.11	2.60	0.43	0.24	0.016	3.67	73	68
Inferred			472,000	1.32	1.25	0.06	0.09	2.10	0.36	0.19	0.011	2.97	20	19
Sub-total – Thunder Bay North (Equity)			10,354,000	1.13	1.07								377	355
Panton														
Top Reef	100%	2012												
Measured			4,400,000	2.46	2.83	-	0.42	-	0.08	0.28	-	-	348	400
Indicated			4,130,000	2.73	3.21	-	0.38	-	0.09	0.31	-	-	363	426
Inferred			1,560,000	2.10	2.35	-	0.38	-	0.13	0.36	-	-	105	118
Middle Reef	100%	2012												
Measured			2,130,000	1.36	1.09	-	0.10	-	0.03	0.18	-	-	93	75
Indicated			1,500,000	1.56	1.28	-	0.10	-	0.04	0.19	-	-	75	62
Inferred			600,000	1.22	1.07	-	0.10	-	0.05	0.19	-	-	24	21
Sub-total – Panton (Equity)			14,320,000	2.19	2.39								1,008	1,102
Total - PGM (Equity)													1,385	1,456

Platinum Group Metals – Resources at 30 June 2018

Qualifying Statements and Notes

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Thunder Bay North Open Pit Resource: The open pit Mineral Resource is reported at a cut-off grade of 0.59 g/t Pt-Eq within a Lerchs-Grossman resource pit shell optimized on Pt-Eq. The strip ratio (waste:ore) of this pit is 9.5:1. The platinum-equivalency formula is based on assumed metal prices and overall recoveries. The Pt-Eq formula is: $\text{Pt-Eq g/t} = \text{Pt g/t} + \text{Pd g/t} \times 0.3204 + \text{Au g/t} \times 0.6379 + \text{Ag g/t} \times 0.0062 + \text{Cu g/t} \times 0.00011 + \text{Total Ni g/t} \times 0.000195 + \text{Total Co g/t} \times 0.000124 + \text{Rh g/t} \times 2.1816$. The conversion factor shown in the formula for each metal represents the conversion from each metal to platinum on a recovered value basis. The assumed metal prices used in the Pt-Eq formula are: Pt US\$1,595/oz, Pd US\$512/oz, Au US\$1,015/oz, Ag US\$15.74/oz, Cu US\$2.20/lb, Ni US\$7.71/lb, Co US\$7.71/lb and Rh US\$3,479/oz. The assumed combined flotation and Platsol™ process recoveries used in the Pt-Eq formula are: Pt 76%, Pd 75%, Au 76%, Ag 55%, Cu 86%, Ni 44%, Co 28% and Rh 76%. The assumed refinery payables are: Pt 98%, Pd 98%, Au 97%, Ag 85%, Cu 100%, Ni 100%, Co 100% and Rh 98%.

Thunder Bay North Underground Resource: The underground mineral resource is reported at a cut-off grade of 1.94g/t Pt-Eq. The Pt-Eq formula is: $\text{Pt-Eq g/t} = \text{Pt g/t} + \text{Pd g/t} \times 0.2721 + \text{Au g/t} \times 0.3968 + \text{Ag g/t} \times 0.0084 + \text{Cu g/t} \times 0.000118 + \text{Sulphide Ni g/t} \times 0.000433 + \text{Sulphide Co g/t} \times 0.000428 + \text{Rh g/t} \times 2.7211$. The assumed metal prices used in the Pt-Eq formula are: Pt US\$1,470/oz, Pd US\$400/oz, Rh US\$4,000/oz, Au US\$875/oz, Ag US\$14.30/oz, Cu US\$2.10/lb, Ni US\$7.30/lb and Co US\$13.00/lb. The assumed process recoveries used in the Pt-Eq formula are: Pt 75%, Pd 75%, Rh 75%, Au 50%, Ag 50%, Cu 90%, and Ni and Co in sulphide 90%. The assumed smelter recoveries used in the Pt-Eq formula are Pt 85%, Pd 85%, Rh 85%, Au 85%, Ag 85%, Cu 85%, Ni 90% and Co 50%. Ni and Co in sulphide were estimated by linear regression of MgO to total Ni and total Co respectively. The regression formula for Ni in sulphide (NiSx) is: $\text{NiSx} = \text{Ni} - (\text{MgO}\% \times 60.35 - 551.43)$. The regression formula for Co in sulphide (CoSx) is: $\text{CoSx} = \text{Co} - (\text{MgO}\% \times 4.45 - 9.25)$.

Cross references to previous ASX announcements:

- Thunder Bay North Open Pit Resources – refer to Magma Metals Limited (ASX:MMW) announcement of 7 February 2011, titled “Positive Scoping Study for Thunder Bay North Project”
- Thunder Bay North Underground Resources – refer to Magma Metals Limited (ASX:MMW) announcement of 23 February 2012, titled “Magma Metals Increases Mineral Resources at TBN to 790,000 Platinum-Equivalent Ounces”
- Panton - refer to the Company’s ASX announcement of 30 September 2015, titled “Mineral Resources and Ore Reserves at 30 June 2015”

No New Information or Data

The Mineral Resource estimates tabled above have been previously reported, and the relevant market announcements cross referenced. 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.