

# Back in Production

## Paydirt Australian Nickel Conference

15 October 2019



## **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.

# Agenda

Creating long-term value for  
shareholders



Corporate

Savannah

Gold

PGMs

Summary

Resources and Reserves

# Corporate Overview

Index	S&P/All Ordinaries
ASX Ticker	ASX: PAN
Shares on issue	654.2M
Share Price	\$0.31 (14 October 19)
<b>Market Cap</b>	<b>~\$203M</b>
Cash	\$20.2M (30 September 2019)
Listed Investments	~\$13M (Horizon Gold, GME, others)
Bank debt	\$20M (as at 30 September 2019)
<b>Enterprise Value</b>	<b>~\$183M</b>



30-day average daily volume	~1.3M
90-day average daily volume	~1.2M
52 week Low-High	\$0.275 - \$0.555

## BOARD



Brian Phillips  
Non-Exec Chairman



Peter Harold  
Managing Director



Peter Sullivan  
Non Exec Director



Rebecca Hayward  
Non Exec Director



Nicholas Cernotta  
Non-Exec Director

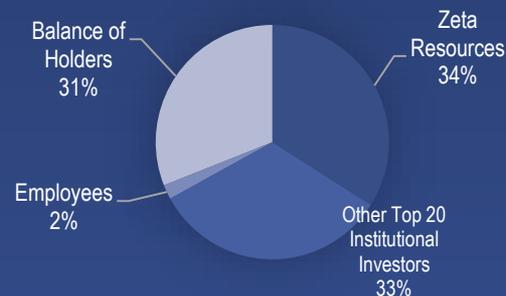


Gillian Swaby  
Non-Exec Director



Trevor Eton  
CFO/Co Secretary

## SHAREHOLDER COMPOSITION

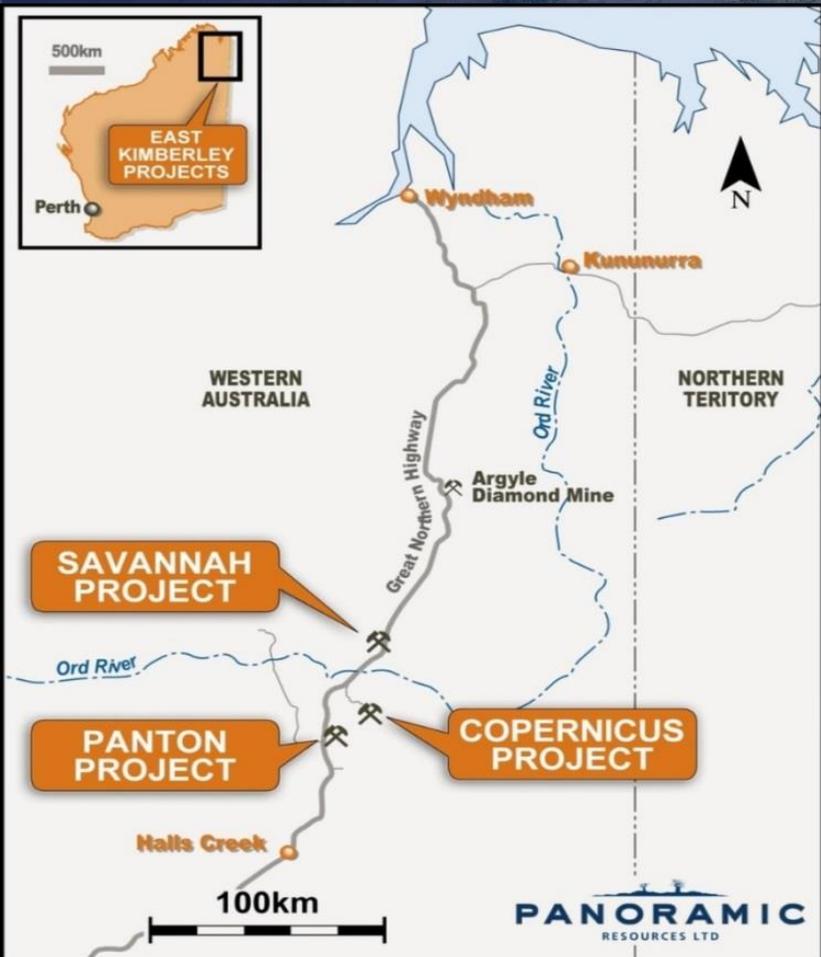


# SAVANNAH

Nickel – Copper – Cobalt



# Savannah - Summary



## Resources\*

- 217,000t Ni
- 100,100t Cu
- 14,800t Co

## Reserves\*

- 110,400t Ni
- 51,200t Cu
- 7,500t Co

## Project Milestones

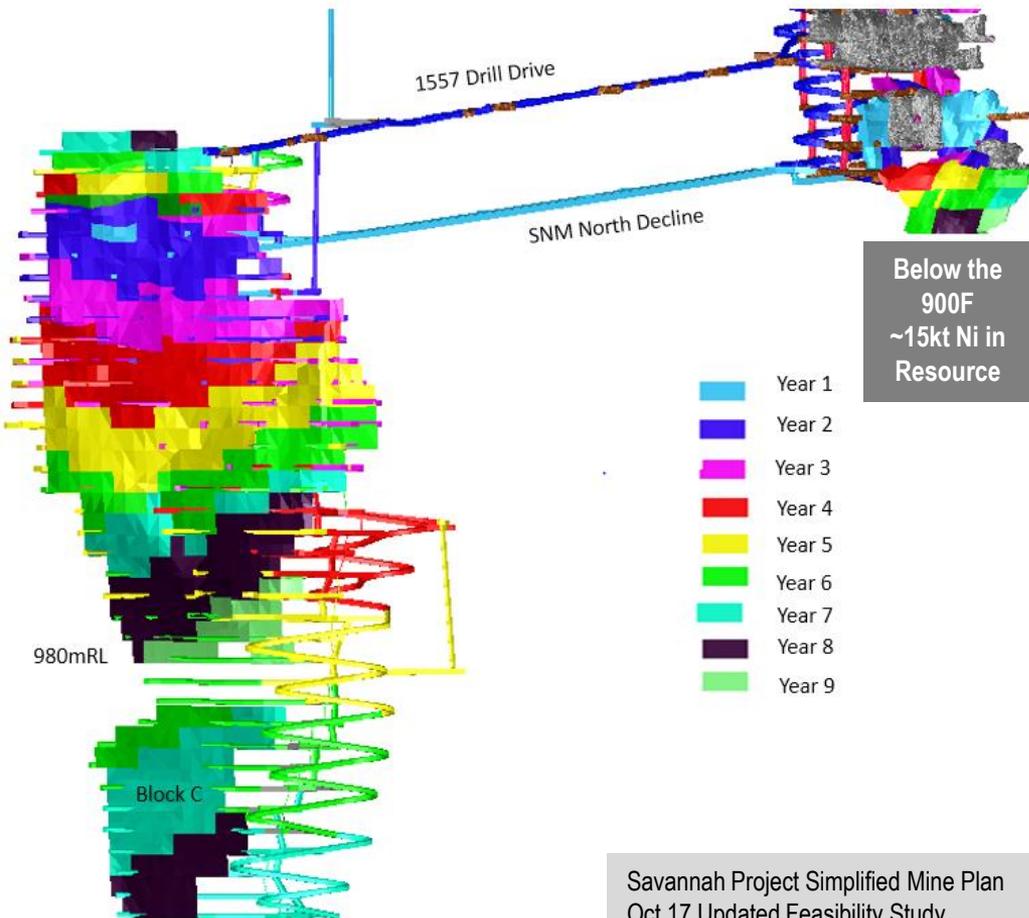
- Jul 18 - Re-start decision made
- Dec 18 - Recommissioned mine and mill
- Feb 19 - First concentrate shipment
- Jul 19 - Improved performance in June qtr<sup>1</sup>
- Sept 19 - Reduced Bank Debt to \$20M
- Sept 19 - Better than expected infill drilling
- **Nov 19 - First Savannah North ore expected**

## Infrastructure

- Underground mine
- 1Mtpa processing plant (SAG mill and conventional flotation)
- Mobile mining fleet
- 200 person village
- Tailings storage facility
- 12 MW power station (owned by CPM/Pacific Energy)
- Storage facilities in Wyndham
- Other associated infrastructure

\*Refer Resources and Reserves Tables 30 June 2019

<sup>1</sup> Whilst performance improved in the June 2019 quarter, production was under budget in the September quarter



Savannah Project Simplified Mine Plan  
Oct 17 Updated Feasibility Study

## Savannah Orebody

- Forecast mine production of **1.68Mt @ 1.18% Ni for 19,800t Ni contained\***
- Started mining Savannah ore in Dec 2018
- Resources below 900 Fault not included in mine plan (**0.90Mt @ 1.65% Ni for 14,900t Ni**)

## Savannah North Orebody

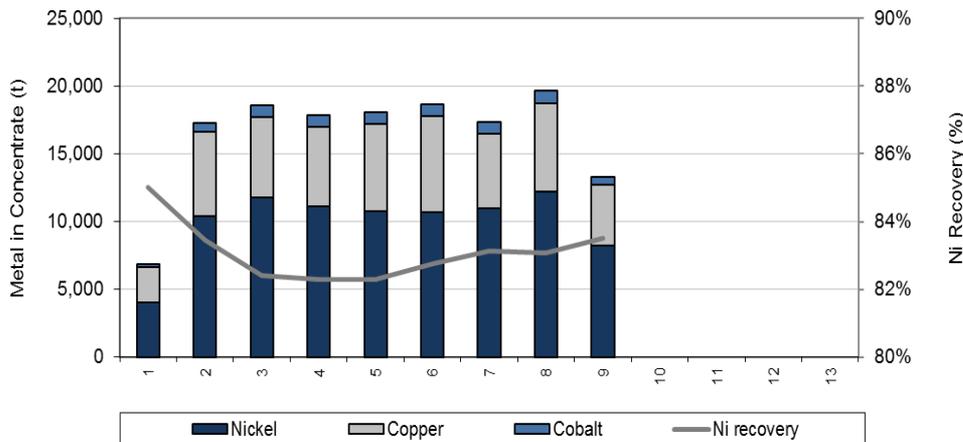
- Forecast mine production of **5.97Mt @ 1.49% Ni for 88,900t Ni contained\***
- Development of twin decline well advanced
- 900 metre ventilation shaft construction progressing
- First ore production scheduled for Q42019

### 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"*

Metal in Concentrate (tonnes per year)



## Production Profile

### 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 from Savannah North\*

- 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

\*Based on Oct 17 Feasibility Study



## Highly Marketable Ni-Cu-Co Concentrate

- **Term** - Four years, Feb 2019 – Feb 2023
- **Buyer** - Sino Nickel (JV between Jinchuan and Sino Mining)
- **Quantity** - 100% pa
- **Metal Payabilities** - improved payabilities for certain contained metals compared to previous Sales 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 nickel and copper
    - agreed % of Metal Bulletin (MB) cobalt price

## ▪ **Project Loan - March 2019<sup>1</sup>**

- **Debt** – A\$30 million Senior, A\$10 million Mezzanine
- **Margin** – competitive margins for each debt style
- **Availability** – fully drawn
- **Repayment Schedule** – quarterly from Jun 2020-Dec 2021
- **Loan Covenants and project ratios** – applies to Senior debt only
- **1<sup>st</sup> Mandatory Hedging** – 7kt Ni at average forward price of A\$8.44/lb, 3kt Cu at average forward price of A\$3.71/lb
- **2<sup>nd</sup> Mandatory Hedging** – 1,560t Ni at average forward price of A\$8.15/lb

## ▪ **Restructured Project Loan - September 2019<sup>2</sup>**

- **Debt** – Facility A1 (Senior) - A\$20 million
- **Margin** – Competitive margin
- **Repayment Schedule** – Quarterly from Sept 2020-Mar 2022 (rolled out one quarter)
- **Loan Covenants and project ratios** – Debt Service Cover Ratio removed
- **Minimum Project Liquidity Amount** – A\$7.5 million minimum removed until mid 2020, then one month operating costs
- **No additional hedging required** - existing hedging rolled to FY2021/22 to match the new loan repayment profile

<sup>1</sup>Refer Company ASX Announcement dated 6 March 2019

<sup>2</sup>Refer Company ASX Announcement dated 3 September 2019



# September 2019 Quarter Results

## Safety

Continued improvement in performance  
**No LTIs**

## Development

↑ **21%\***  
1,054m

## Ore Mined

↓ **16%\***  
119,334t  
1.24% Ni, 0.70% Cu & 0.06% Co

## Ore Milled

↓ **14%\***  
120,771t  
1.31% Ni, 0.76% Cu & 0.06% Co

## Metallurgical Recoveries On Target

85.1% Ni, 93.1% Cu & 88.5% Co

## Metal Production

Ni ↓ **12%\***, Cu ↑ **6%\***  
1,342t Ni, 855t Cu & 64t Co  
in concentrate

## Concentrate Shipped

↓ **27%\***  
15,734dmt

## Savannah North Development

Twin declines only 70m from  
orebody, first ore Nov 19

## Nickel Price

has rallied strongly on  
Indonesian export ban  
spot >US\$8/lb



## Development

- Twin Declines
  - within 70m of Savannah North orebody
- Mining Savannah North
  - development ore from Savannah North in November 2019
  - producing from stopes early in the March 2020 quarter

## ~900m Ventilation Shaft

- **Advance Rate** - Raisebore advancement improved significantly since the reamer head diameter was reduced to 4.1m in May 2019
- **Progress**

▪ end September 2019	327m (37% complete)
▪ remaining	564m
▪ completion	June 2020 quarter

## Ventilation Requirements

- Independent ventilation consultants have confirmed that there is sufficient capacity within existing ventilation system to meet forecast production rates for FY2020



## Mining the Savannah Orebody

- Significantly improved June 2019 quarter averaging 47kt/month
- Below forecast September quarter averaging ~40kt/month (budget 60kt) due to:
  - Equipment availability
  - Bridging of ore in some stopes
  - Localised seismic event in July
  - Tight labour market

## Improvement Plan

- Repair/replace underperforming mobile equipment
- More waste rock fill and cemented rock fill
- Gain access to 1490 level, 150kt ore
- Fill remaining vacancies of the permanent workforce



## Processing Plant

- **Nickel** - recoveries now on target, 85% Ni, 93% Cu and 89% Co
- **Paste** – paste plant and reticulating system performing as required
- **Paste Delivery** - contractor engaged to facilitate catch up backlog of paste fill

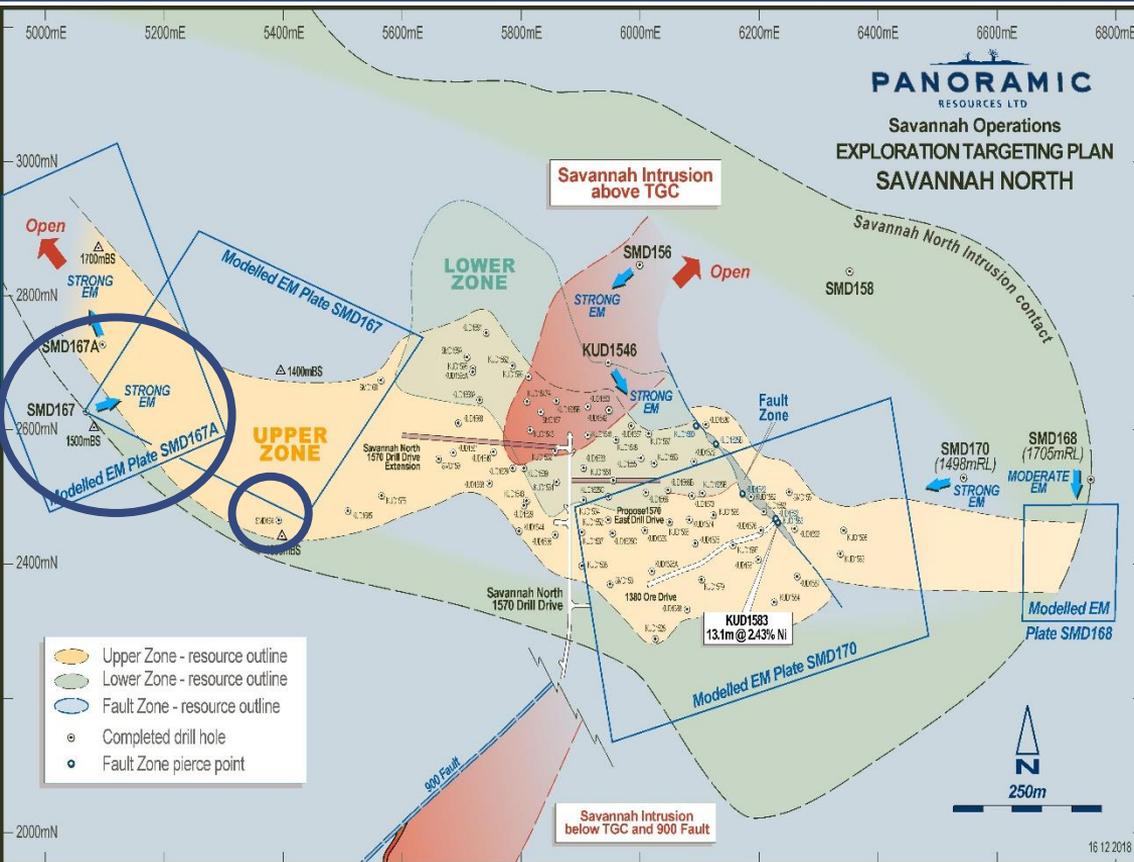
## Concentrate Shipping and Revenue

- **Shipments** - regular monthly basis averaging 5-8,000 wmt ramping up to >10,000 wmt from January 2020
- **Enhanced Revenue**
  - nickel and cobalt price rally has increased sales revenue
  - positive quotational period (QP) pricing adjustments

## FY2020 Production Guidance

- **Nickel**      **9,500 – 10,000t**
- **Copper**     **5,500 – 6,000t**
- **Cobalt**      **600 – 650t**

# Significant Exploration Upside



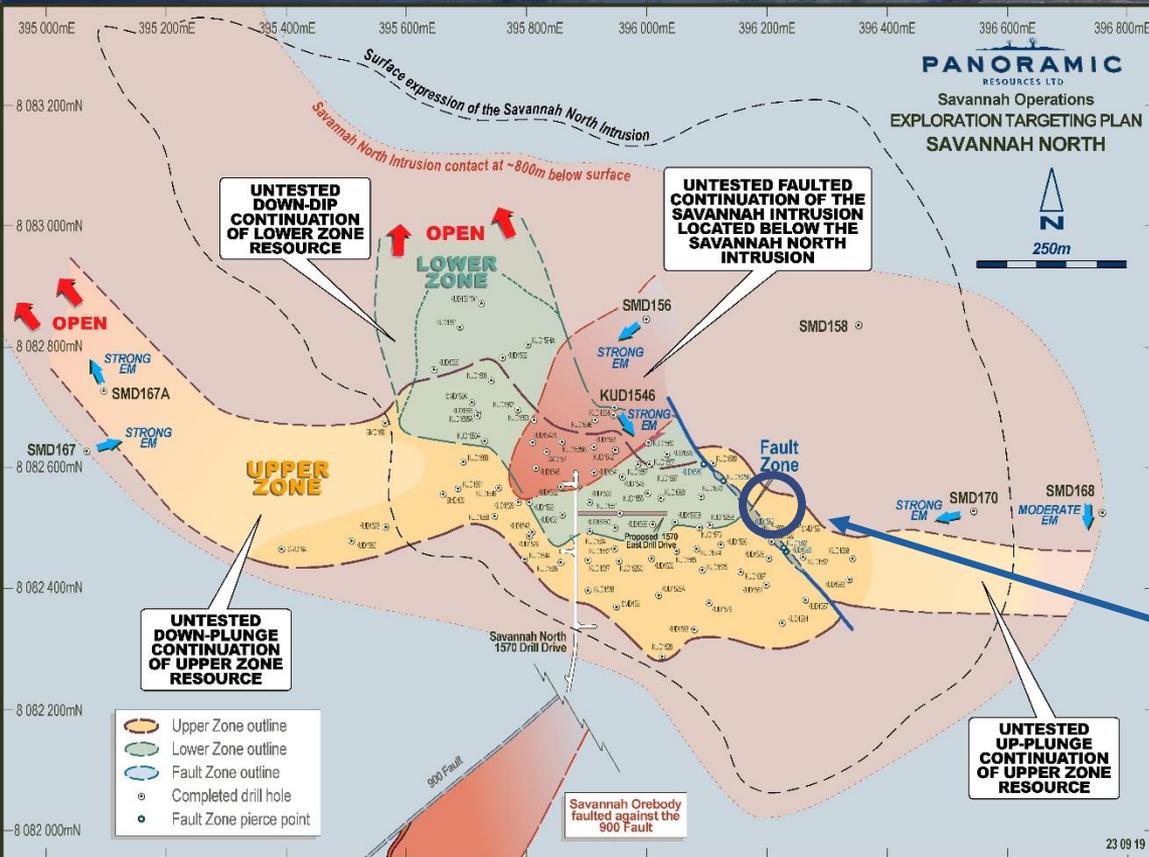
## Committed to growth through exploration

### Opportunities to increase the Resource base:

- **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<sup>1</sup>
  - SMD167 & SMD167A, Section 5100mE<sup>2</sup>

1. Refer Company ASX announcement dated 28 October 2015, titled "Quarterly Report for the Period Ending 30 September 2015"  
 2. Refer Company ASX announcement dated 31 January 2017, titled "Quarterly Report for the Period Ending 31 December 2016"  
 3. Refer Company ASX announcement dated 10 October 2019, titled "Savannah North Drilling and Development Update"

# Significant Exploration Upside



## Committed to growth through exploration

### Opportunities to increase the Resource base:

- Only half of the potential Upper Zone mineralisation has been tested and remains open up-plunge to the east and down-plunge to the west
- Recent drill intercepts from up-plunge to the east<sup>3</sup> returned:
  - KUD1637 5.90m at 2.31% Ni
  - KUD1639 6.30m at 2.14% Ni
- The Lower Zone Resource remains open down dip to the northwest
- **Significant potential to increase mine life**

1. Refer Company ASX announcement dated 28 October 2015, titled "Quarterly Report for the Period Ending 30 September 2015"  
 2. Refer Company ASX announcement dated 31 January 2017, titled "Quarterly Report for the Period Ending 31 December 2016"  
 3. Refer Company ASX announcement dated 10 October 2019, titled "Savannah North Drilling and Development Update"

# Goldman Sachs lifts nickel price forecast to US\$22,000 as supply woes continue

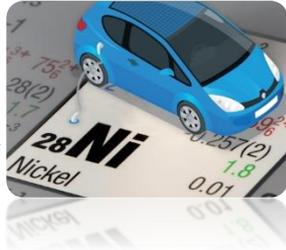
By Lorna Nicholas - September 5, 2019



Goldman Sachs has raised its 12-month price forecast for nickel due to supply concerns over Indonesia's imminent

## NICKEL PRICE OUTLOOK

# Nickel: A Market On The Cusp Of Change



EV Batteries  
5%

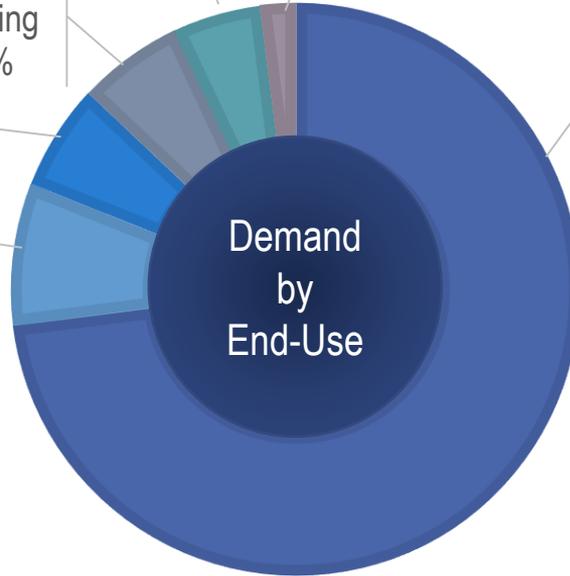
Other  
2%

Plating  
6%

Special Steel  
6%

Alloys  
8%

Stainless Steel  
73%



Nickel demand from EVs expected to exceed nickel production from existing operations

- Stainless steel remains the main driver of nickel demand
- EV battery demand to become the primary driver
- Forecast nickel use in batteries to grow >9% by 2023 then strong growth, not only in the number of EVs that are expected to be produced, but also in the nickel intensity of individual batteries

CRU Group Principal Consultant  
Alex Laugharne

EV/Energy Revolution a Major Disruptive Event

# Nickel price rallies to 5 year highs

- Nickel staged one of the biggest rallies this decade in London as an Indonesian official confirmed the country will push ahead with a ban on exports of raw ore from the end of December 2019.
- LME Futures surged as much as 8.8% to a fresh five year high of \$17,900t after a spokesman for the country's energy and resources ministry confirmed that it will bring forward the ban from an original 2022 deadline.

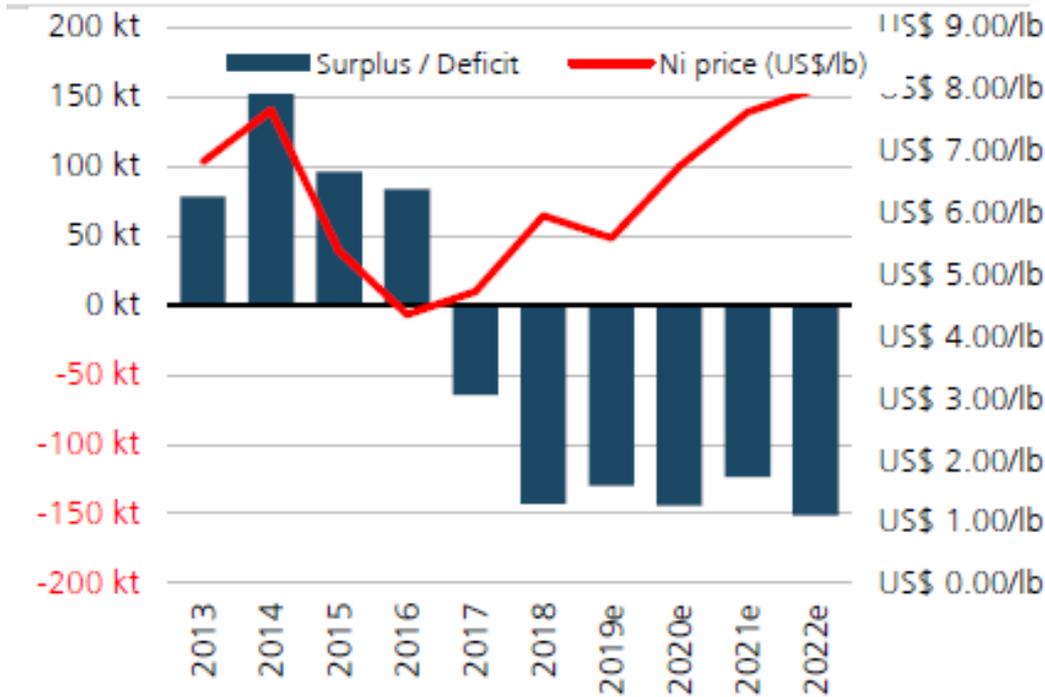
Bloomberg News, 30 August 2019

## Nickel prices react to fears of a new Indonesian nickel ore ban



Source: LME, Macquarie Commodities Strategy, September 2019

## UBS Nickel Market Balance and Price forecast



Source: WoodMac, Company Filings, UBSe.

UBS Report 6 September 2019

- The market growth acceleration has resulted in significant market deficits since 2015
- LME stockpiles at 8 year low
- Deficit growing to ~150t by 2020
- By the end of 2020, the official inventories of 150kt could vanish unless higher nickel prices allow mine restarts or new projects

### Macquarie Commodity Price Forecasts (September 2019)

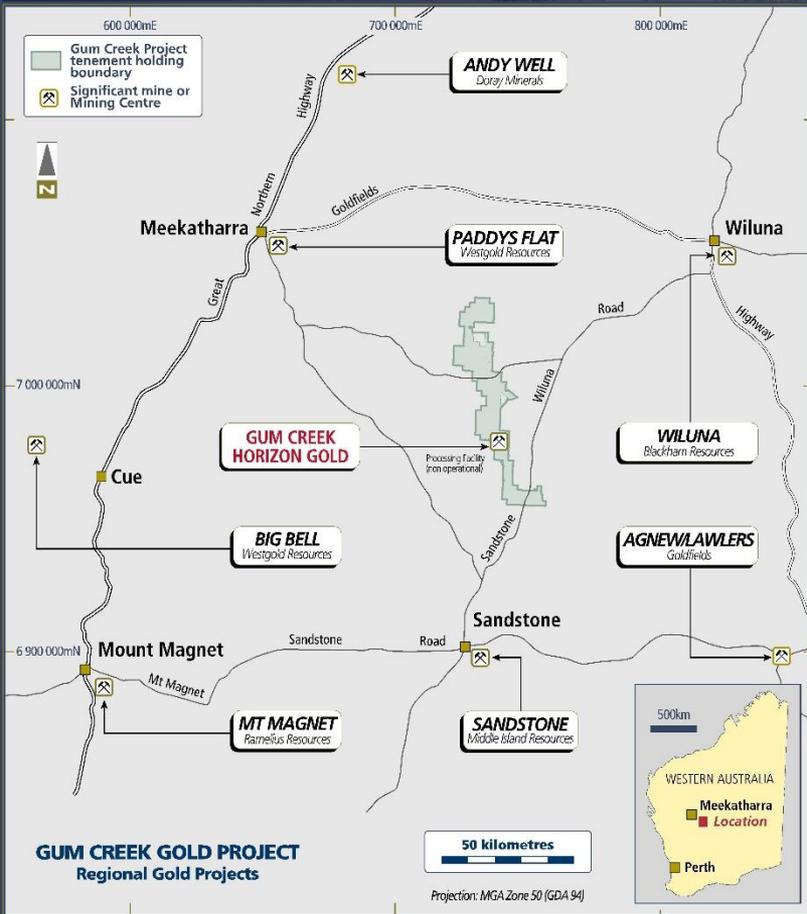
- 2019 \$ 6.48/lb
- 2020 \$ 7.14/lb
- 2021 \$ 7.43/lb
- 2022 \$ 8.39/lb
- 2023 \$ 8.62/lb

# OTHER ASSETS

Gold, Platinum, Palladium



# Horizon Gold Limited - Gum Creek Gold Project



- Shares on issue 76.5M
- Market capitalisation \$25M (at 10 October 2019)
- Cash (30 June 2019) \$1.9M
- **Panoramic interest services 51% and provides management services**

**Location** - 640km NE of Perth, Western Australia

**Historic production** - >1Moz gold

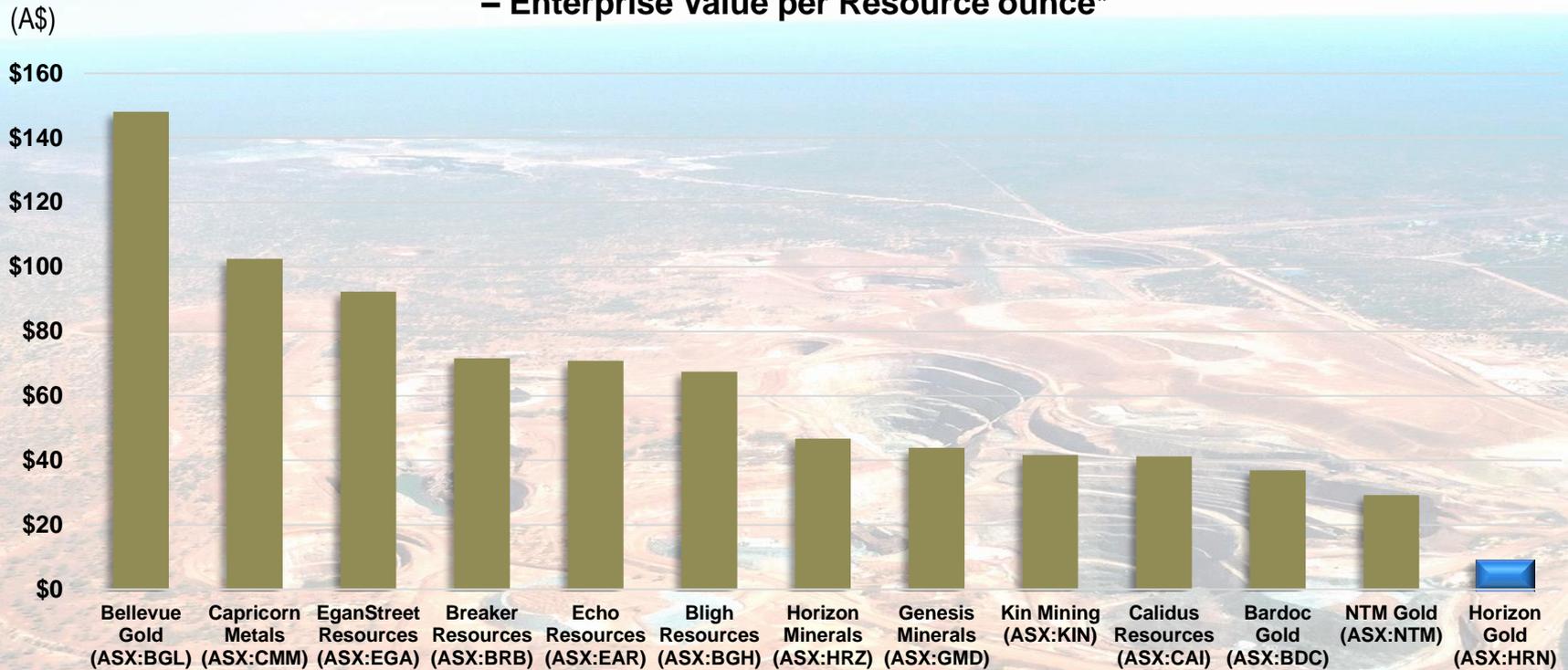
**Resources** - 1.39Moz gold

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

## Recent Activities

- **Butcherbird Shear** 8m @ 19.7g/t Au\*
- **Altair Discovery** 55m @ 3.32% Zn & 0.52% Cu\*\*
- **Resource Upgrade** New Swift Open Pit Resource
- **Production Opportunity** Investigating toll treatment options

## Advanced Australian gold exploration/developer valuations – Enterprise Value per Resource ounce\*



\* **Source:** Company ASX announcements, information including share price, EV and Mineral Resource current as at 31 July 2019. Additional supporting information can be found in Appendix 2 of this presentation.

## RESOURCE

### PANTON PROJECT

- Located only 60km from Savannah
- BFS completed by previous owners
- Project under internal review due to rise in Pd price and potential for Cr by-product credit
- Exploration Upside for PGMs and Ni identified

2.1Moz of Pt+Pd\*

## RESOURCE

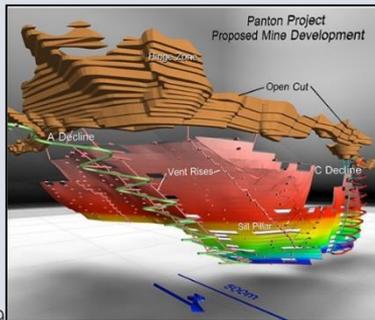
### THUNDER BAY NORTH

- Located in Ontario, Canada
- PEA completed by previous owner
- Sale to Benton Resources agreed
- Settlement anticipated Q42019

0.7Moz of Pt+Pd\*

## Current workstreams

- Project review in progress
- Preparing financial model based on updated information including:
  - Geology, mining, processing
  - PGM prices
  - Cr stream
  - CAPEX and OPEX
- Findings due Dec 2019 quarter



## Terms of Deal with Benton\*\*

- **Binding Letter Agreement** - amended
- **Price** – C\$9M (C\$4.5M on closing and C\$1.5M payable on each anniversary of closing for 3 years)
- **Definitive Agreement** – to be signed within 30 days from date of Amending Letter
- **Deposit** - C\$250k deposit
- **Completion of Transaction**
  - 60 days after signing of the Definitive Agreement
  - Completion date can be extended if certain CPs not satisfied to enable those CPs to be satisfied

\*Refer PGM Resource Table

\*\*Refer ASX Announcements dated 2 July 2019 and 3 September 2019

**Ramp up production from the Savannah orebody**

**Operate safely**

**Successful transition to Savannah North ore**

**Unlock PGMs project value (TBN dealt, updating Panton)**

**Study value adding options for Savannah**

**Unlock value in Horizon Gold (PAN 51%)**

# Investment Proposition

Investing in Panoramic gives shareholders exposure to:

1. The EV battery thematic through nickel-copper-cobalt sulphide production from Savannah
2. Lower operating costs per pound payable Ni and improved margins when Savannah North ramps up due to higher nickel and cobalt grades and increased mining rates compared to the Savannah orebody
3. +8 year mine life with excellent potential for mine life extension through exploration success
4. Capturing the recent rally in the nickel price and favourable price outlook going forward through improved revenue
5. A gold and PGM option through 51% shareholding in Horizon Gold and 100% Panton





**FOLLOW US AS WE CREATE  
VALUE FOR SHAREHOLDERS**

**[www.panoramicresources.com](http://www.panoramicresources.com)**



# APPENDICES





# 1. INFERRED RESOURCES IN SAVANNAH MINE PLAN

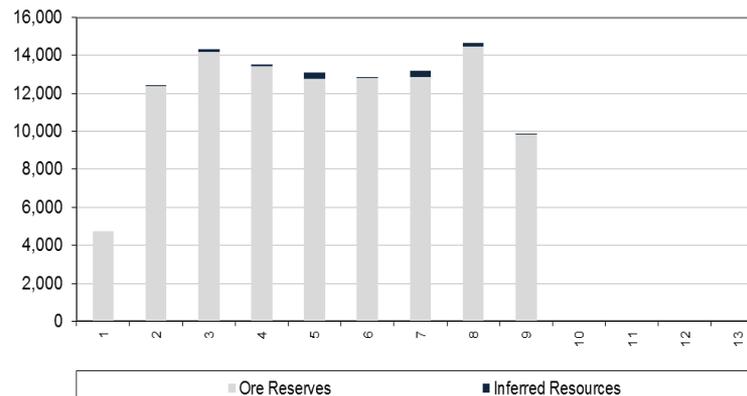
Classification	Tonnage Mt	Grade Ni%	Grade Cu%	Grade Co%	Contained Ni (t)	Contained Cu (t)	Contained Co (t)
Ore Reserves	7.58	1.42	0.68	0.09	107,500	51,200	7,200
Inferred Resource	0.06	1.91	0.69	0.13	1,200	400	100
<b>Total</b>	<b>7.65</b>	<b>1.42</b>	<b>0.68</b>	<b>0.10</b>	<b>108,700</b>	<b>51,700</b>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

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)



A light grey silhouette of two baobab trees on a horizon line, set against a white background. The trees are positioned on the left and right sides of the frame.

# 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.*

# RESOURCES: Nickel-Copper-Cobalt at 30 June 2019

Resource	Equity	Metal	JORC Compliance	Measured		Indicated		Inferred		Total		Metal Tonnes
				Tonnes	(%)	Tonnes	(%)	Tonnes	(%)	Tonnes	(%)	
<b>Savannah Project</b>												
Savannah (above 900)	100%	Nickel	2012	1,178,000	1.40	622,000	1.70	-	-	1,800,000	1.50	27,100
		Copper			0.86		1.41		-		1.05	18,900
		Cobalt			0.07		0.08		-		0.07	1,300
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
<b>Total (Equity)</b>		Nickel								12,977,000	1.67	217,000
		Copper									0.77	100,100
		Cobalt									0.11	14,800

## 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*

### 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"*

### No New Information or Data

*The Mineral Resource estimates tabled above, with the exception of Savannah (above 900), have been previously reported and the relevant market announcements cross referenced. Except where stated otherwise, 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.*

### Competent Person Statement

*The information in this presentation that relates to Mineral Resources for Savannah (above 900) is based on information compiled by or reviewed by Matthew Demmer (MAusIMM). The aforementioned is a full-time employee of Panoramic Resources Limited. The aforementioned have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are 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. The aforementioned consents to the inclusion in the release of the matters based on their information in the form and context in which it appears.*

# RESERVES: Nickel-Copper-Cobalt at 30 June 2019

Reserve	Equity	Metal	JORC Compliance	Proven		Probable		Total		Metal Tonnes
				Tonnes	(%)	Tonnes	(%)	Tonnes	(%)	
<b>Savannah Project</b>										
Above 900 Fault	100%	Nickel	2012	1,371,000	1.16	-	-	1,371,000	1.16	15,900
		Copper			0.75		-		0.75	10,300
		Cobalt			0.06		-		0.06	800
Savannah North	100%	Nickel	2012	-	-	6,650,000	1.42	6,650,000	1.42	94,500
		Copper			-		0.61		0.61	40,900
		Cobalt			-		0.10		0.10	6,700
<b>Total (Equity)</b>		<b>Nickel</b>						<b>8,021,000</b>	<b>1.38</b>	<b>110,400</b>
		<b>Copper</b>							<b>0.64</b>	<b>51,200</b>
		<b>Cobalt</b>							<b>0.09</b>	<b>7,500</b>

## Notes:

Figures have been rounded and therefore may not add up exactly to the reported totals

Savannah Reserve average cut-off grade 1.02% Ni equivalent.

Savannah North Reserve cut-off grade is 0.80% 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 Ore Reserve estimates tabled above for Savannah North has 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.

## Competent Person Statement

The information in this presentation that relates to Ore Reserves for Savannah (above 900) is based on information compiled by or reviewed by Simon Curd (MAusIMM). The aforementioned is a full-time employee of Savannah Nickel Mines Pty Ltd. The aforementioned has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are 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. The aforementioned consents to the inclusion in the release of the matters based on their information in the form and context in which it appears.

# RESOURCES: Platinum Group Metals at 30 June 2019

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)	
<b>Thunder Bay North</b>															
<b>Open Pit</b>	<b>100%</b>	<b>2004</b>													
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	
<b>Underground</b>	<b>100%</b>	<b>2004</b>													
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	
<b>Sub-total – Thunder Bay North (Equity)</b>			<b>10,354,000</b>	<b>1.13</b>	<b>1.07</b>								<b>377</b>	<b>355</b>	
<b>Panton</b>															
<b>Top Reef</b>	<b>100%</b>	<b>2012</b>													
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	
<b>Middle Reef</b>	<b>100%</b>	<b>2012</b>													
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	
<b>Sub-total – Panton (Equity)</b>			<b>14,320,000</b>	<b>2.19</b>	<b>2.39</b>								<b>1,008</b>	<b>1,102</b>	
<b>Total - PGM (Equity)</b>													<b>1,385</b>	<b>1,456</b>	

## Qualifying Statements and Notes

### Notes

*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:  $Pt-Eq\ g/t = Pt\ g/t + Pd\ g/t \times 0.3204 + Au\ g/t \times 0.6379 + Ag\ g/t \times 0.0062 + Cu\ g/t \times 0.00011 + Total\ Ni\ g/t \times 0.000195 + Total\ Co\ g/t \times 0.000124 + Rh\ g/t \times 2.1816$ . 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 PlatsolTM 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:  $Pt-Eq\ g/t = Pt\ g/t + Pd\ g/t \times 0.2721 + Au\ g/t \times 0.3968 + Ag\ g/t \times 0.0084 + Cu\ g/t \times 0.000118 + Sulphide\ Ni\ g/t \times 0.000433 + Sulphide\ Co\ g/t \times 0.000428 + Rh\ g/t \times 2.7211$ . 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:  $NiSx = Ni - (MgO\% \times 60.35 - 551.43)$ . The regression formula for Co in sulphide (CoSx) is:  $CoSx = Co - (MgO\% \times 4.45 - 9.25)$ .*

### 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 in this presentation 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.*