

# **POSEIDON NICKEL**

**Re emerging Australian Nickel Producer**

**General Meeting : Monday 15 July 2019**



# Poseidon Overview

- Significant Nickel Resource\*\*
  - 44 million Tonnes
  - 392,000 Ni Tonnes\*
- Three operations encompassing the WA's sulphide Nickel province
- Two nickel concentrators
  - 2.2mtpa - Black Swan
  - 1.5mtpa - Lake Johnston
- Black Swan/Silver Swan Operations
  - De-risking for restart of operations
  - Mineable resource- expanding/improving
  - On going drilling (continuing positive outcomes)
- Lake Johnston – Significant exploration potential (recent Abi Rose discovery)
- Windarra – Cerberus deposit existing mine development plan (69,000 Ni Tonnes\*)

\*\* Reference Mineral Resources Statement Table 1 attached

\*Contained Ni metal

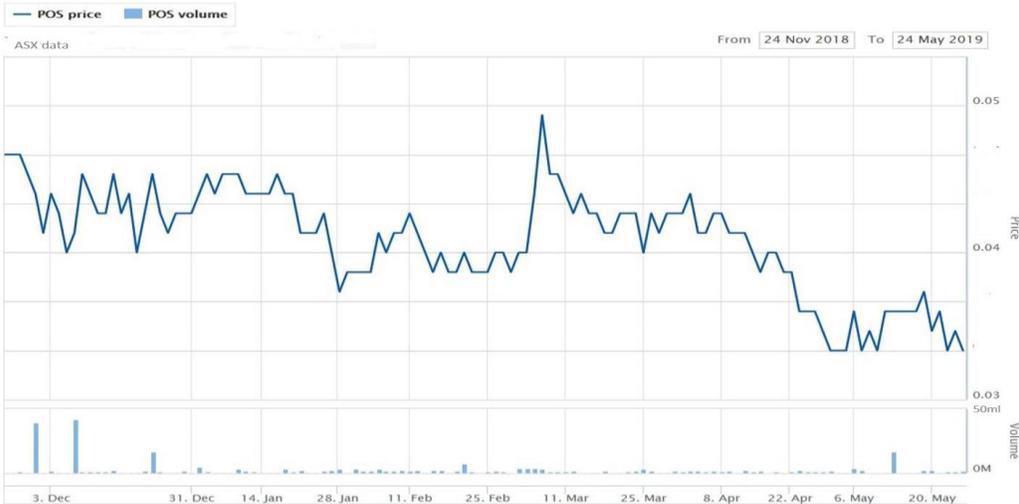
# Key Strategies & Timetable

- Finalise optimisation of Black Swan ready for restart - Ni price driven
  - Restart capable (elapsed time)  **9 -12 months**
- Current drilling program targeting
  - High grade Silver Swan - complete  **June 2019**
  - Disseminated Black Swan ore body open pit - commencing  **July 2019**
- Update Black Swan operations, resource and reserves  **August 2019**
- Ongoing development of opportunities
  - Proximal external ore sources
  - R&D enhanced process recovery
- Continue to build processing utilisation options– toll treatment
- Optimise value of Lake Johnston, Windarra (exploration/corporate)

# Corporate Profile

## Capital Structure/Enterprise Value

ASX Ticker	POS
Shares on Issue	2.64bn
Share Price	~\$0.04
Market Cap	~\$106M
Cash	~\$63.5M
Debt (convertible note)	\$US\$17.5 - \$AU25M



6mth Share Price and Volume

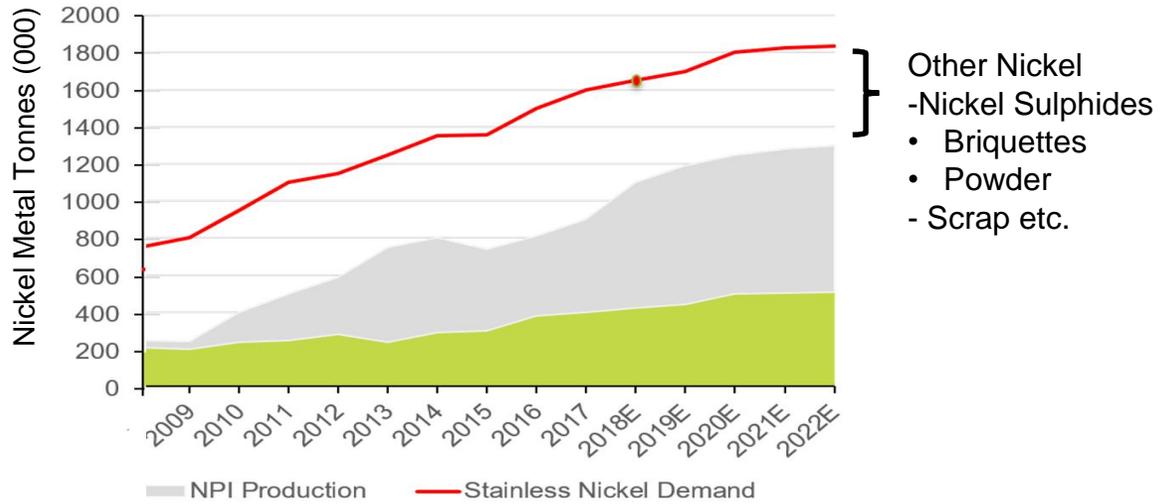
## Board of Directors

<b>Geoff Brayshaw</b> <i>Non Executive Director &amp; Interim Chair</i>	Chartered Accountant with over 35 years' experience primarily in audit & assurance, corporate finance & litigation support. Former independent Director of Fortescue Metals Group.
<b>Robert Dennis</b> <i>Chief Executive Officer &amp; Managing Director (retiring 30 August 2019)</i>	Mining Engineer with over 40 years' experience in the nickel, copper, gold and alumina industries. Previously COO IGO responsible for the team during design, construction, commissioning and successful ramp up of the Nova Project.
<b>Felicity Gooding</b> <i>Non Executive Director</i>	Chartered Accountant with over 15 years' experience specialising in mergers, acquisitions, equity and debt financing across various sectors in the United States, Singapore and London. Held senior positions at PWC, Diageo Plc and Fortescue Metals Group Ltd
<b>Karl Paganin</b> <i>Non Executive Director</i>	Mr Paganin has over 20 years' experience in investment banking, specialising in transaction structuring, equity and capital markets, M&A and strategic advice to listed companies. He is currently a non-executive director of ASX listed companies Southern Cross Electrical Engineering Limited and Veris Limited.

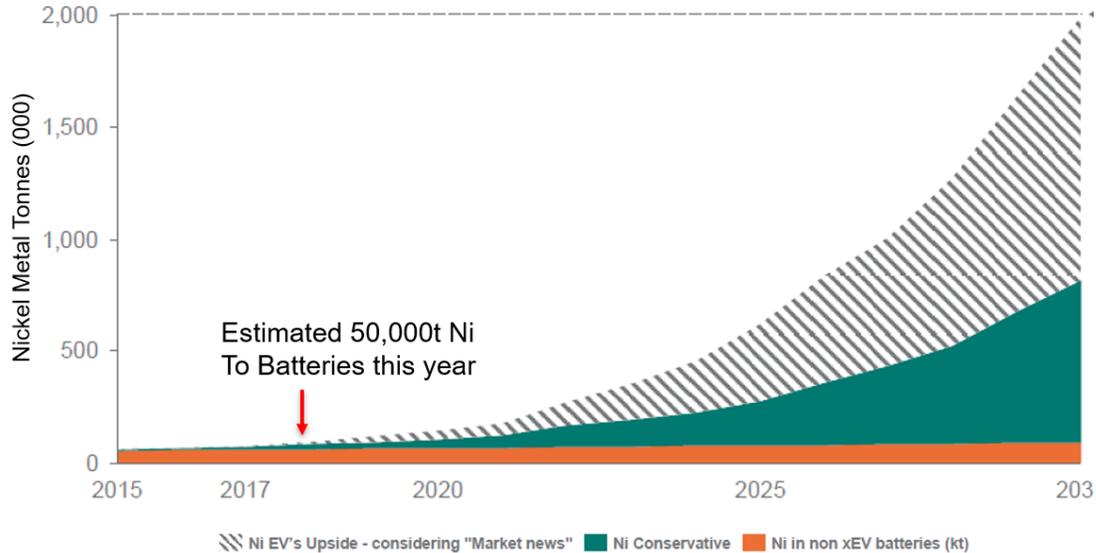
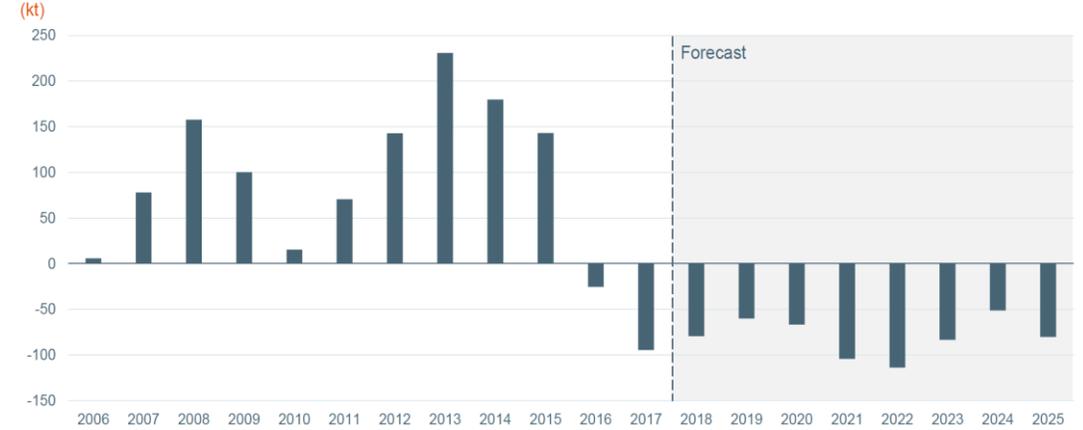
## Significant Shareholders

Black Mountain Metals Ltd	~20%	Squadron Resources Ltd	~18%
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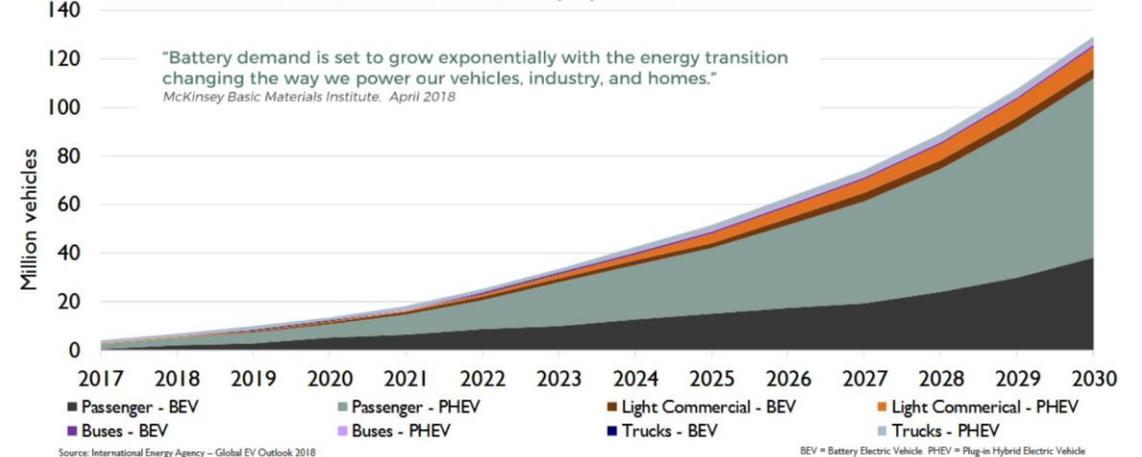
# Nickel Market Dynamics and Drivers



Refined Nickel Market Balance

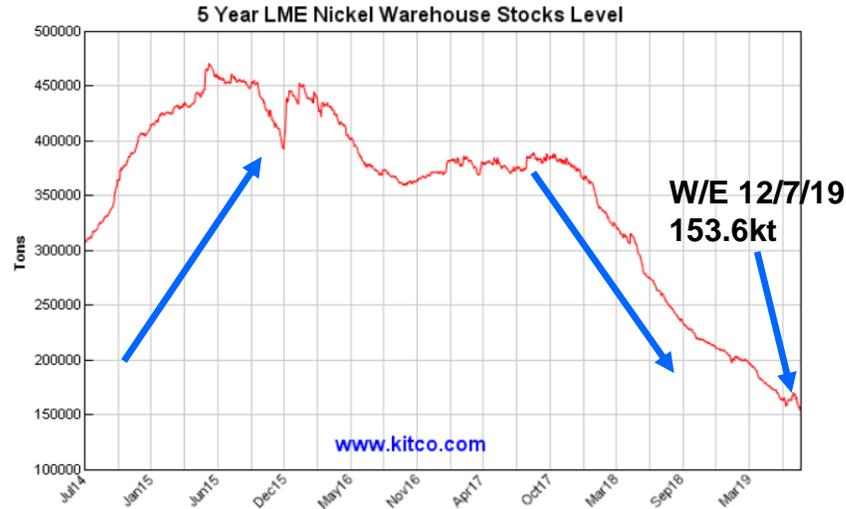


GLOBAL ELECTRIC VEHICLE (EV) ADOPTION FORECAST

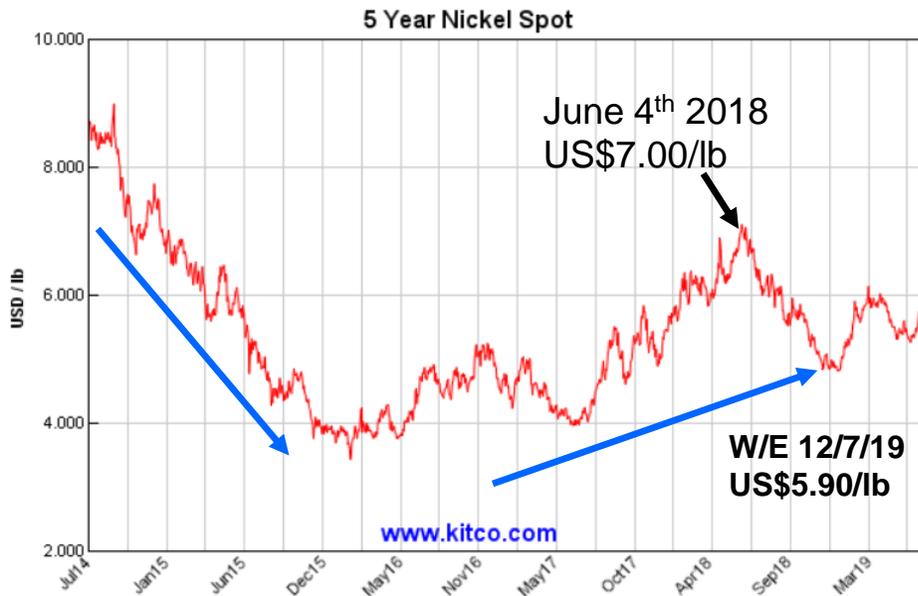


# Nickel Market Macro Trends (Ni PRICE vs LME STOCKS)

5 Year  
LME  
Nickel  
Stocks  
(tonnes)



5 Year  
Nickel  
Metal  
Price  
US\$/lb



## 1 Year Nickel Spot Price vs LME Stocks



## Recap

- Sustained growth in stainless steel demand
- New and accelerating demand from LiB technology
- Declining LME stocks, lowest level in 5 years
- Forecast Nickel supply deficit

# Nickel Portfolio Profile

## Black Swan Operations\*\*

- Silver Swan underground Ni mine 12.4kt Ni Tonnes\* (Grade - 9.2%)
- Black Swan Ni open pit & stockpiles 179kt Ni Tonnes\* (Grade - 0.7%)
- 2.2mtpa process plant
- Exploration upside

## Lake Johnston Operations\*\*

- Maggie Hays Ni Mine 52kt Ni Tonnes\* (Grade - 1.5%)
- Emily Ann Ni Mine – now closed
- Recent Abi Rose Ni discovery – New geological model
- 1.5mtpa process plant
- Exploration upside

## Windarra Nickel Operations\*\*

- Mt Windarra & underground Ni mine 79kt Ni Tonnes\* (Grade - 1.7%)
- Cerberus Nickel deposit 70kt Ni Tonnes\* (Grade - 1.5%)
- Potential to upgrade and process ore at Black Swan
- Gold Tailings - Au 183koz & Ag 670koz\*\*\*

\* Contained Ni metal

\*\*Reference Mineral Resources Statement Table 1 attached

\*\*\*Reference Mineral Resources Statement Table 2 attached



# Black Swan Nickel Operations

- **July 2018 Study\*\***
  - Estimated Restart Capex
    - Silver Swan Underground \$13m
    - Black Swan Processing plant \$19m
    - Sustaining Capex \$25m
  - All In Sustaining Cost – US\$5.10
  - 3.1 Year mine life
- Operational restart requires less than 12 months
- Planned 1.1mtpa start up capacity (2.2m tonne name plate concentrator)
- Silver Swan underground: 12.4kt Ni\* (Grade - 9.2%)
- Black Swan open pit & stockpiles: 179kt Ni\* (Grade - 0.7%)
- Fully operational infrastructure
- Connected to the State Power Grid - potential lower power costs
- Exploration upside Black Swan and Silver Swan
- **Restart planning and Study subject to ongoing optimisation**

(\*Contained Nickel Metal)

(\*\* ASX announcement July 8 2018)

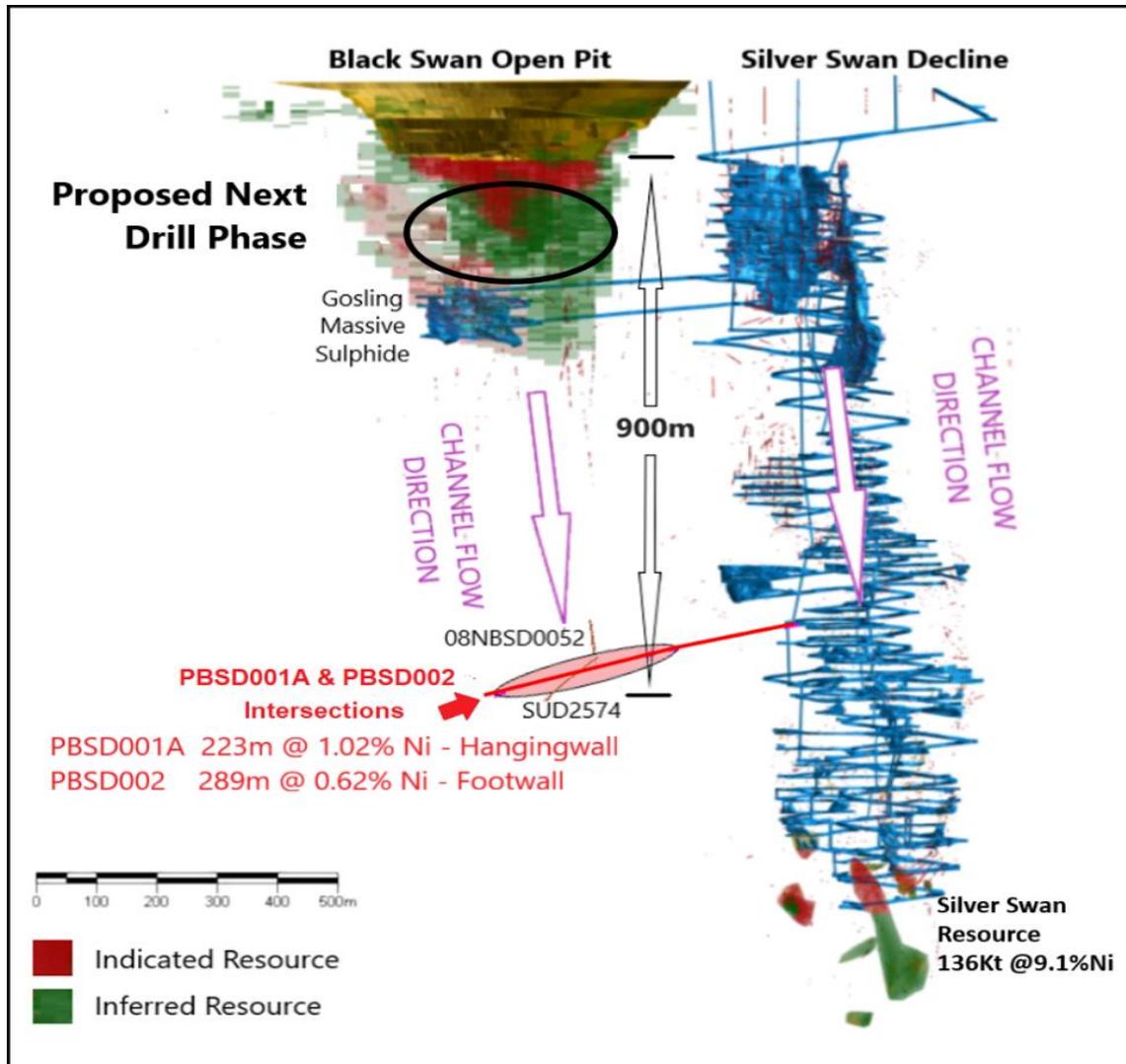
1 All in sustaining cash (AISC) costs are C1 cash costs plus mine development and sustaining capital on a payable basis (excludes once off pre-production capital costs).

2 C1 cash costs means operating cash costs including mining, processing, geology, OHSE, site G&A, concentrate transport, royalties, less by-product credits divided by nickel in concentrate produced (100% payable basis).

3 Unless otherwise stated, all cash flows are in Australian dollars and not subject to inflation or escalation factors. A nickel price of US\$7.70/lb has been assumed and an exchange rate of AUD:USD of 0.76.)



# Black Swan – Resource Potential Expanding



- Currently finalising significant drilling program testing resource expansion potential
- Current Resource (Indicated & Inferred)\*\*
  - 30mt @ 0.6% for 179,000t Ni Tonnes\*
- Open pit benches available to mine
- Current drilling confirms continuity of the Black Swan disseminated mineralisation at depth (both grade and scale)
- Next drilling phase accelerated and planned to target ore between Gosling deposit and the open pit floor

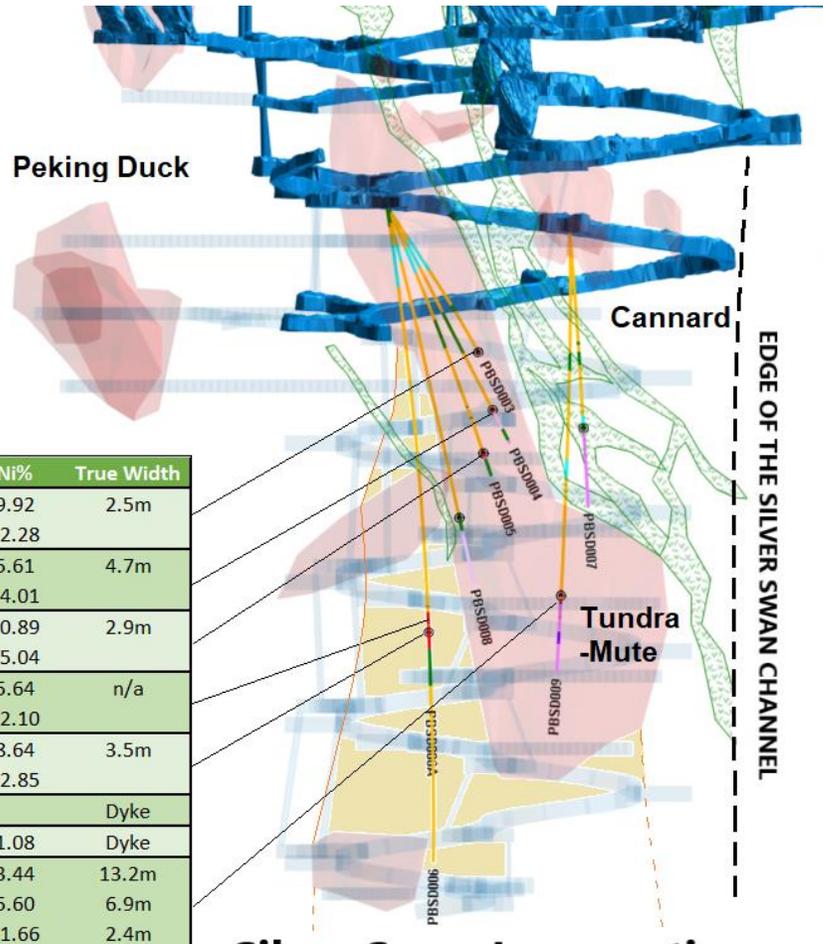
(\*Contained Ni metal)

\*\*Reference Mineral Resources Statement Table 1 attached

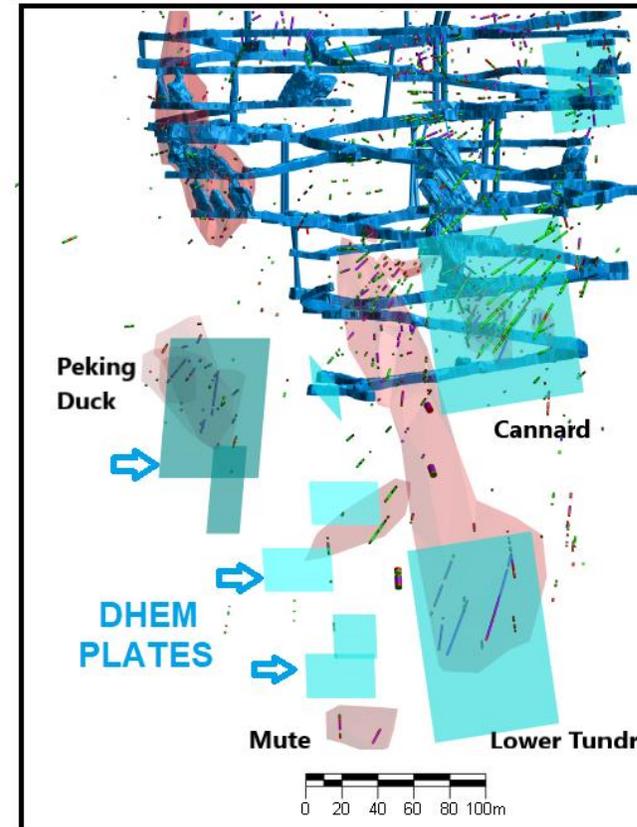
# Silver Swan High Grade Drilling Results



Hole	m From	m To	Interval	Ni%	True Width
PBSD003	99	104.9	5.9m	9.92	2.5m
including	99.8	103.98	4.18m	12.28	
PBSD004	119.4	133	13.6	5.61	4.7m
including	119.4	122.9	3.5	14.01	
PBSD005	131.52	139	7.48m	10.89	2.9m
including	132.58	137.1	4.52m	15.04	
PBSD006	180	193	13m	5.64	n/a
including	187.05	191	3.95m	12.10	
PBSD006A	180	195.15	15.15	8.64	3.5m
including	186.2	192.19	5.99	12.85	
PBSD007					Dyke
PBSD008	151	154	3	1.08	Dyke
PBSD009	159.07	197	37.93	3.44	13.2m
with	177.15	197	19.85	5.60	6.9m
including	180.85	187.77	6.92	11.66	2.4m



**Silver Swan Longsection  
Looking East**



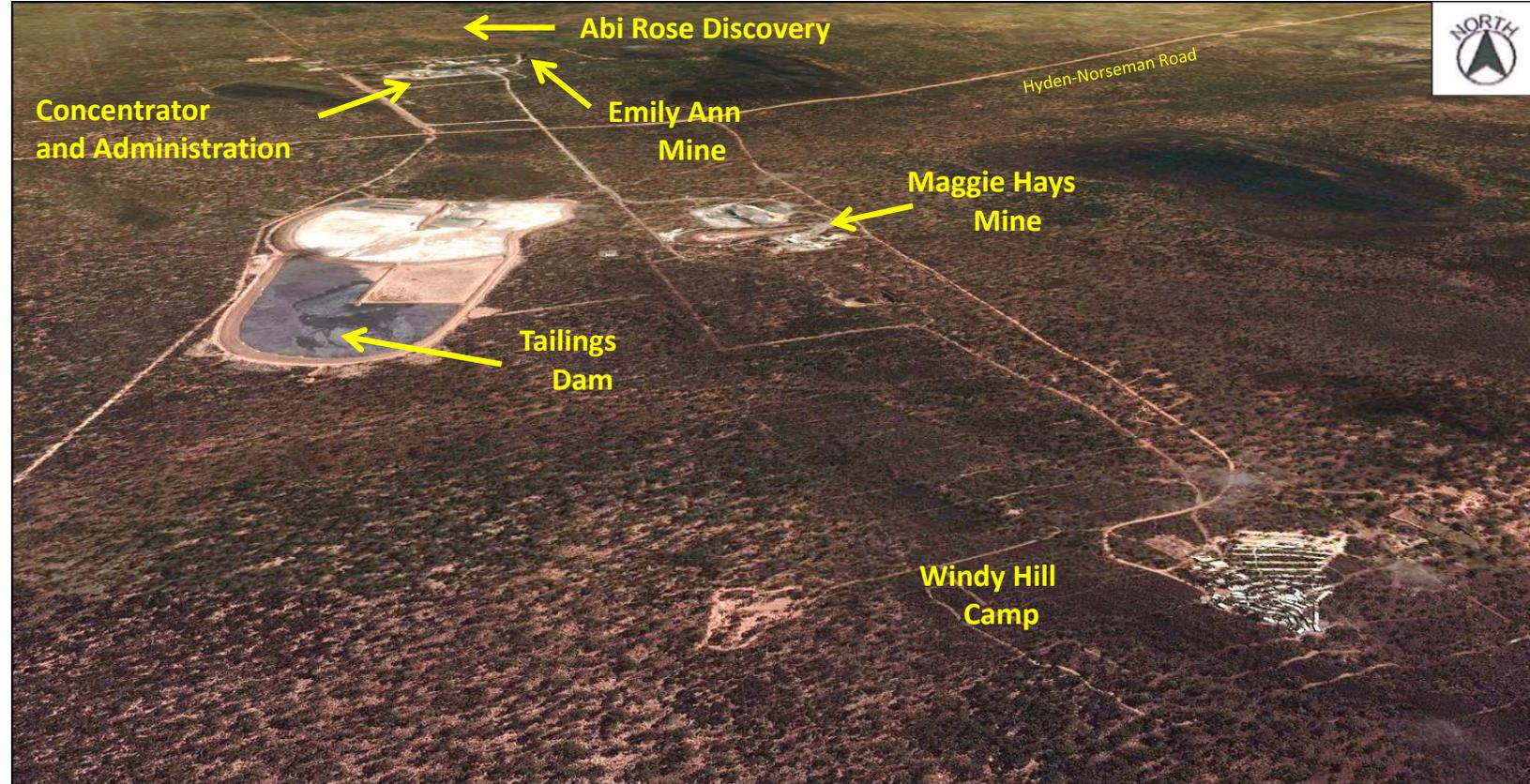
- One of the highest grade Nickel deposits globally
- 3,000m drilling program continuing
- Initial drilling intersected high grade massive sulphide
  - 6% - 15% Ni\*
- (\* ASX release 27<sup>th</sup> May & 12 June 2019)
- DHEM plates indicates further opportunity for resource extension

# Lake Johnston Operation

- Two Historical Mines
  - Emily Ann Mine (mined 2001 – 2007)
  - Maggie Hays Mine
    - Remaining resource 3.5m @ 1.5% Ni Tonnes\*\* for 52,000 Ni Tonnes\*
- 1.5mtpa Concentrator
- Abi Rose new discovery provides significant exploration upside potential

(\*Contained Ni metal)

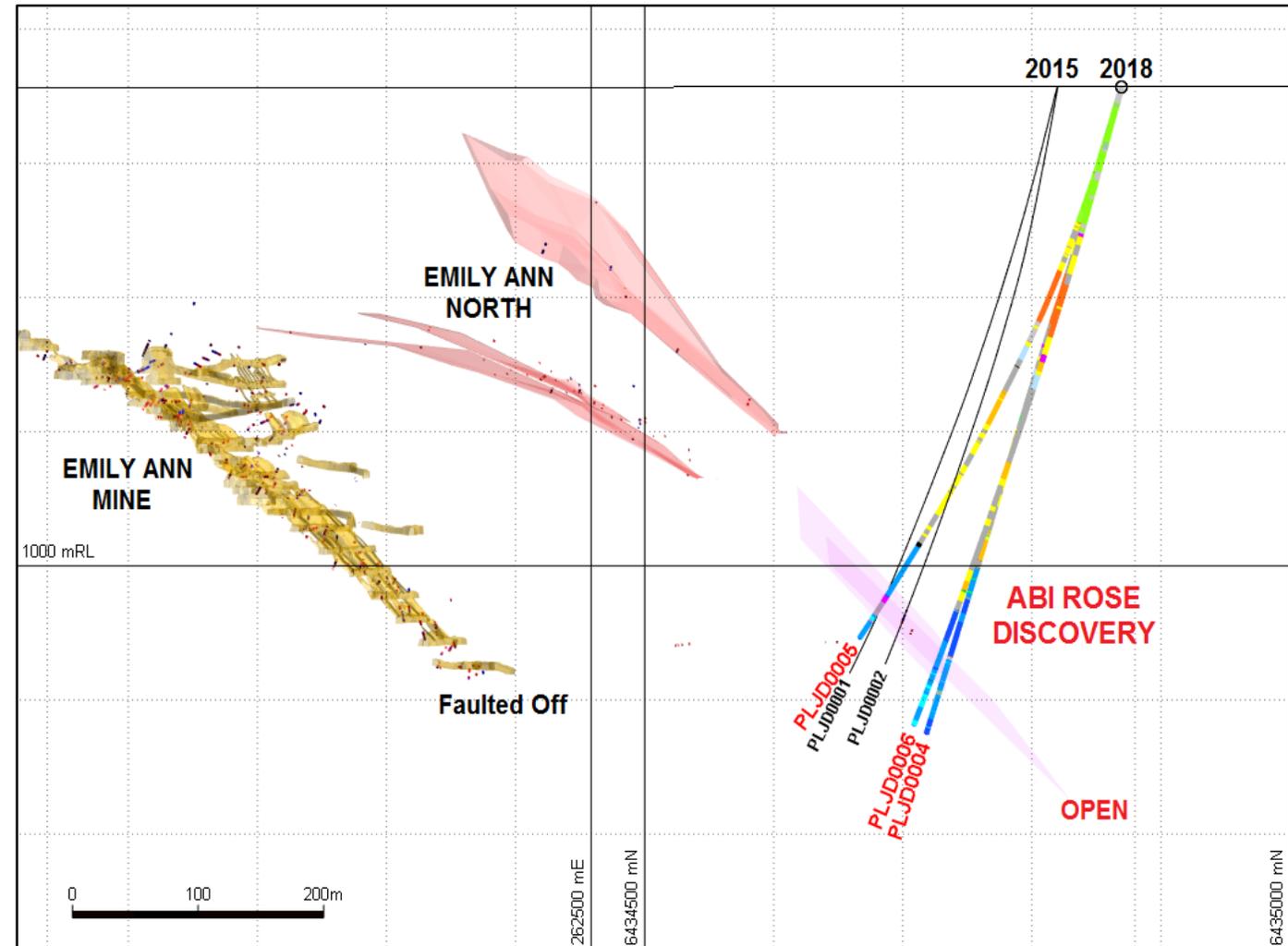
\*\*Reference Mineral Resources Statement Table 1 attached



# Lake Johnston – Abi Rose Discovery & Exploration

- Confirmation of intrusive nickel-copper style model NOT traditional komatiite hosted model leading to Abi Rose discovery
- Current geological review outcomes
  - Scope for continuity of mineralisation
  - a new intrusive nickel-copper model best intersection in PLJD0002 - 10.48m @ 3.2% Ni \*
- Indicates scope for larger scale potential

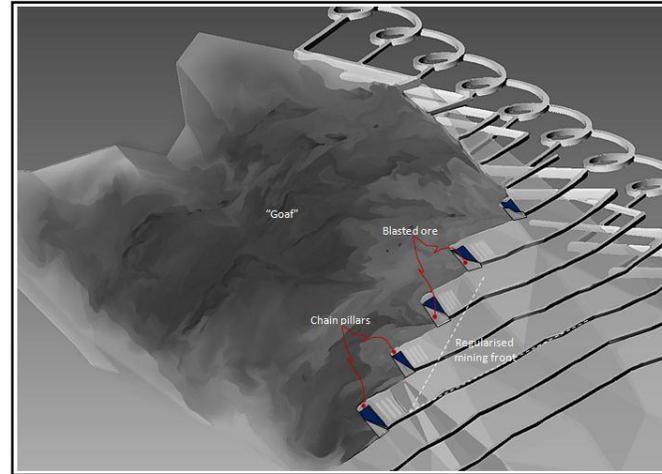
(\*ASX release Successful drilling program at Abi Rose 21<sup>st</sup> November 2018)



# Windarra Nickel Project

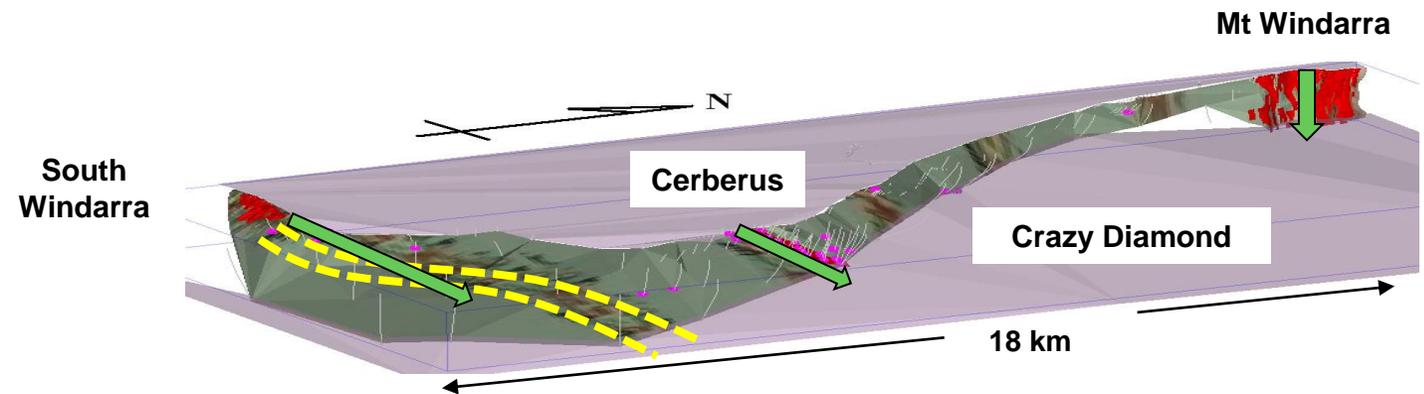
- Discovered 1969 – Poseidon Nickel NL
  - 8 mt mined and process to produce
  - 84,000 Ni Tonnes\* (1974 to 1993)
- Mt Windarra Underground mine remnant resources
  - 4.36 mt @ 1.64% 71,500t Ni Tonnes\*
  - Mine decline partially refurbished in 2011
- Cerberus deposit has existing mine development plan
- Remaining/proximal exploration potential
- Currently on Care and Maintenance

(\*Contained Ni metal)



Cerberus Conceptual mine design

- First ore 80m from surface
- Mineralisation open down dip and plunge



# Summary

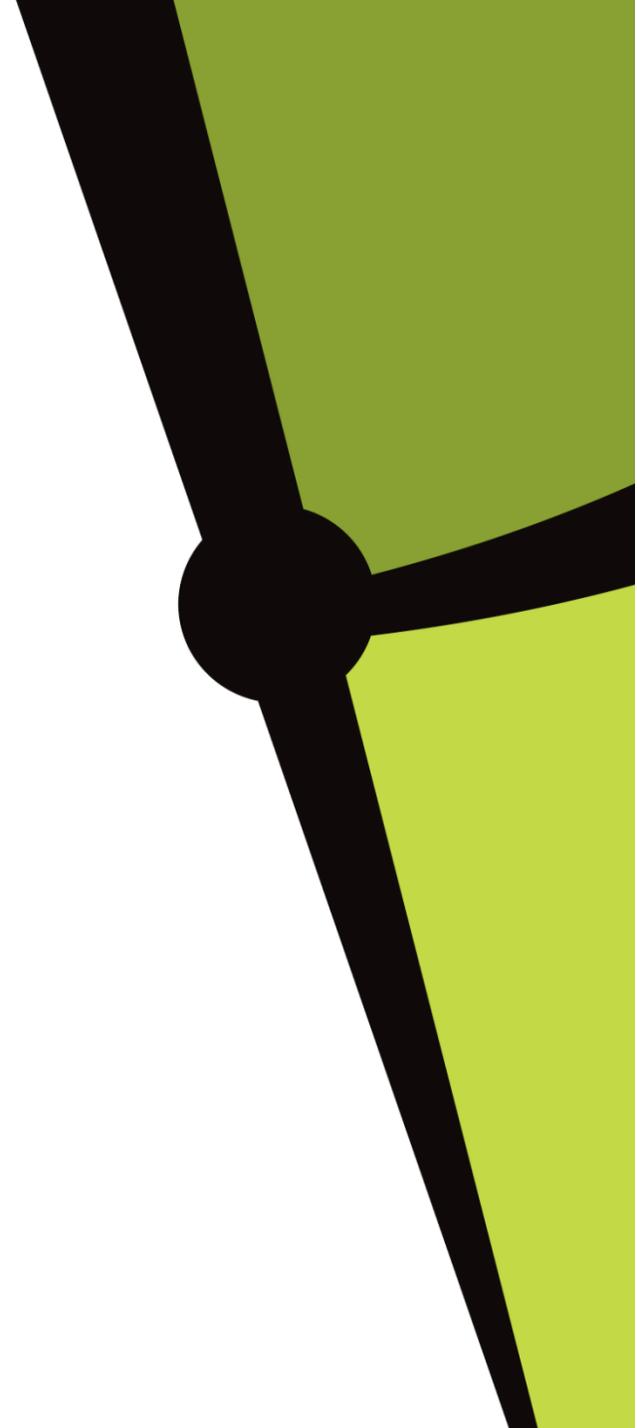
- Three strategic Nickel assets – Geologically and Geographically significant
- Short time frame for Black Swan operational restart - optimisations continuing
- Well positioned to leverage off a rising Nickel Price
- Continuing strong demand for Nickel
  - Stainless steel growth / Demand for battery metals
- Experienced Board and Management Team
  - Project delivery/re-commencement of operations
  - Strategic development and optimisation
  - Geologically driven resource expansion (life extension)
- Robust Balance sheet - \$63.5m cash and \$25m debt – Net ~AUD 38m cash
- Supportive cornerstone stakeholders

# Disclaimer

This presentation has been prepared for the purpose of providing general information about Poseidon Nickel Limited ("Poseidon"). It should not be considered as an offer or invitation to subscribe for or purchase any securities in Poseidon or as an inducement to make an offer or invitation with respect to those securities. It is not recommended that any person makes an investment decision in relation to Poseidon in reliance on this presentation material.

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# Competent Persons Statement

*The information in this report that relates to Exploration Results is based on, and fairly represents, information compiled and reviewed by Mr Steve Warriner, Chief Geologist, who is a full-time employee at Poseidon Nickel, and is a Member of The Australian Institute of Geoscientists.*

*The information in this report which relates to the Black Swan Mineral Resource is based on, and fairly represents, information compiled by Mr Andrew Weeks who is a full-time employee of Golder Associates Pty Ltd. The information in this report which relates to the Black Swan Ore Reserve is based on, and fairly represents, information compiled by Mr Andrew Weeks who is a full-time employee of Golder Associates Pty Ltd and who is a Member of the Australasian Institute of Mining and Metallurgy.*

*The information in this report which relates to the Silver Swan Mineral Resource is based on, and fairly represents, information compiled by Mr Steve Warriner, Chief Geologist, who is a full-time employee at Poseidon Nickel, and is a Member of The Australian Institute of Geoscientists and Mr Ian Glacken who is a full time employee of Optiro Pty Ltd and is a Fellow of the Australasian Institute of Mining and Metallurgy. The information in this report which relates to the Silver Swan Ore Reserve is based on, and fairly represents, information compiled by Mr Matthew Keenan who is a full-time employee of Entech Pty Ltd and is a Member of the Australasian Institute of Mining and Metallurgy.*

*The information in this report which relates to the Lake Johnston Mineral Resource is based on, and fairly represents, information compiled by Mr Steve Warriner, Chief Geologist, who is a full-time employee at Poseidon Nickel, and is a Member of The Australian Institute of Geoscientists and Mr Andrew Weeks who is a full-time employee of Golder Associates Pty Ltd and is a Member of the Australasian Institute of Mining and Metallurgy. The information in this report which relates to the Lake Johnston Ore Reserves Project is based on, and fairly represents, information compiled by Mr Matthew Keenan who is a full time employee of Entech Pty Ltd and is a Member of the Australasian Institute of Mining and Metallurgy.*

*The information in this report that relates to Mineral Resources at the Windarra Nickel Project and Gold Tailings Project is based on, and fairly represents, information compiled by Mr Steve Warriner, Chief Geologist, who is a full-time employee at Poseidon Nickel, and is a Member of The Australian Institute of Geoscientists and Mr Ian Glacken who is a full time employee of Optiro Pty Ltd and is a Fellow of the Australasian Institute of Mining and Metallurgy. The Windarra Project contains Mineral Resources which are reported under JORC 2004 Guidelines as there has been no Material Change or Re-estimation of the Mineral Resource since the introduction of the JORC 2012 Codes. Future estimations will be completed to JORC 2012 Guidelines.*

*Mr Warriner, Mr Glacken, Mr Weeks, and Mr Keenan all have sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code 2012). Mr Warriner, Mr Glacken, Mr Weeks, and Mr Keenan have consented to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

*The Australian Securities Exchange has not reviewed and does not accept responsibility for the accuracy or adequacy of this release.*

# Competent Persons Statement

## **FORWARD LOOKING STATEMENT – INFERRED RESOURCE STATEMENTS:**

*The Company notes that an Inferred Resource has a lower level of confidence than an Indicated Resource and that the JORC Codes, 2012 advises that to be an Inferred Resource it is reasonable to expect that the majority of the Inferred Resource would be upgraded to an Indicated Resource with continued exploration. Based on advice from relevant competent Persons, the Company has a high degree of confidence that the Inferred Resource for the Silver Swan deposit will upgrade to an Indicated Resource with further exploration work.*

*The Company believes it has a reasonable basis for making the forward looking statement in this announcement, including with respect to any production targets, based on the information contained in this announcement and in particular, the JORC Code, 2012 Mineral Resource for Silver Swan as of May 2016, together with independent geotechnical studies, determination of production targets, mine design and scheduling, metallurgical testwork, external commodity price and exchange rate forecasts and worldwide operating cost data.*

## **FORWARD LOOKING STATEMENTS:**

*This release contains certain forward looking statements including nickel production targets. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as “may”, “will”, “except”, “intend”, “plan”, “estimate”, “anticipate”, “continue”, and “guidance”, or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production and expected costs. Indications of, and guidance on future earnings, cash flows, costs, financial position and performance are also forward looking statements*

*Forward looking statements, opinions and estimates included in this announcement are based on assumptions and contingencies which are subject to change, without notice, as are statements about market and industry trends, which are based on interpretation of current market conditions. Forward looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance.*

*Forward looking statements may be affected by a range of variables that could cause actual results or trends to differ materially. These variations, if materially adverse, may affect the timing or the feasibility and potential development of the Silver Swan underground mine.*

# Mineral Resource Statement

Table 1: Nickel Projects Mineral Resource Statement

Nickel Sulphide Resources	JORC Compliance	Cut Off Grade	MINERAL RESOURCE CATEGORY												
			INDICATED			INFERRED			TOTAL						
			Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Co% Grade	Co Metal (t)	Cu% Grade	Cu Metal (t)
<b>BLACK SWAN PROJECT</b>															
Black Swan	2012	0.40%	9,600	0.68	65,000	21,100	0.54	114,000	30,700	0.58	179,000	0.01	4,200	NA	-
Silver Swan	2012	4.50%	52	9.19	4,800	84	9.01	7,600	136	9.08	12,400	0.17	250	0.45	600
<b>LAKE JOHNSTON PROJECT</b>															
Maggie Hays	2012	0.80%	2,600	1.60	41,900	900	1.17	10,100	3,500	1.49	52,000	0.05	1,800	0.10	3,400
<b>WINDARRA PROJECT</b>															
Mt Windarra	2012	0.90%	922	1.56	14,000	3,436	1.66	57,500	4,358	1.64	71,500	0.03	1,200	0.13	5,700
South Windarra	2004	0.80%	772	0.98	8,000	-	-	-	772	0.98	8,000	NA	-	NA	-
Cerberus	2004	0.75%	2,773	1.25	35,000	1,778	1.91	34,000	4,551	1.51	69,000	NA	-	0.08	3,600
<b>TOTAL</b>															
Total Ni, Co, Cu Resources	2004 & 2012		<b>16,720</b>	<b>1.01</b>	<b>168,700</b>	<b>27,300</b>	<b>0.82</b>	<b>223,200</b>	<b>44,020</b>	<b>0.89</b>	<b>391,900</b>	<b>0.05</b>	<b>7,450</b>	<b>0.10</b>	<b>13,300</b>

Note: totals may not sum exactly due to rounding. NA = information Not Available from reported resource model.

The Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Ore Reserves.

Black Swan Resource as at 22 July 2014, Silver Swan Resource as at 3 June 2016, Maggie Hays Resource as at 17 March 2015, Mt Windarra, South Windarra and Cerberus Resource as at 30 April 2013

# Mineral Resource Statement

**Table 2: Gold Tailings Project Mineral Resource Statement**

Gold Tailings Resources	JORC Compliance	Cut Off Grade	MINERAL RESOURCE CATEGORY				
			TOTAL INDICATED				
			Tonnes (Kt)	Au Grade (g/t)	Au (oz)	Ag Grade (g/t)	Ag (oz)
<b>WINDARRA GOLD TAILINGS PROJECT</b>							
Gold Tailings	2004	NA	11,000	0.52	183,000	1.9	670,000
<b>TOTAL</b>							
Total Au Resources	2004		<b>11,000</b>	<b>0.52</b>	<b>183,000</b>	<b>1.9</b>	<b>670,000</b>

Note: totals may not sum exactly due to rounding. Windarra Gold Tailings Resource as at 30 April 2013.

**Table 3: Nickel Project Ore Reserve Statement**

Nickel Sulphide Reserves	JORC Compliance	ORE RESERVE CATEGORY						
		PROBABLE						
		Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Co% Grade	Co Metal (t)	Cu% Grade	Cu Metal (t)
<b>SILVER SWAN PROJECT</b>								
Silver Swan Underground	2012	57	5.79	3,300	0.11	60	0.26	150
<b>TOTAL</b>								
Total Ni Reserves	2012	57	5.79	3,300	0.11	60	0.26	150

Note: Calculations have been rounded to the nearest 10,000 t of ore, 0.01 % Ni grade 100 t Ni metal and 10t of cobalt metal.

Co & Cu grades and metal content for Black Swan require additional modelling prior to estimation.

Silver Swan Underground Reserve as at 26 May 2017, Black Swan Open Pit Reserve as at 5 November 2014.

The Company is not aware of any new information or data that materially affects the information in this report and the Resource/Reserve tables above. Such information is based on the information compiled by the Company's Geologists and the Competent Persons as listed below in the Competent Person Statements.

