# **POSEIDON** NICKEL detind

POSEIDON BLACK SWAN DECLINE MARCH 1996 25

Targeting production in 2022

2021 Noosa Mining and Exploration Investor Conference Virtual Presentation 15 July 2021

### **Disclaimer and Competent Person Statement**



#### Disclaimer

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#### **Competent Person Statement**

The information in this report that relates to Exploration Results is based on, and fairly represents, information compiled and reviewed by Mr Andrew Pearce, who is an employee of 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 Members 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 was a full-time employee at Poseidon Nickel, and is a Member of The Australian Institute of Geoscientists and Mr Kahan Cervoj who is a full time employee of Optiro Pty Ltd and is a Fellow of the Australasian Institute of Mining and Metallurgy. The 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 was 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 Australian 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 Australian Institute of Mining and Metallurgy.

The information in this Updated Gold Tailings Project Mineral Resource Statement which relates to Mineral Resources is based upon details compiled by Ian Glacken, who is a Fellow of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Ian Glacken is an employee of Optiro Pty Ltd and has sufficient experience which is relevant to the style of mineralisation and the 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 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code).

The Company is not aware of any new information or data that materially affects the information in the relevant market announcements. All material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

Mr Pearce, Mr Warriner, Mr Cervoj, Mr Weeks, Mr Glacken 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 Pearce, Mr Warriner, Mr Cervoj, Mr Weeks, Mr Glacken and Mr Keenan 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

#### **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 Golden Swan underground mine.

# NICKEL

## **COMPANY OVERVIEW**

## The Poseidon Story



Western Australian focused		2Mtpa processing plant				
Experienced Exploration and Development Team	Combined Nickel Resources ~400kt Ni	at Black Swan 1.5Mtpa processing plant at Lake Johnston (both on C&M)	Gold Tailings Project containing 180koz Au + option to treat another 62koz Au	Targeting nickel production in 2022		
Three quality nickel sulphide		<b>~</b> >	<u>A</u> R	<u>~</u>		
assets	る Golden Swan and		<u> </u>	\$		

#### **Experienced Board and Executive Team**





#### Derek La Ferla

#### **Non-Executive Chair**

Derek La Ferla is an experienced corporate lawyer and company director with over 30 years of experience working in corporate and commercial law. Derek is on the National Board of the AICD, a member of its WA Council and a fellow since 2010. He is also a partner (part time) at large independent WA law firm, Lavan and the Chairman of Sandfire Resources Ltd and Threat Protect Australia Ltd.



Peter Harold is a process engineer with over 30 years corporate experience in the minerals industry, specialising in financing, marketing, business development and general corporate activities. Prior to joining Poseidon, Peter was the Managing Director of Panoramic Resources for 18 years which developed and operated the Savannah and Lanfranchi nickel suphide underground mines.



#### **Dean Hildebrand**

#### **Non-Executive Director**

Dean Hildebrand is a Director and Chief Financial Officer of Black Mountain Metals, a global battery metals mining company. He is a corporate finance professional with experience in capital markets, mergers and acquisitions, and project financing within the natural resources sectors. Dean is the nominee Director for Black Mountain Metals Pty Ltd, a significant shareholder of the Company, holding 19.6%



## Felicity Gooding

#### **Non-Executive Director**

Felicity Gooding is the Deputy Chief Executive Officer of Minderoo, encompassing the philanthropic and private business holdings of Andrew and Nicola Forrest. Felicity has held senior positions at PwC, Diageo Plc and Fortescue Metals Group Ltd where she was instrumental in the raising of over \$5bn expansion financing. Prior to joining Minderoo, Felicity was an executive at potash development company Sirius Minerals Plc. Exploration Companies Inc.



#### Peter Muccilli

#### **Non-Executive Director**

Peter Muccilli is a geologist with more than 30 years of extensive exploration, development, operational experience in the resources sector, particularly nickel, gold, zinc and lead. He has proven experience in mine geology, exploration and resource estimation and was the former Managing Director and Chief Executive Officer for Mincor Resources NL. Peter is also the Technical Director for Constellation Resources Ltd.



#### **Brendan Shalders**

#### **CFO & Joint Co Sec**

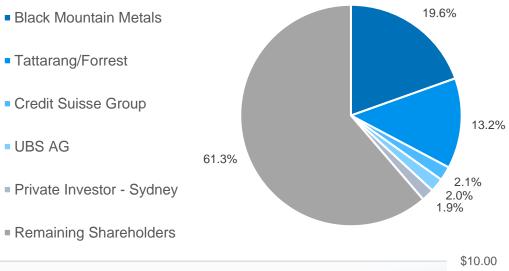
Brendan Shalders is a Chartered Accountant having commenced his career at KPMG. He was the Managing Director at FTI Consulting for nearly 3 years. Having held senior finance roles in both advisory and corporate settings, he has over 16 years' experience in corporate finance, accounting, risk management and business development, predominantly within the mining and mining services industries.

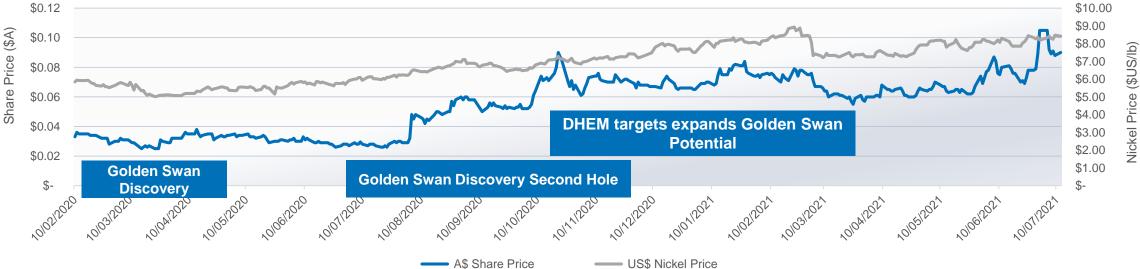
### **Capital Structure**



Capital Structure/Enterprise Value							
ASX Code	POS						
Shares on Issue	2.81B						
Share Price (14 July 2021)	\$0.10						
Market Cap	~\$280M						
Cash (31 Mar 2021)	~\$15M						

#### **Significant Shareholders**





#### Share Price Performance

# NICKEL

## **NICKEL MARKET**

## Electric Vehicles to drive massive nickel demand growth

"Our team accepted the challenge to transform product development at GM and position our company for an all-electric future," said Mary Barra, GM chairman and CEO.

November 2020

OUR

**ELECTRIC** 

POSEIDON

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## **Nickel Outlook**



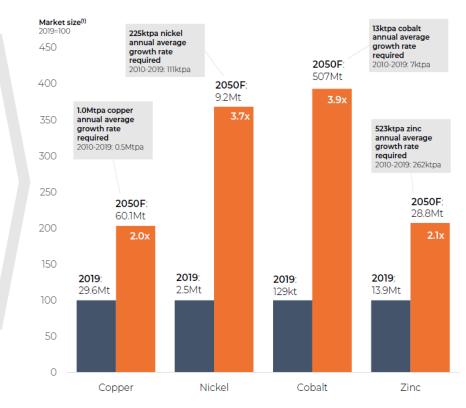
#### Electric Vehicles (EVs) drive nickel demand

- Significant investment by car manufacturers in electrification
- Traditional car makers, i.e. VW, showing they can build EVs cost efficiently with their ID.3 model UBS, March 2021
- Battery manufacturers adopting battery chemistries with higher nickel content Trafigura research, SMM, CIAP
- These batteries projected to hold 63% of EV market in six years
- Supply deficits in nickel forming over the decade
- Prices expected to rise to incentivise new production capacity

#### **Projected Base Metal Demand Growth**

#### ... needs significant metals supply growth ...

Forecast commodity demand under a Rapid Transition 1.5°C pathway



Glencore 2020 Preliminary results

### Jaguar Land Rover goes all-electric

Land Rover's Jaguar brand will be all-electric by 2025, the carmaker has said. Longer term, the UK government wants to outlaw the sale of all wholly petrol and diesel cars from 2030. POSEIDON

# NICKEL

## 

## **OUR NICKEL PROJECTS**

## Black Swan Project



Aerial view of Black Swan concentrator

### **Project Overview**

#### **History**

- Black Swan Production 5.9Mt @ 0.7% Ni for 41kt Ni
- Silver Swan Production 2.7Mt @ 5.1% Ni for 137.5kt Ni
- Total production 178.5kpta Ni in concentrate

#### **Current Resources & Infrastructure**

- Silver Swan underground 16kt Ni\* (grade 9.5%)<sup>1</sup>
- Black Swan open pit & stockpiles 179kt Ni\* (grade 0.6%)<sup>1</sup>
- 2.2 Mtpa processing plant and associated infrastructure

#### **Future Focus and Activities**

- Resources & Reserves definition drilling of Golden Swan
- Continue to explore the Southern Terrace
- Pre-works ahead of FID to mine high-grade ore in December 2021
- Develop & commission high-grade underground mine, second half 2022

#### Black Swan 2.2Mtpa milling circuit





#### Black Swan Project Silver Swan Discovery - 1995

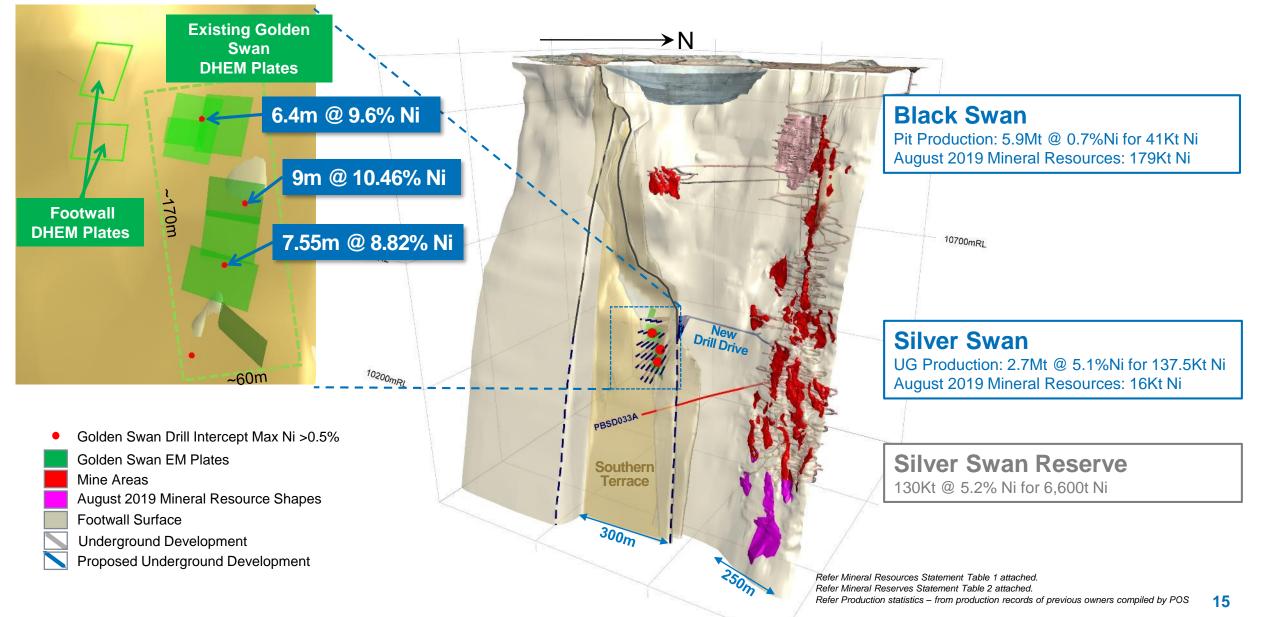


## Maiden Resource 440,000 tonnes @ 14% Ni for approximately 62,000 tonnes of Ni<sup>1</sup>

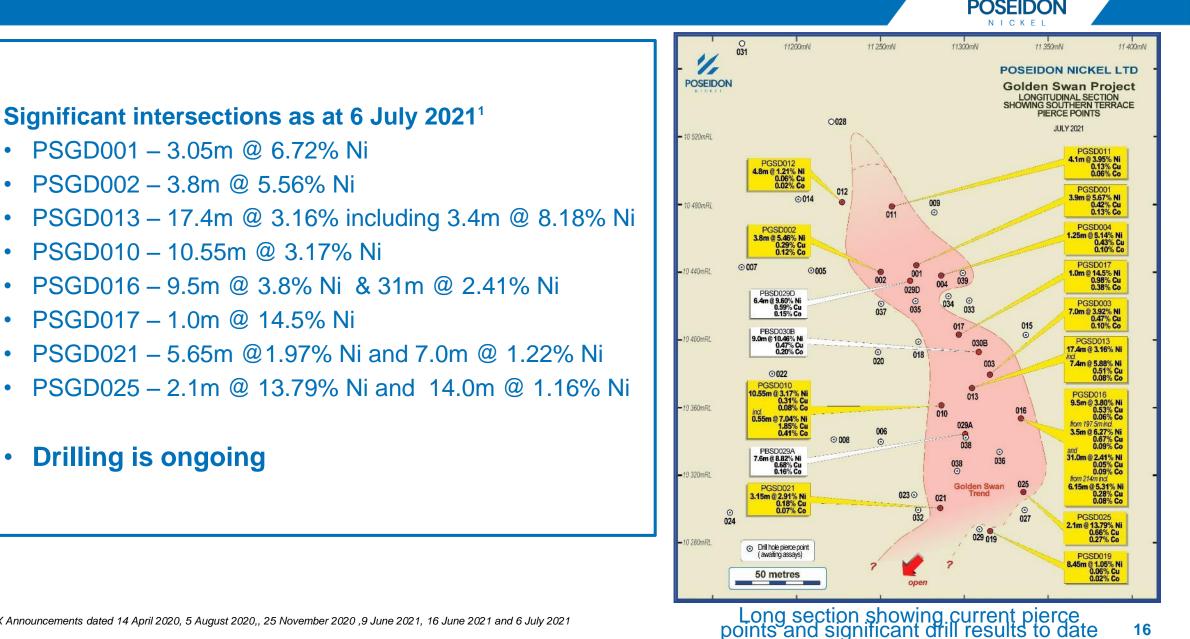
Left to Right: Kelvin Fox, David Burt & Jarmo Vesanto <sup>1</sup> MPI Press Release 20 November 1995

## **Golden Swan High Grade Discovery & Southern Terrace Prospectiv**





## Golden Swan Resource Drilling – results as at 6 July 2021



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## **Golden Swan & Southern Terrace – future activities**



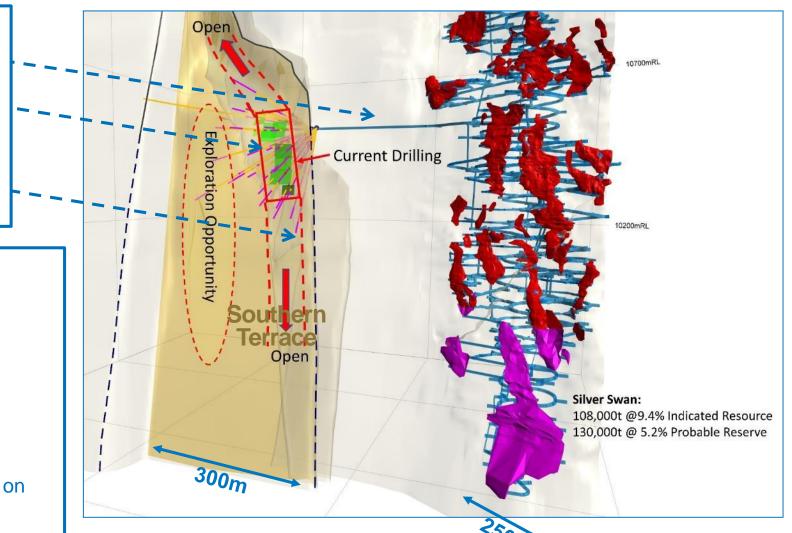
- Resource drilling 13,000m on track to be completed in July
- Southern Terrace further EM surveys & drill testing ongoing

#### **Golden Swan Metallurgy**

- Preliminary Testwork very positive<sup>1</sup>
- Ni recovery >90%
- Ni conc grade >13%
- Fe:MgO > 50:1
- Testwork ongoing

#### Processing

• GR Engineering completing a scoping study on restarting 150ktpa plant and 1.1Mpta plant

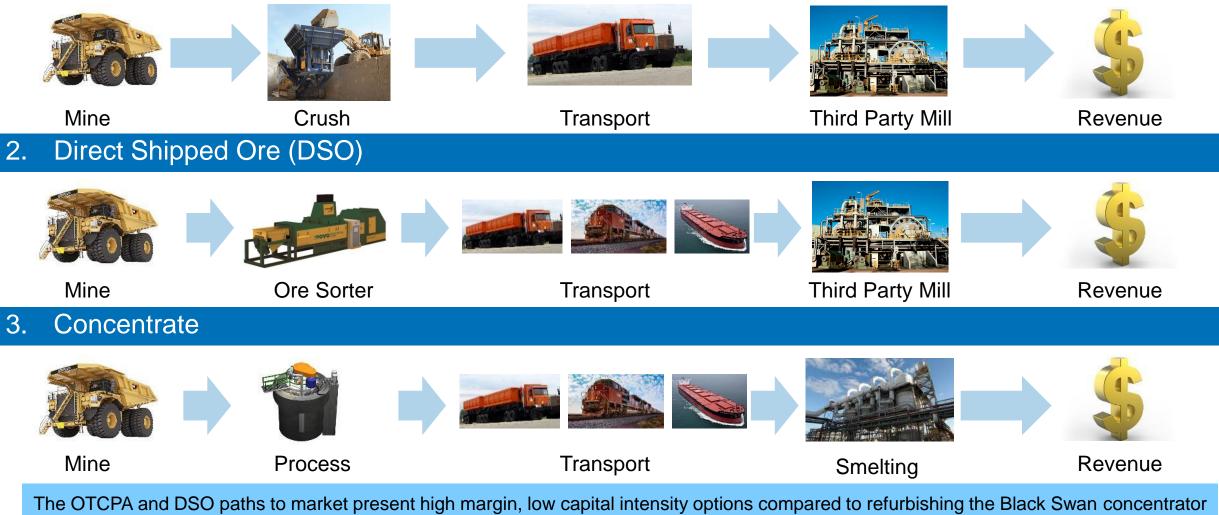


## **Golden Swan Path to Market**



The Company is assessing several options to bring Golden Swan to market

1. Ore Treatment Concentrate Purchase Agreement (OTCPA)



## **Progressing Toward Production in 2022**



WORKSTREAM	1Q21	2Q21	3Q21	4Q21	
GOLDEN SWAN					
- Drill drive					
- Resource drilling					
- Met test work					
- Detailed mine design / reserve					
<ul> <li>Production / marketing studies (DSO v Concentrator)</li> </ul>					Production in 2022
- Final Investment Decision				•	,
BLACK SWAN OPEN PIT AND HIGH-GRADE UNDERGROUND					
<ul> <li>Review of 2018 Restart Study incorporating Golden Swan and Windarra</li> </ul>					
- Final Investment Decision				•	

Note: proposed timeline could change subject due to delays in completing proposed workstreams, factors outside the control of the Company or macro economic considerations like commodity prices and exchange rates.

## Lake Johnston





#### **Project Overview**

#### History

- Emily Ann 1.5Mt @ 3.5% Ni mined and processed between 2001-2007
- Maggie Hays 10Mt @ 0.6%Ni mined and processed between 2008-2014
- 11.5Mt ore mined and processed to produce +100kt Ni

#### **Current resources & infrastructure**

- Maggie Hay 3.5Mt @ 1.5% Ni\* for 52kt Ni<sup>1</sup>
- 1.5Mtpa process plant (on C&M)

#### **Exploration Potential - Future activities**

- Assess options (sale, IPO, JV, retain)
- Update restart study
- Test geological theory
  - More Kambalda-style deposits
  - Intrusive model Follow up Abi Rose Ni discovery<sup>2</sup>





Lake Johnston processing plant

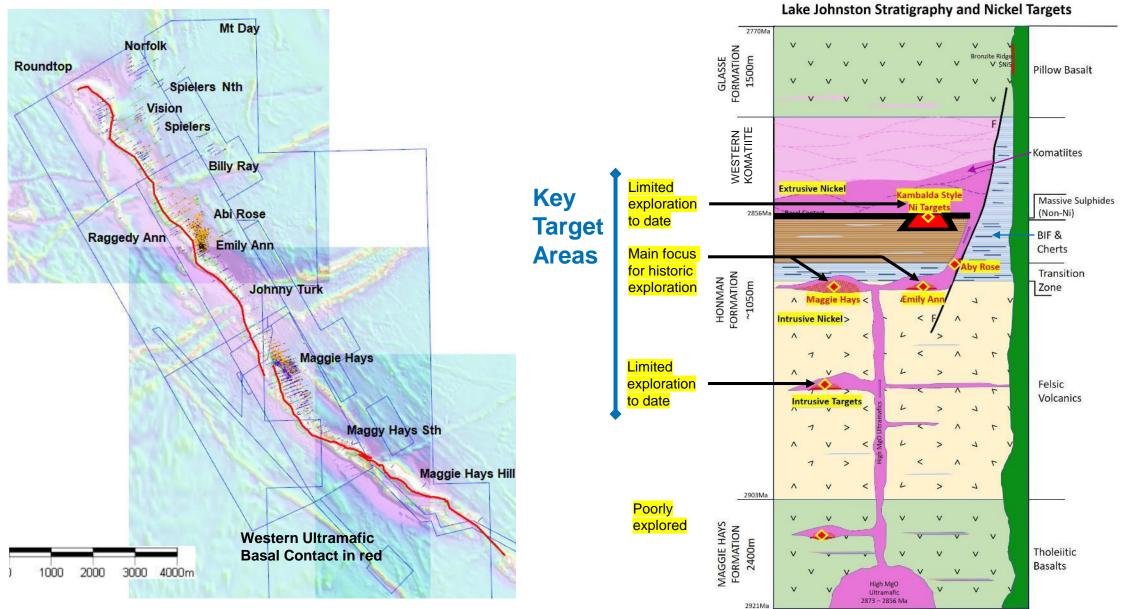
\*Contained Ni metal

<sup>1</sup> Reference Mineral Resources Statement Table 1 attached

<sup>2</sup> ASX Announcement Successful Drill Program at Abi Rose Concluded with all three diamond holes intersecting Massive Nickel-Copper sulphides" dated 21 November 2018

## Stratigraphy, Nickel Targets and Regional Magnetics





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## Mt Windarra





### **Project Overview**



#### History

- Discovered in 1969 and mined from 1974-1983
- 8Mt mined and processed to produce 84kt Ni\*

#### **Current resources & infrastructure**

- Mt Windarra 71.5kt Ni\* (grade 1.64%)<sup>1</sup>
- Cerberus Nickel 69kt Ni\* (grade 1.5%)<sup>1</sup>
- South Windarra 8kt Ni\* (grade 0.98%)<sup>1</sup>
- Gold Tailings contains ~180,000 oz/Au Resource<sup>2</sup>
- June 2020 PFS on Gold Tailings Project<sup>2</sup> confirmed low risk, low capex & opex

#### Future activities – Gold Tailings

- Complete DFS incorporating the 62,000oz of Lancefield tailings<sup>3</sup>
- Proposed plant 1.5Mtpa CIL processing facility
- Monetise existing gold resource and utilise cash for nickel strategy

<sup>\*</sup>Contained Ni metal

<sup>&</sup>lt;sup>1</sup> Refer Mineral Resource Statement attached Table 2

<sup>&</sup>lt;sup>2</sup> Refer ASX Announcement "Robust PFS completed for Windarra Gold tailings Project" dated 22 June 2020

<sup>&</sup>lt;sup>3</sup> Refer ASX Announcement "Poseidon to acquire rights to treat Lancefield gold tailings" dated 17 August 2020

# NICKEL



#### Black Swan

- Deliver maiden Golden Swan Resource and Reserve, finalise offtake and financing, FID by December 2021 or earlier
- Continue to drill test the Southern Terrace
- Convert more Silver Swan Resource into Reserve
- Complete a Scoping Studies on capex and opex of 150ktpa and 1.1Mtpa processing plants

#### Mt Windarra

- Study option of trucking ore to Black Swan for 1.1Mtpa processing option
- Complete gold tailings BFS and monetise asset

#### Lake Johnston

- Review and prioritise all exploration targets
- Determine optimum pathway for this asset

# NICKEL

Peter Harold Managing Director & CEO

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### **Mineral Resource and Reserve Statement Tables**



#### **Table 1: Nickel Projects Mineral Resource Statement**

				MINERAL RESOURCE CATEGORY											
Nickel Sulphide JORC Resources Compliance	Cut Off Grade	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 Met (t)	
BLAC	BLACK SWAN PROJECT														
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%	108	9.4	10,130	61	9.7	5,900	168	9.5	16,030	0.19	316	0.4	679
LAKE	LAKE JOHNSTON PROJECT														
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
WIND	ARRA PROJI	ЕСТ													
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
TOTAL															
Total Ni, Co, Cu Resources	2004 & 2012		16,775	1.04	174,030	27,275	0.81	221,500	44,049	0.90	395,530	0.02	7,516	0.03	13,379

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

Table 2.1 Windarra Gold Tailings Project North and South Dams Mineral Resource – JORC 2012 Tabulation									
	INDICATED								
	Tonnes (t)	AU (g/t)	Au (oz)	Ag (g/t)	As (ppm	) CU (ppm)	Ni (%)		
North Dam	3,624,000	0.78	91,000	1.9	1,770	360	0.10		
South Dam	923,000	0.48	14,000	0.6	630	369	0.26		
Total	4,547,000	0.72	105,000	1.6	1,540	360	0.13		
Table 2.2 Windarra Gold Tailings Project Central Dam Mineral Resource – JORC 2012 Tabulation									
	INDICATED								
	Tonnes (t)	AU (g/t)	Au (c	oz)	As (ppm)	CU (ppm)	Ni (%)		
Central	6,198,000	0.37	74,00	74,000 435.0 270		270	0.3		

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

		ORE RESERVE CATEGORY							
Nickel Sulphide Reserves	JORC Compliance	PROBABLE							
		Tonnes (kt)	Ni % Grade	Ni Metal (t)					
Silver Swan Project									
Silver Swan Underground	2012	130	5.2	6,800					
Silver Swan Open Pit	2012	3,370	0.63	21,500					
Total Ni Reserves	2012	3,500	0.81	28,300					

#### Table 1 – Nickel Resource Table

Black Swan Resource as at 22 Jul 2014 (ASX announcement "Poseidon Announces Black Swan Mineral Resource" 4 Aug 2014)

Silver Swan Resource as at 5 Aug 2019 (ASX announcement "Silver Swan Resource Upgrade..." 5 Aug 2019) Maggie Hays Resource as at 17 Mar 2015 (ASX announcement "50% Increase in Indicated Resources at Lake Johnston" 17 Mar 2015)

Mt Windarra Resource as at t Nov 2014 (ASX announcement "Poseidon Announces Revised Mt Windarra Resource" 7 Nov 2014)

South Windarra and Cerberus Resource as at 30 Apr 2013 (ASX announcement "Resource Increase of 25% at Windarra Nickel Project" 1 Dec 2011)

The Company is not aware of any new information or data that materially affects the information in the relevant market announcements. All material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

#### Table 2.1 Windarra Gold Tailings Project JORC2012 Mineral Resource

The Windarra Tailings estimate for North and South Dams has been reported based on the following: no cut-off grade has been used to report the resource, as potential mining method dictates removal of the entire dams. a dry bulk in situ density of 1.6 t/m<sup>3</sup> has been used to derive tonnages.

•resource numbers in Table 2.1 may not sum exactly due to rounding.

#### Table 2.2 Windarra Central Dam JORC2012 Mineral Resource

The Windarra Tailings estimate for the Central Dam has been reported based on the following:

•No cut-off grade has been used to report the resource, as the potential mining method dictates removal of the entire dam down to a specified elevation.

•The mineralisation has been reported above a flat elevation of 446 mRL; there are tailings below this level but these have been shown by drilling to contain no gold, and it is anticipated that the proposed mining method will not treat material below this elevation.

•A dry bulk in situ density of 1.6  $t/m^3$  has been used to derive tonnages.

•Resource totals may not sum exactly due to rounding.

Windarra Gold Tailings Resource as at 22 June 2020 (see ASX announcement "Gold Tailings Resource at Windarra updated to JORC 2012 Indicated" 22 Jun 2020). The Company is not aware of any new information or data that materially affects the information in the relevant market announcements. All material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

#### Table 3 – Nickel Reserve Table

Silver Swan Underground Reserve as at 26 May 2017 (ASX announcement "Silver Swan Definitive Feasibility Study" 26 May 2017).

Black Swan Open Pit Reserve as at 5 Nov 2014 (ASX announcement "Poseidon Announces Black Swan Ore Reserve" 5 Nov 2014).

The Company completed an upgrade to the Silver Swan Indicated Resource in 2019 which was based upon the 2015 Silver Swan Resource Estimate (refer Table 1 above). At this point it is not known the impact the updated to the Silver Swan Resource will have on the Silver Swan Reserve.

The Company is not aware of any other new information or data that materially affects the information in the relevant market announcements for the Black Swan Open Pit Reserve. All material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.