

26 May 2017

## SILVER SWAN DEFINITIVE FEASIBILITY STUDY

Poseidon Nickel Limited (ASX: POS. "Poseidon" or the "Company") is pleased to advise the key outcomes of the Definitive Feasibility Study (DFS) for the Silver Swan high grade underground nickel mine.

### *Highlights*

#### **Strong Economic Fundamentals**

- **High grade underground nickel mine**
- **All-in-sustaining cash costs including capital of US\$3.10lb**
- **Breakeven nickel price of US\$4.63/lb on an undiscounted basis**
- **First ore from financing in less than 9 months**

#### **Low Capital Intensity**

- **Existing underground mine and infrastructure**
- **Pre-production and working capital of A\$25.0m**

#### **Physical Parameters**

- **Initial 2 year mine life for 147Kt of ore and 8.8Kt of contained nickel**
- **Underground mine diluted Ore Reserve of 3.3kt of contained nickel, grading 5.8% nickel, 0.1% cobalt & 0.3% copper to surface**

#### **Significant Upside**

- **Silver Swan Deeps, Black Swan Open Pit plus stockpiled ore, combined with Windarra & Cerberus add potential project mine life for a minimum of 7 years**

The Company Chairman Chris Indermaur stated, "The DFS demonstrates Silver Swan has a robust production and nickel grade profile and the completion of the detailed engineering for Silver Swan will allow Poseidon to take early advantage of an improving nickel market, as soon as this occurs."

“Poseidon welcomes the positive outcomes of the DFS that reinforce the Company’s decision to purchase the Black Swan Operations (the Project). The acquisition of the Project was a strategic decision undertaken by the Company in 2014 and it remains a core asset located in a highly prospective nickel and gold location. Poseidon purchased the Black Swan Operations in order to access the 2.2 million tonne per annum process plant, supporting infrastructure and associated high grade underground Silver Swan and Black Swan open pit mines.”

The DFS results included in this announcement are drawn from the engineering work undertaken by MineGeotech Pty Ltd and Beck Engineering Pty Ltd (geotechnical studies) and Entech Pty Ltd (mining method, life of mine schedules, mining costs & mine capital development costs). Mining costs are estimated at +/-15% level of accuracy and sourced from budget estimates supplied to Entech by mining contractors.

Key Production Physicals	
Life of Mine (LOM)	~2 years
Ore Tonnes Mined	147Kt
Ore Tonnes Delivered to surface	73,000t per year
ROM diluted nickel head grade	6%
Nickel metal	8.8Kt

Table 1: Key Production Physicals

Project Commercial Metrics	
Revenue <sup>1</sup>	\$120.7m
C1 Cash Costs <sup>2</sup>	US\$2.05/lb-Ni
All in Sustaining Cash Costs (AISC) <sup>3</sup>	US\$3.10/lb-Ni
Breakeven Nickel Price	US\$4.63/lb-Ni
Net Cash Flow (Pre-Tax basis)	\$34.7m
Pre-Tax NPV <sub>10</sub>	\$27.8m
IRR	204%

Table 2: Project Commercial Metrics

<sup>1</sup> Unless otherwise stated, all cash flows are in Australian dollars and not subject to inflation or escalation factors. A nickel price of US\$6.50/lb has been assumed and an exchange rate of AUD:USD of 0.70.

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

<sup>3</sup> All-in-sustaining cash costs are C1 cash costs plus mine development and sustaining capital.

**Cautionary Statement:** The production target and financial forecasts derived from the production targets in this announcement are based on the Company’s Ore Reserve estimates as detailed in Table 3 below (which underpin 37% of the target and forecast) with the remainder underpinned by a lower level of geological confidence with Inferred Resources as detailed in Table 4 and stated material assumptions disclosed in this announcement and in Attachment A (refer Silver Swan Ore Reserve Estimate).

The Company will need to secure new funding in order to achieve the stated financial outcomes. This funding may be raised via debt and/or equity, depending upon market conditions at the time. An equity raising will result in dilution of existing shareholders, the quantum of which will depend on the amount of any equity funding raised. The need for an equity raising has not yet been determined.

### Silver Swan Ore Reserve Estimation

The Silver Swan Ore Reserve estimates were classified in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012). Entech Pty Ltd has consented to the release of the Ore Reserve statement (Table 3 below) and Attachment A (Silver Swan Reserve Estimate), as required under the JORC Code, 2012.

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

**Table 3: Silver Swan JORC 2012 Ore Reserve as at May 2017**

Note:

The material assumptions underpinning the Silver Swan Ore Reserve estimates are provided in Attachment A. 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.

### Project Overview

Following the positive outcomes of the scoping study on Silver Swan completed internally by Poseidon, the Company advised the market (ASX: refer to 26 November 2015 AGM presentation and announcement dated 12 November 2015) that detailed engineering including geotechnical modelling and engineering would be progressed to confirm the project economics at a DFS level in support of a restart of the Silver Swan mine in an improving nickel market. The Company also advised that the only outstanding regulatory requirement was the approval of the Project Management Plan (PMP) that has since been submitted to the WA Department of Mines and Petroleum (DMP).

The DFS confirmed restarting the high grade underground mining operations at Silver Swan and direct shipment of ore (DSO) to China under an existing offtake agreement with Tsingshan (agreement expires December 2017 and the Company is confident this can be extended further) generates a healthy return on investment at a nickel price above US\$5.50/lb-Ni. The Company is presently exploring options to fund the initial pre-production activities which include refurbishment of the mine and infrastructure in preparation of a restart at the right time.

At 9.2% Resource grade, the very high grade nickel mineralised zones at Silver Swan delivers a diluted Reserve grade of approximately 6% nickel to surface (Table 3). This results in a very low forecast C1 operating and capital cash costs of US\$2.05/lb-Ni and US\$1.05/lb-Ni respectively. The low capital intensity further enhances the Project fundamentals making it an attractive first step as Poseidon moves to become Australia's new nickel producer in what remains a difficult market for existing nickel producers. Furthermore, Silver Swan Deeps (Inferred Resources), Black Swan open pit, stockpiled ore, Windarra and Cerberus nickel sulphide deposits offer significant upside by potentially by extending mine life a minimum of 7 years.

**Next Steps**

- Consider debt and/or equity funding alternatives and continue discussions with commodity traders, refiners, stainless steel producers and strategic joint venture parties
- Prepare tender documentation for Silver Swan underground mining operations
- Define further drilling of the Silver Swan high grade massive sulphide mineralised zones to improve the resource definition
- Secure outstanding regulatory approval for the PMP
- Update the Black Swan prefeasibility study capital estimate for the process plant refurbishment to a definitive feasibility level of +/-15% accuracy and incorporate Silver Swan as a fully integrated alternative

**Background**

The Silver Swan underground nickel mine site is adjacent to the Black Swan Nickel Operation located 53 km north-east of the city of Kalgoorlie-Boulder, which is 600 km east of Perth, Western Australia. The site location is shown below in Figure 1. Ore was first mined from the high grade underground Silver Swan ore body in 1997 and then from the Black Swan disseminated orebody an adjacent open pit mine from 2004 to February 2009 when the site closed at the peak of the global financial crisis.

The process plant and infrastructure has been expanded several times since the initial high grade circuit was installed for the treatment of massive nickel sulphide ore from Silver Swan. A major plant upgrade of the concentrator was successfully commissioned in 2006 and achieved throughput rates of over 2.2Mtpa. The Black Swan open pit mine was also expanded to support the process plant upgrade. Ore processing through the Black Swan concentrator involved conventional nickel sulphide flotation to upgrade the ore to a final concentrate product grading around 16% - 20% nickel.

The operation comprises one exploration licence and four mining leases. The total lease holding covers an area of 4,648 hectares. The ore from both was processed through the original Silver Swan processing facility which was commissioned in May 1997. Annual production through the original plant was around 300,000tpa.

The Silver Swan orebody is accessed by a decline ramp system from the base of a box-cut located 430 metres west of the orebody (Figures 2 and 3). The Black Swan orebody is accessed by a three stage open pit (Figure 2).

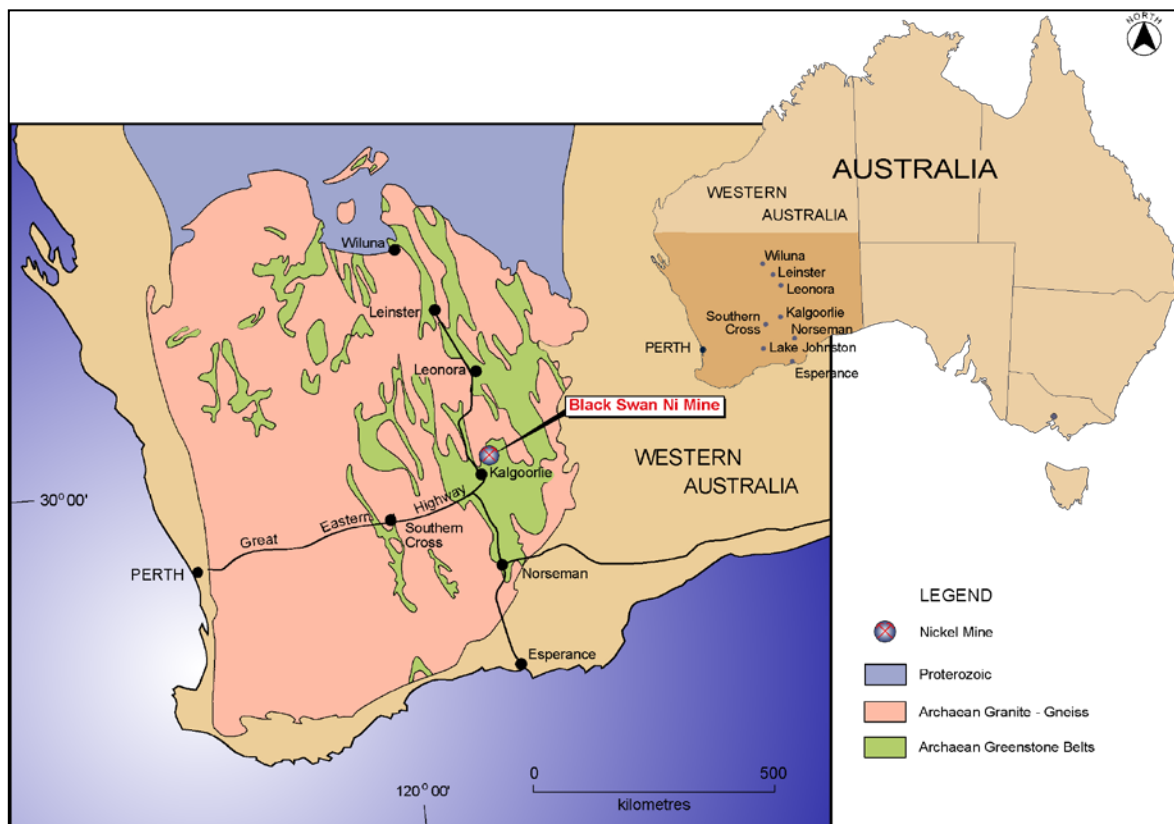


Figure 1: Black Swan Nickel Operation Location

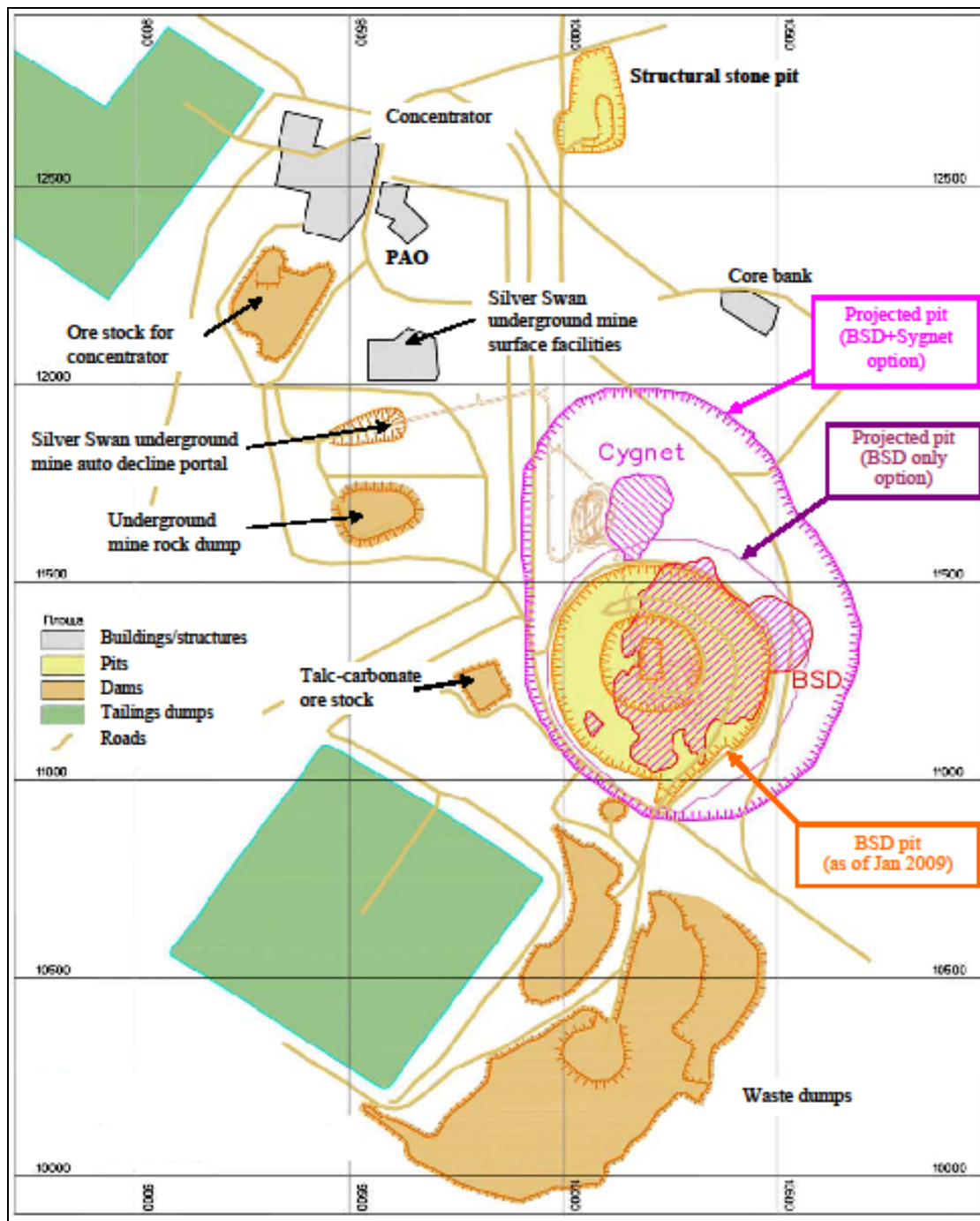


Figure 2: Overview of Black Swan Nickel Operations

## Geology

The massive Silver Swan ores form a series of steep-tiled lenses confined to the Black Swan Komatiite Complex (BSKC) basal contact. Primary mineralisation is represented by pentlandite and pyrrhotite, small amount of violarite, chalcopyrite, pyrite and gersdorffite. Individual ore bodies include Silver Swan, White Swan, Goose, Fledgling, Canard, Odette, Trumpeter, Peking Duck, Tundra, Mute & Pato at depth (Figure 3). The mineralised zones are steep tilted northwards along the southern margin of Silver Swan structurally raised footwall (FW) dome and explored to a depth of 1600m from surface. The mineralised zones have been mined to approximately 1100m from surface.

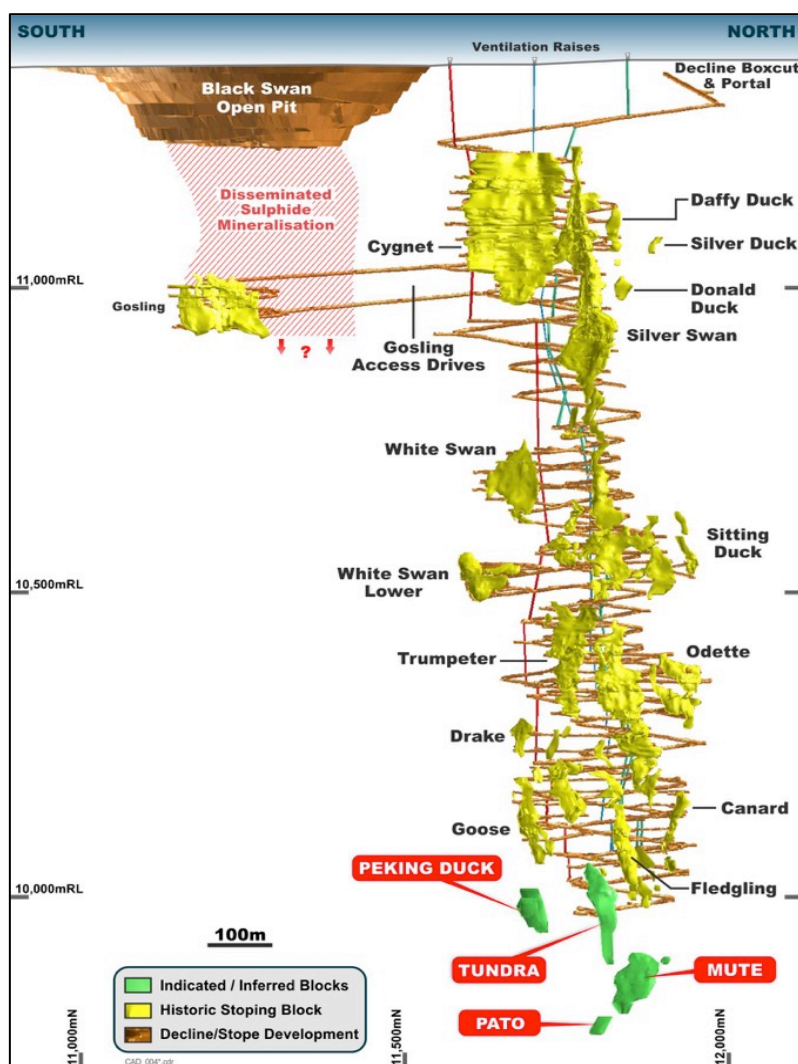


Figure 3: Black Swan & Silver Swan Section

In 2016 Poseidon commissioned Optiro Pty Ltd to complete an updated Mineral Resource estimate for the Silver Swan nickel project (ASX: Silver Swan Resource Update dated 3 June 2016). The estimate was classified in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources, and Ore Reserves (JORC Code, 2012). Optiro classified the Mineral Resource principally on geological confidence, drill hole spacing, and grade continuity demonstrated from the available drilling data. The Company is not aware of any new information or data that materially affects the information included in the previously disclosed Mineral Resource estimates and all material assumptions and technical parameters underpinning the estimates as disclosed continue to apply and have not materially changed.

A summary of Mineral Resources for Silver Swan is provided in Table 4 below and are inclusive of Mineral Resources modified to produce the Ore Reserves. The mineralisation models and block reporting cut-off grade used in the in-situ resource estimate for Silver Swan is 4.5% Ni and Black Swan is 0.4% Ni.

Silver Swan Underground Nickel Project Sulphides	Cut Off Grade	Mineral Resource Category (JORC 2012)								
		Indicated			Inferred			TOTAL		
		Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Tonnes (Kt)	Ni% Grade	Ni Metal (t)
<b>Tundra-Mute</b>	4.5%	24.0	9.2	2,200	73.3	8.9	6,480	97.2	8.9	8,690
<b>Peking Duck</b>	4.5%	20.7	8.8	1,820	8.0	10.2	820	28.9	9.2	2,640
<b>Fledgling- Canard</b>	4.5%	5.8	10.4	600	2.9	9.8	280	8.7	10.2	880
<b>Goose</b>	4.5%	1.5	10.0	150	0.0	0.0	0	1.5	10.0	150
<b>Total Silver Swan</b>	4.5%	<b>51.9</b>	<b>9.2</b>	<b>4,770</b>	<b>84.2</b>	<b>9.0</b>	<b>7,580</b>	<b>136.1</b>	<b>9.1</b>	<b>12,360</b>

*Note: totals may not sum exactly due to rounding*

**Table 4: Silver Swan JORC 2012 Mineral Resource Estimate (4.5% Nickel Cut-Off) as of May 2016**



## Material Assumptions, Economic Assumptions and Outcomes from DFS

### Silver Swan Mining

The mining area will be accessed through the existing Silver Swan portal and decline. Previous mining was completed in 2008 and the mine has been kept dry and on care and maintenance since this time. The existing decline has been developed at a 1-in-7 gradient from the portal at 11346m RL to the 9967m RL, over approximately 9.7km of length. The mine was extensively stoped during previous operations with most of the deeper voids being paste-filled.

The existing ventilation raise and escapeway system has been inspected. The ventilation rise system will require some bogging of material that has fallen out of rises in some areas. The escapeway system will require some rehabilitation works including replacement of some sections of ladderways. The decline was inspected by an independent geotechnical consultants and some minor rehabilitation was identified. A detailed refurbishment cost was prepared by the engineer and included for in the DFS cost model.

All development was designed at a maximum 1-in-7 gradient. Level development was designed flat. Decline and capital development requiring truck access were planned to be developed at a 5.0m W x 5.0m H profile to allow the use of 50 t-sized underground trucks while conforming to the 1.8m minimum clearance requirements within travel ways of the WA Mine Safety and Inspection Regulations (MSIR). Shoulders are rounded with a 1m radius arch.

Capital development has been designed in the FW as per previous mining. A minimum decline stand-off of 40m from stoping voids has been assumed. A decline radius of 30m has been applied. Stockpiles have been designed between levels on the decline and in level accesses for truck loading. Ore drives within the Tundra-Mute area have been designed to intersect the orebody from the southern end based on geotechnical advice.

Figure 4 below illustrates the Silver Swan development design.

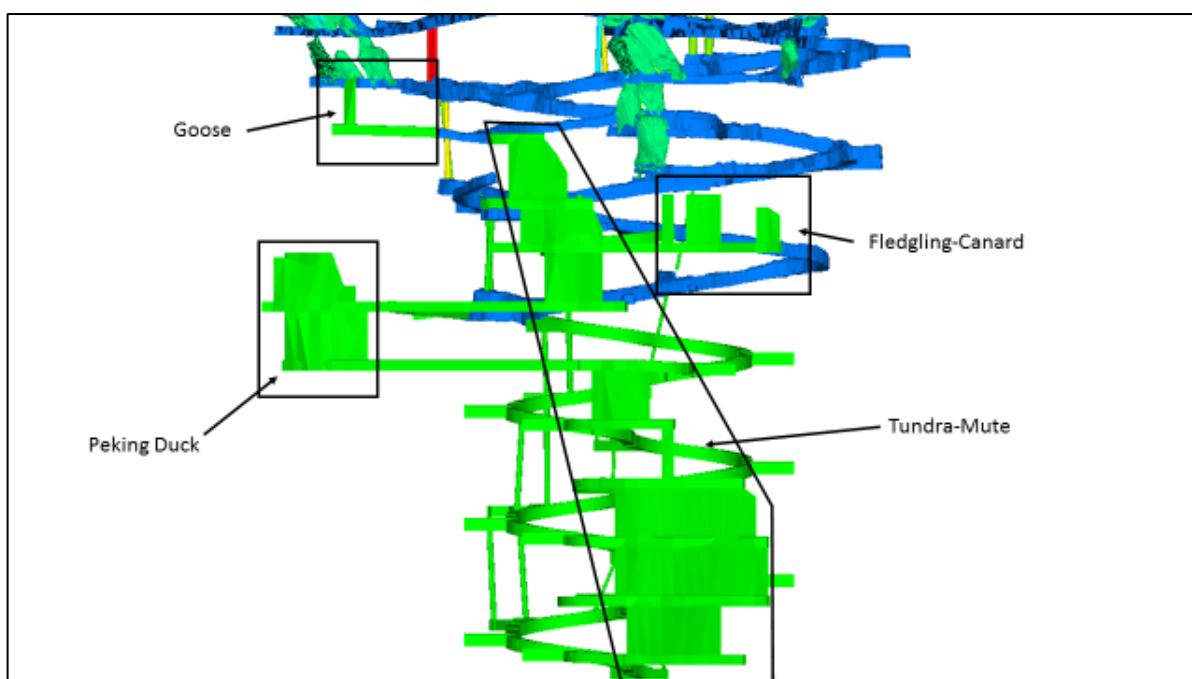


Figure 4: Silver Swan Mine Development

## Processing

No ore processing is required as the ore mined will be shipped directly to Tsingshan without further treatment capturing 100% of the contained nickel.

## Operating Costs

The Silver Swan underground operating costs are outlined in Table 5 below.

Operating Cash Costs (US\$/lb)	Silver Swan
Mining	1.07
Haulage + G&A	0.04
Transport of Ore	0.69
Royalties	0.25
By-product Credits	-
<b>Total Cash Cost</b>	<b>2.05</b>
<b>Operating Costs (A\$/tonne)</b>	
Mining	202.59
Haulage + G&A	8.00
Transport of Ore	130.23
Royalties	45.95
By-product Credits	-
<b>Total Operating Costs</b>	<b>386.77</b>
<b>Ore Produced (tonnes)</b>	<b>147,004</b>

**Table 5: Forecast Operating Costs**

**Note:**

1. Operating costs are the average life of mine costs
2. The underground mining costs are sourced from Entech Pty Ltd based DFS.
3. Cash cost includes mining, G&A, transport and royalties on a 100% payable basis (excludes capital, corporate costs, working capital and financing costs)

## Capital Estimate

The Silver Swan underground capital costs are outlined in Table 6 below.

Capital Expenditure Description	A\$m
Refurbishment of Silver Swan u/g mine	1.8
Mine underground Escapeways	1.1
Underground mine development costs	11.2
Pre-production Costs	2.4
Infrastructure Capital	4.2
Resource drilling (estimate)	1.2
<b>Total Capital</b>	<b>21.9</b>
Contingency	0.7
<b>Total Capital (incl. contingency)</b>	<b>22.6</b>

**Table 6: Forecast Capital Expenditure Costs**

**Note:**

1. The Silver Swan capital costs are sourced from:
  - a. Entech Pty Ltd, Definitive Feasibility Study 2017
  - b. MineGeotech Pty Ltd & Beck Engineering Pty Ltd Geotechnical Modelling 2017
2. The above capital estimate excludes working capital

The total funding requirement for the Silver Swan Nickel Project is forecast to be approximately A\$25m which includes all contingencies, pre-production, refurbishment & restart costs and includes an allowance for working capital.

### **Criteria Used for Classification and Estimation Methodology**

The Probable Ore Reserve is based on that portion of the Indicated Mineral Resource within the mine designs that may be economically extracted and includes an allowance for dilution and ore loss.

None of the Probable Ore Reserves have been derived from Measured Mineral Resources. The result appropriately reflects the Competent Person's view of the deposit.

### **Cut-off Grades**

Cut-off grade parameters for the underground ore were determined based on the 2017 financial analysis, assuming the direct shipment of ore (DSO) to Tsingshan. The fully costed stoping cut-off grade applied for the Silver Swan underground was 3.0% Ni, and the incremental stoping cut-off grade was 2.1% Ni.

A nickel price of \$US6.50/lb and a USD:AUD exchange rate of 0.70 was used to determine the cut-off grades.

### **Mining Methods and Mining Assumptions**

- Detailed mine designs were carried out on the Silver Swan underground, and these were used as the basis of the Reserve estimate.
- The Silver Swan Ore Reserve is planned to be mined using a bottom-up modified Avoca method with unconsolidated backfill. This mining method is based on detailed dynamic geotechnical modelling. Diesel powered trucks and loaders will be used for materials handling. Diesel-electric jumbo drill rigs will be used for development and ground support installation, and diesel-electric longhole rigs used for production drilling.
- The mining methods chosen are well-known and widely used in the local mining industry and production rates and costing can be predicted with a suitable degree of accuracy. Suitable access is available through the existing workings, which have been kept pumped dry during care and maintenance.
- Re-entry and refurbishment of capital development was costed in the Silver Swan mine plan based on detailed independent expert inspection.
- Independent geotechnical consultants MineGeotech Pty Ltd and Beck Engineering Pty Ltd contributed appropriate geotechnical analyses to a suitable level of detail. These form the basis of mine design, ground support, refurbishment costs and mining method selection for the Reserve estimate.
- Underground stopes were designed inclusive of minimum mining width of 2.5 m plus dilution volumes determined by independent geotechnical analysis and dynamic modelling. Global planned waste dilution is 35%, and unplanned waste dilution is 7%. An extra 2% of waste dilution was applied to allow for overbog of fill. Non-fill dilution was assumed to carry a grade of 0.35% Ni, based on Mineral Resource information provided by POS. Sub-level intervals are 25 m based on geotechnical advice.

Maximum stope spans opened prior to filling are 5 m along strike. A mining recovery of 95% has been applied to all stopes. Ore development had an assumed 100% mining recovery, based on historical experience and industry standards.

- Most of the infrastructure required for the operations is already in place and has been under care and maintenance for approximately 8 years, including a processing plant and associated infrastructure, access roads, offices and ablutions, connections to the Western Power grid, power reticulation, and borefields. Allowance has been made for refurbishment of this infrastructure where required based on quotes provided by reputable independent vendors to an appropriate standard of detail.
- Only the Indicated portion of the Mineral Resource was used to estimate the Ore Reserve. All Inferred material has had grade set to waste for the purposes of evaluation. The Ore Reserve is technically and economically viable without the inclusion of Inferred Mineral Resource material.

### **Processing Method and Processing Assumptions**

- Cobalt has been included as a by-product in the Ore Reserve estimate.
- The Silver Swan Ore Reserve estimate has been determined based on a sale of DSO to a customer in China. The payable metal content of the ore has been provided by POS based on an existing ore offtake agreement with Tsingshan.
- The DSO off-take agreement payable metal content for nickel is 67% with no payable for cobalt.

### **Modifying Factors and Approvals**

The project site is already developed and is in care and maintenance. The required infrastructure is already in place and only relatively minor refurbishment is required. As the site is 53 km from Kalgoorlie, a residential workforce is expected to drive in/drive out on a daily basis. The mine is connected to the Western Power grid through two lines, one feeding the concentrator and one feeding the other surface infrastructure and underground workings.

## MINERAL RESOURCE STATEMENT

Table 7: 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		16,720	1.01	168,700	27,300	0.82	223,200	44,020	0.89	391,900	0.05	7,450	0.10	13,300

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.

Table 8: Gold Tailings Project Mineral Resource Statement

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

Note: totals may not sum exactly due to rounding.

## ORE RESERVE STATEMENT

Table 9: Nickel Projects 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.

**COMPETENT PERSON STATEMENTS:**

*The information in this report that relates to Exploration Results is based on, and fairly represents, information compiled and reviewed by Mr N Hutchison, General Manager of Geology 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 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 Matthew Keenan who is a full-time employee of Entech Pty Ltd. Both are 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 Neil Hutchison, General Manager of Geology at Poseidon Nickel, who is a Member of The Australian Institute of Geoscientists and 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 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 Neil Hutchison, General Manager of Geology at Poseidon Nickel, who is a Member of The Australian Institute of Geoscientists and 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 Matt 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 Neil Hutchison, General Manager of Geology at Poseidon Nickel, who is a Member of The Australian Institute of Geoscientists and 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 Hutchison, 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 Hutchison, 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.*

**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.*

**ATTACHMENT A  
JORC (2012) Table 1  
Silver Swan Ore Reserve Estimate**



**SILVER SWAN ORE RESERVE ESTIMATE**

**SECTION 1 Sampling Techniques and Data**

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

JORC Code explanation	Commentary
<b>Sampling techniques</b>	
<p><i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><i>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i></p>	<p>Underground diamond drilling has been used to obtain core samples. Sampling is a mixture of full core, and half core sampling. In general, 1 m samples or smaller have been used for exploration and grade control drilling.</p> <p>Samples have been obtained from drilling carried out from underground drilling by LionOre and Norilsk Nickel Australia below the 10100mRL level. The drilling database and block model above this RL have been cut from the resource estimate data set as these have been mined out and are not reported in this document. Only drilling completed between 2006 and 2008 are included in the resource estimate.</p> <p>Diamond drilling sampling protocol has followed accepted industry practice, with all mineralised core sampled and intervals selected by geologists to ensure samples did not cross geological or lithological contacts. Core was halved, with a half sent for assay and the remaining core retained for geological reference.</p>
<b>Drilling techniques</b>	
<p><i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</i></p>	<p>Underground diamond drilling is the method by which drilling has been conducted into the ore zones below the 10100mRL level of the mine.</p> <p>All of the diamond core below the reported 10100mRL is of NQ size. Core orientation was carried out using the EzyMark system.</p> <p>All core trays are digitally photographed to maintain a permanent record of core prior to any sampling operations. Hard copy photographs exist for core photographed before the advent of digital photography.</p>
<b>Drill sample recovery</b>	
<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p> <p><i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></p>	<p>Core recovery and presentation has been documented as being good to excellent and inspection of core trays by Poseidon geologists has confirmed the quality of core recovery.</p> <p>Due to the good to excellent core recovery, Poseidon has no reason to believe that there is bias due to either sample recovery or loss/gain of core.</p>
<b>Logging</b>	
<p><i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></p> <p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	<p>Much of the drill core has been oriented prior to the core being logged. Drilling data and geological logging was electronically captured and uploaded in to the site Acquire® geology SQL database. This has been exported to an Access database which has been converted to Surpac format for modelling.</p> <p>The entire length of the drillholes have been logged geologically and entered into the digital database.</p>
<b>Sub-sampling techniques and sample preparation</b>	
<p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p> <p><i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p> <p><i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for</i></p>	<p>All of the deeper drill core used in this estimation was either full core or cut using a core saw, with half core used for sampling.</p> <p>Resource and grade control drilling was crushed to &lt;3 mm and then split to 3 kg lots, then pulverised. This is appropriate given the sample interval and mass.</p>

JORC Code explanation	Commentary
<p><i>field duplicate/second-half sampling.</i> <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	
<p><b>Quality of assay data and laboratory tests</b></p>	
<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> <i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i> <i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></p>	<p>All assaying since March 2004 has been carried out by Kalgoorlie Assay Laboratories (Kalassay, now Bureau Veritas) using ICP-OES on a 4 acid digest using standard laboratory practices. Both independent and laboratory internal QAQC were used.</p> <p>Site specific standards were derived from two RC drillholes specifically designed for the purpose and prepared by ORE Pty Ltd in Melbourne. Analysis for these standards was for Ni, As, Fe and Mg.</p> <p>The following QA/QC measures were adopted during the sampling and assaying of underground diamond drill core and include:</p> <ul style="list-style-type: none"> <li>• Blank inserted in 1:25 samples</li> <li>• Certified standards inserted in 1:25 samples</li> <li>• Sizing analysis of 1:20 samples</li> <li>• Duplicate analysis of quarter core for 1:25 holes</li> <li>• Analysis of laboratory QAQC. Repeat analysis completed by laboratory on 5% of samples</li> <li>• Monthly reporting of QAQC</li> <li>• Six monthly temporal and spatial analysis of the erroneous standards and blanks.</li> </ul> <p>The quality of the data received from the laboratory appears to be good, with no major issues being highlighted. Standard samples have a well-defined margin of error suitable for the deposit.</p> <p>No external laboratory checks were conducted on the drill samples.</p>
<p><b>Verification of sampling and assaying</b></p>	
<p><i>The verification of significant intersections by either independent or alternative company personnel.</i> <i>The use of twinned holes.</i> <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> <i>Discuss any adjustment to assay data.</i></p>	<p>Logging and assay data is electronically captured and up loaded in to the site Acquire® geology SQL database which was handed over to Poseidon following the sale transaction. This has been exported to an Access database which has been converted to Surpac format for modelling.</p>
<p><b>Location of data points</b></p>	
<p><i>Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i> <i>Specification of the grid system used.</i> <i>Quality and adequacy of topographic control.</i></p>	<p>All collar surveys were completed to an accuracy of ±10 mm and recorded by the underground surveyor. A local grid based on seven known AMG_84 references was created. The Department of Land Information (formerly the Department of Land Administration) benchmark UO51 on the Yarri Road opposite 14 Mile Dam was used to tie the survey control stations to the Australian Height Datum (AHD). A height datum of AHD + 1000 m was adopted for the Black Swan project.</p> <p>A local mine grid was established and used throughout the operation. Poseidon has also converted surveys to the current MGA_94 grid format.</p> <p>All Silver Swan diamond drillholes have been routinely surveyed downhole. All underground diamond drillholes have been surveyed using either Eastman Single Shot down-hole survey instruments or Reflex Gyro instruments.</p>
<p><b>Data spacing and distribution</b></p>	
<p><i>Data spacing for reporting of Exploration Results.</i> <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></p>	<p>Underground drilling used a maximum spacing of 10 m x 10 m for Indicated category resources and approximately 10m x 20m and 20 m x 40m for Inferred resources.</p> <p>Sample data was composited to 1 m.</p>

JORC Code explanation	Commentary
<i>Whether sample compositing has been applied.</i>	
<b>Orientation of data in relation to geological structure</b>	
<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	Drillhole orientation was dominantly between 20°-60° to geological continuity as the mineralisation is drilled from underground workings in the footwall of the deposit which dips 80° to grid east. The angle of intersection is factored into the resource shape interpretations and is well understood as it is verified by mining and reconciliation of the ore zones to a depth of 1300m below surface. The sampling and interpretations meets the requirements of the resource estimation.
<b>Sample security</b>	
<i>The measures taken to ensure sample security.</i>	There are no documented details available regarding sample security. As the mine is not precious metals and the drilling consists of visually observable massive nickel sulphide mineralisation, security is not considered to have been compromised.
<b>Audits or reviews</b>	
<i>The results of any audits or reviews of sampling techniques and data.</i>	Examination of duplicate, blank and standard data does not highlight any material bias or systematic error. The drillhole intersections correlate well with the block model results.

**Section 2 Reporting of Exploration Results**  
(Criteria listed in the preceding section also apply to this section.)

**Section 2: Reporting of Exploration Results**

<b>Mineral Tenement and Land Tenure Status</b>	
<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i>	Silver Swan underground mine is located in the Kalgoorlie District within M27/200. Silver Swan mine is part of the Black Swan Operation which is located 42.5km NE of Kalgoorlie. M27/200 is registered to MPI Nickel PTY Ltd which is a 100% subsidiary of OJSC MMC Norilsk Nickel. Following the purchase of the assets from Norilsk, the tenement is currently in the process of being transferred to Poseidon Nickel Limited.
<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	All operating licenses are in place and are currently being renewed and transferred to Poseidon Nickel.  Historical royalties of 3% NSR exist over the minerals produced.
<b>Exploration Done by Other Parties</b>	
<i>Acknowledgment and appraisal of exploration by other parties.</i>	The Silver Swan Mine was discovered by MPI Mines Ltd, then was acquired by LionOre in 2004. Much of the exploration drilling and development was completed by these 2 companies. In turn LionOre was taken over by Norilsk in 2007 and continued mining and developing the underground mine at Silver Swan. Poseidon Nickel purchased the operation from Norilsk in late 2014.
<b>Geology</b>	
<i>Deposit type, geological setting and style of mineralisation.</i>	The Silver Swan deposit is a Kambalda style komatiite hosted nickel deposit.
<b>Drillhole Information</b>	
	No new Exploration Results have been reported.
<b>Data Aggregation Methods</b>	
	No new Exploration Results have been reported.
<b>Relationship Between Mineralisation Widths and Intercept Lengths</b>	
	No new Exploration Results have been reported.
<b>Diagrams</b>	
	No new Exploration Results have been reported.
<b>Balance Reporting</b>	
	No new Exploration Results have been reported.
<b>Other Substantive Exploration Data</b>	
	No new Exploration Results have been reported.
<b>Further work</b>	

Poseidon expects to undertake further resource definition and grade control drilling at Silver Swan to convert Inferred resources to Indicated resources.

### Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

JORC Code explanation	Commentary
<b>Database integrity</b>	
<p><i>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used.</i></p>	<p>Logging and assay data has been electronically captured and uploaded in to the site Acquire® geology SQL database. Data was exported to csv and imported into Datamine Studio 3 for the resource estimation.</p> <p>The database has been previously reviewed by Golder Associates and was found to be in excellent condition. It is very clean and contains few errors, but does not contain sample and assay quality control information.</p> <p>Both Golder &amp; Poseidon have conducted visual validation checks on the drillhole data, with holes not relevant to the estimation (above the 10100mRL) removed from the dataset.</p>
<b>Site visits</b>	
<p><i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case.</i></p>	<p>Mr Neil Hutchison, the General Manger-Geology and Competent Person for Poseidon, has visited the Black Swan site and Silver Swan underground mine on numerous occasions within the last 18 months. Underground inspections of access and ore development drives relevant to this resource estimate have been verified by Mr Hutchison on several visits. Black Swan has a long history of exploration and has been an operating mine, with both open pit and underground mining operations taking place.</p>
<b>Geological interpretation</b>	
<p><i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.</i></p>	<p>The geological interpretation is validated by drill and mining activity, as well as face mapping by the previous owners.</p> <p>Estimation has been restricted to lithologies controlling and surrounding mineralisation. The geological domaining is based on 3D wireframes created from sectional interpretation in Surpac. A grade threshold of between 1.2 and 1.4% Ni was used to model the mineralisation. Grade proximal to these wireframes has been modelled using a 1 m dilution skin model which is unclassified and not reported.</p> <p>A total of 14 mineralised domains were interpreted and include the Goose, Fledgling-Canard, Peking Duck and Tundra-Mute ore bodies.</p> <p>The interpretation for this Mineral Resource estimate relies solely upon data from drilling below the 10250mRL, and not on mapping or face sampling. The Tundra-Mute has previously been modelled as two individual ore bodies, plunging at opposite directions. Re-evaluation of the drill information and geology, including the addition of assay information acquired through reconnaissance of data collection in progress at the time of the mine being put under care and maintenance (circa 2008).</p>
<b>Dimensions</b>	
<p><i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i></p>	<p>The mineralisation associated with the Silver Swan mine has a width of approximately 375 m striking grid north-south and has been defined to a down dip length of 1550 m plunging towards the east. Individual sulphide lenses are typically 3-5 m in thickness. Drilling has intercepted Ni mineralisation down to a depth of 1600 m below surface and is still open down plunge.</p>
<b>Estimation and modelling techniques</b>	
<p><i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in</i></p>	<p>Mineralisation within the 14 modelled domains was selected and composited to 1 m composites using s best fit approach. Top cuts were applied to Ni (21%), As (25,000), Co (5,000 ppm) and Cu (20,000 ppm) after population disintegration analysis and consideration of the domain statistics.</p> <p>Traditional variograms were used to model the variography of all grade variables with the exception of copper where a normal scores transformation was used. Variogram analysis was completed in Supervisor using the combined 1 m composited data due to the small domain populations. Variogram ranges for each variable ranged from 15 to 79 in the Major direction, 18 to 47 in the Semi-Major direction and 4 to 10 in the Minor direction. The nugget values were derived from the downhole variograms and were generally low (&lt;5%), with the exception of As and Co, which were 35%. As expected, the variogram orientations approximated the orientation of the mineralisation (~NNE strike, E 70° dip).</p> <p>A 3D block model was generated in Datamine Studio 3 using a block size of 2 m</p>

JORC Code explanation	Commentary
<p>relation to the average sample spacing and the search employed.</p> <p>Any assumptions behind modelling of selective mining units.</p> <p>Any assumptions about correlation between variables.</p> <p>Description of how the geological interpretation was used to control the resource estimates.</p> <p>Discussion of basis for using or not using grade cutting or capping.</p> <p>The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.</p>	<p>(X) by 5 m (Y) by 10 m (Z). The variable sub-block size was set to 0.25 m (X) by 0.5 m (Y) by 0.5 m (Z). This degree of sub-blocking is used because of the narrow and variable shoot geometry. Prior to estimation the block model was coded using domain wireframes (ore, dilution and waste domains). Mined out volumes and resource categories were also coded into the block model post estimation.</p> <p>Ordinary Kriging was used to estimate block grades for the following variables; Ni (%), As (ppm), Co (ppm), Cu (ppm), Fe (%), MgO (%) and S (%). Three estimation passes were used for each domain and hard estimation boundaries were used. Search parameters based on the results of the nickel variogram analysis and kriging neighbourhood analysis (KNA) were used. The orientations of search ellipses were set to mirror the orientation of each orebody lens. The first search pass was 25m E by 25 m N by 4 m RL using a minimum of 10 samples and a maximum of 24. The second pass was multiplied by a factor of 1.5 utilising the same min and max sample numbers. The third pass was factored by 5, and the minimum samples required was lowered to 4. A total of 79% of the resource was filled in the first estimation pass for nickel. Block discretisation points used were X:4, Y:10, Z:10. Un-estimated blocks were attributed the block domain averages.</p> <p>A dilution skin model estimating Ni and As only was created by expanding the mineralised wireframe by 1 m. Drillholes were selected and composited as being outside the main ore zone, and within the 1 m dilution skin. A hard estimation boundary between the mineralisation and the dilution skin was used. Three estimation passes were used. The first search was restricted to 15m by 15m by 2m, the second to 22.5m by 22.5m by 3m and the final search was expanded to 75m by 75m by 10 m to estimate any remaining blocks. All searches used a minimum of 6 and a maximum of 24 samples.</p>
<p><b>Moisture</b></p> <p>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</p>	<p>Density measurements were performed using the immersion technique. The density was calculated as a wet density. The core from underground is fresh, dense and non-porous therefore moisture content is not considered to be an issue.</p>
<p><b>Cut-off parameters</b></p> <p>The basis of the adopted cut-off grade(s) or quality parameters applied.</p>	<p>The resource model is constrained by assumptions about economic cut-off grades. The Mineral Resource was modelled using a 1.2-1.4% Ni wireframe threshold and reported using a cut-off grade of 4.5% Ni which was applied on a block by block basis.</p>
<p><b>Mining factors or assumptions</b></p> <p>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</p>	<p>The following assumptions have been factored regarding possible mining methods;</p> <ul style="list-style-type: none"> <li>• A mining dilution of 25% has been applied to stopes.</li> <li>• 50% dilution has been applied to the 3.5m x 3.5m development ore drives.</li> <li>• Single boom jumbos are used for development ore drives.</li> <li>• Airleg flatback mining using 2m x 2.5m ore stoping is applied.</li> <li>• A mining recovery of 91% ore extraction has been used due to pillars.</li> <li>• Stopes are backfilled with development waste.</li> </ul>
<p><b>Metallurgical factors or assumptions</b></p> <p>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</p>	<p>Metallurgical recovery of nickel was assigned based on 100% of the contained metal as defined in the offtake agreement.</p>
<p><b>Environmental factors or assumptions</b></p> <p>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential</p>	<p>As the project has previously been mined, there are existing waste storage facilities and environmental considerations are not expected to pose any issues to the resumption of mining activity.</p>

JORC Code explanation	Commentary
<p><i>environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</i></p>	
<p><b>Bulk density</b></p>	
<p><i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i></p> <p><i>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.</i></p> <p><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></p>	<p>Bulk density measurements were routinely collected for all underground drill core submitted for analysis. The majority of measurements have been made using the water immersion method where the weight of selected pieces of core is measured in both air and water. All weights were measured using an electronic balance. The bulk density measurements were used to determine a regression calculation that was used with the estimated nickel values to determine the SG. SGs above a value of 5 were top cut.</p>
<p><b>Classification</b></p>	
<p><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></p> <p><i>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i></p> <p><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></p>	<p>Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).</p> <p>The classification of Mineral Resources was completed by Optiro and Poseidon based on geological confidence, drillhole spacing, data density and grade continuity. The Competent Person is satisfied that the result appropriately reflects his view of the deposit.</p> <p>Continuous zones meeting the following criteria were used to define the resource class:</p> <p><u>Measured Resource</u></p> <ul style="list-style-type: none"> <li>Measured Mineral Resources consist of the high confidence material which has been grade control drilled (15x15m) and sill development has been completed both above and below.</li> <li>No material is categorised as Measured in this resource estimation</li> </ul> <p><u>Indicated Resource</u></p> <ul style="list-style-type: none"> <li>The Indicated Mineral Resources reflects moderate confidence material with good data density.</li> <li>Consistent strike and dip orientation and geological and grade continuity between drill intercepts.</li> <li>Reflects a nominal drill spacing of less than 25m x 25m resource definition drilling, through to grade control drilling (10 x 15m spacing), but not intersected by ore drive development.</li> </ul> <p><u>Inferred Resource</u></p> <ul style="list-style-type: none"> <li>The Inferred Mineral Resource reflects uncertainty in continuity of the massive sulphides confirmed by drill intersection with poor data density or drilled at a high angle to the mineralisation.</li> <li>Uncertainty in geological and grade continuity between drill intercepts.</li> </ul>
<p><b>Audits or reviews</b></p>	
<p><i>The results of any audits or reviews of Mineral Resource estimates.</i></p>	<p>This Mineral Resource estimate has been compared with previous non-JORC resource estimates completed by Poseidon and Norilsk Nickel Pty Ltd. Previous estimates used an accumulation model estimating Ni x "T", As x "T" and SG x "T" (where "T" is true thickness). Little correlation exists between true thickness and nickel grade at depth and consequently an OK modelling approach was adopted. The 2016 model also used a higher nominal grade threshold for interpretation of the mineralisation (1.2-1.4% compared to the previous 0.4%). The Tundra-Mute areas has also been significantly remodelled. The May 2016 is reporting the Mineral Resource is reporting more tonnes at a lower grade, for approximately the same amount of metal.</p> <p>No other audits or reviews have been completed.</p>
<p><b>Discussion of relative accuracy/confidence</b></p>	
<p><i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or</i></p>	<p>The relative accuracy is reflected in the resource classification discussed above that is in line with industry acceptable standards.</p> <p>This is a Mineral Resource estimate that includes knowledge gained from mining</p>

JORC Code explanation	Commentary
<p><i>geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i></p> <p><i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></p> <p><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></p>	<p>and milling recovery data during production.</p>

## Section 4 Estimation and Reporting of Ore Reserves

JORC Code explanation	Commentary
<b>Mineral Resource estimate for conversion to Ore Reserves</b>	
<p><i>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</i></p> <p><i>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</i></p>	<p>The Silver Swan Ni Mineral Resource used as the basis of this Ore Reserve were estimated by Poseidon Nickel Ltd and Optiro Pty Ltd and was announced to market in June 2016. Cu and Co Mineral Resources are included concurrently with this Ore Reserve.</p> <p>Mineral Resources are reported inclusive of the Ore Reserves.</p>
<b>Site visits</b>	
<p><i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></p> <p><i>If no site visits have been undertaken indicate why this is the case.</i></p>	<p>The Competent Person (Mr Matthew Keenan) visited the site on 7<sup>th</sup> June 2016. The visit included inspection of the Silver Swan underground workings and surface infrastructure.</p> <p>The site visits did not give the Competent Person any reason to believe that any portion of the Reserve Estimate will not be mineable.</p>
<b>Study status</b>	
<p><i>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</i></p> <p><i>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</i></p>	<p>A DFS has been completed for the Silver Swan material being converted from Mineral Resource to Ore Reserve.</p> <p>Modifying factors accurate to the study level have been applied based on detailed stope design analysis. Modelling indicates that the resulting mine plan is technically achievable and economically viable.</p>
<b>Cut-off parameters</b>	
<p><i>The basis of the cut-off grade(s) or quality parameters applied.</i></p>	<p>Cut-off grade parameters for the underground ore were determined based on the 2017 financial analysis, assuming toll treatment of ore by a third party. The fully costed stoping cut-off grade applied for the Silver Swan underground was 3.0% Ni, and the incremental stoping cut-off grade was 2.1% Ni.</p> <p>A nickel price of \$US6.50/lb and a USD:AUD exchange rate of 0.76 was used to determine the cut-off grades.</p>
<b>Mining factors or assumptions</b>	
<p><i>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</i></p> <p><i>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</i></p> <p><i>The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling.</i></p> <p><i>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</i></p> <p><i>The mining dilution factors used.</i></p>	<p>Detailed mine designs were carried out on the Silver Swan underground, and these were used as the basis of the Reserve estimate.</p> <p>The Silver Swan Ore Reserve is planned to be mined using a bottom-up modified Avoca method with unconsolidated backfill. This mining method is based on detailed dynamic geotechnical modelling. Diesel powered trucks and loaders will be used for materials handling. Diesel-electric jumbo drill rigs will be used for development and ground support installation, and diesel-electric longhole rigs used for production drilling.</p> <p>The mining methods chosen are well-known and widely used in the local mining industry and production rates and costing can be predicted with a suitable degree of accuracy. Suitable access is available through the existing workings, which have been kept pumped dry during care and maintenance.</p>

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<p><i>The mining recovery factors used.</i></p> <p><i>Any minimum mining widths used.</i></p> <p><i>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</i></p> <p><i>The infrastructure requirements of the selected mining methods.</i></p>	<p>Re-entry and refurbishment of capital development was costed in the Silver Swan mine plan based on detailed independent expert inspection.</p> <p>Independent geotechnical consultants MineGeotech Pty Ltd and Beck Engineering Pty Ltd contributed appropriate geotechnical analyses to a suitable level of detail. These form the basis of mine design, ground support and mining method selection for the Reserve estimate.</p> <p>Only the Indicated portion of the Mineral Resource was used to estimate the Ore Reserve. All Inferred material has had grade set to waste for the purposes of evaluation. The Ore Reserve is technically and economically viable without the inclusion of Inferred Mineral Resource material.</p> <p>Underground stopes were designed inclusive of minimum mining width of 2.5 m plus dilution volumes determined by independent geotechnical analysis and dynamic modelling. Global planned waste dilution is 35%, and unplanned waste dilution is 7%. An extra 2% of waste dilution was applied to allow for over bog of fill. Non-fill dilution was assumed to carry a grade of 0.35% Ni, based on Mineral Resource information provided by POS. Sub-level intervals are 25 m based on geotechnical advice. Maximum stope spans opened prior to filling are 5 m along strike. A mining recovery of 95% has been applied to all stopes. Ore development had an assumed 100% mining recovery, based on historical experience and industry standards.</p> <p>Most of the infrastructure required for the operations is already in place and has been under care and maintenance for approximately 8 years, including a processing plant and associated infrastructure, access roads, offices and ablutions, connections to the Western Power grid, power reticulation, and borefields. Allowance has been made for refurbishment of this infrastructure where required based on quotes provided by reputable independent vendors to an appropriate standard of detail.</p>
<b>Metallurgical factors or assumptions</b>	
<p><i>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</i></p> <p><i>Whether the metallurgical process is well-tested technology or novel in nature.</i></p> <p><i>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</i></p> <p><i>Any assumptions or allowances made for deleterious elements.</i></p> <p><i>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</i></p> <p><i>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</i></p>	<p>The Silver Swan Reserve estimate has been determined based on a sale of DSO to a customer in China. The Payability of the ore has been provided by POS based on discussions with Tsingshan.</p> <p>The DSO payable metal content is 67% and is based on information provided by POS, the payable metal content is assumed to cover any contained by-products, metallurgical recovery losses, smelting and refining costs and any contained deleterious elements.</p>
<b>Environmental</b>	
<p><i>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</i></p>	<p>Geochemical characterisation studies have been conducted that indicate that the rock mass is non-acid forming.</p> <p>POS has advised that most required approvals already issued under the <i>Mining Act</i> and <i>Environmental Protection Act</i> from previous operations remain current.</p> <p>At this point in time the Competent Person sees no reason permitting will not be granted within a reasonable time frame.</p>
<b>Infrastructure</b>	
<p><i>The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</i></p>	<p>The project site is already developed and on care and maintenance. The underground workings are powered and kept dry through the installed pumping system.</p> <p>All required surface infrastructure is already in place and requires only minor refurbishment.</p> <p>All required underground infrastructure is in place to commence mining including primary ventilation fans, escapeways, high voltage power reticulation,</p>



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	<p>service water and compressed air. Allowance has been made for refurbishment and recommissioning of this infrastructure based on inspections and detailed quotes.</p> <p>As the site is 53 km from Kalgoorlie, a residential workforce will commute to site daily.</p> <p>The mine is connected to the Western Power grid through two lines, one feeding the concentrator and one feeding the other surface infrastructure and underground workings. Allowance has been made for additional diesel generated power to supplement this underground feed.</p>
<b>Costs</b>	
<p><i>The derivation of, or assumptions made, regarding projected capital costs in the study.</i></p> <p><i>The methodology used to estimate operating costs.</i></p> <p><i>Allowances made for the content of deleterious elements.</i></p> <p><i>The source of exchange rates used in the study.</i></p> <p><i>Derivation of transportation charges.</i></p> <p><i>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</i></p> <p><i>The allowances made for royalties payable, both Government and private.</i></p>	<p>The Silver Swan DFS mining costs are based on detailed quotes from suppliers and mining contractors gathered as part of a Request for Quotation process involving three reputable and experienced underground contractor firms. These were also benchmarked against similar operations in the WA Goldfields and historical data from previous operations at Silver Swan.</p> <p>The USD:AUD exchange rate assumed for the cost modelling was 0.76.</p> <p>Road and sea transport charges for DSO are based on factored quotes provided by POS.</p> <p>WA state royalties of 2.5 % and a third-party royalty of 1% have been applied to gross concentrate nickel revenues.</p>
<b>Revenue factors</b>	
<p><i>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</i></p> <p><i>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</i></p>	<p>Forecasts for head grade delivered to the plant are based on detailed mine plans and mining factors.</p> <p>The payable content is 67% and is based on information provided by POS.</p> <p>Any by-product credits from contained Cu and Co and any deleterious element penalties have been assumed to be incorporated into the payable metal content, based on advice from POS following discussions with potential offtake partners.</p> <p>A flat USD:AUD exchange rate of 0.70 was used in the financial model.</p> <p>A flat nickel price of US\$6.50/lb has been assumed for the financial analysis, based on forecasts provided by POS.</p>
<b>Market assessment</b>	
<p><i>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</i></p> <p><i>A customer and competitor analysis along with the identification of likely market windows for the product.</i></p> <p><i>Price and volume forecasts and the basis for these forecasts.</i></p> <p><i>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</i></p>	<p>POS is currently discussing offtake agreements with several potential offtake partners, including the partner offering the DSO sale option used to determine the Reserve estimate.</p> <p>The volume of concentrate produced by processing the estimated Reserve will be too small to have an impact on the global market of nickel sulphide concentrate.</p> <p>DSO transport costs have been included in the financial analysis.</p>
<b>Economic</b>	
<p><i>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</i></p> <p><i>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</i></p>	<p>The Silver Swan underground Ore Reserve has been assessed in a detailed financial model.</p> <p>The Reserve plan is economically viable and has a positive NPV at a 10% discount rate at the stated commodity price and exchange rate.</p> <p>Sensitivity analysis shows that the project is most sensitive to commodity price/exchange rate movements. The project is still economically viable at unfavourable commodity price/exchange rate adjustments of 10%.</p>
<b>Social</b>	
<p><i>The status of agreements with key stakeholders and matters leading to social licence to operate.</i></p>	<p>A compensation agreement exists between the Black Swan Nickel Operations and Mt Veters Pastoral Station. This has been updated periodically as the</p>

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	<p>operation has changed. Compensation previously paid under this agreement has been adequate to address all impacts of the project. No further compensation is required under the terms of this agreement. However, previous practice may have resulted in an expectation of additional compensation if significant additional land clearance is proposed. Significant land clearance is not required under the current Reserve estimate plan.</p> <p>POS will continue to communicate and negotiate in good faith with key stakeholders</p>
<b>Other</b>	
<p><i>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</i></p> <p><i>Any identified material naturally occurring risks.</i></p> <p><i>The status of material legal agreements and marketing arrangements.</i></p> <p><i>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</i></p>	<p>A formal process to assess and mitigate naturally occurring risks will be undertaken prior to execution. Currently, all naturally occurring risks are assumed to have adequate prospects for control and mitigation.</p> <p>No marketing agreement has been signed but it is expected that such an agreement is likely to be arrived upon. Interest has been expressed by various potential offtake partners for the concentrate and it was successfully marketed during previous operations.</p> <p>Based on the information provided, the Competent Person sees no reason all required approvals will not be successfully granted within the anticipated timeframe.</p>
<b>Classification</b>	
<p><i>The basis for the classification of the Ore Reserves into varying confidence categories.</i></p> <p><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></p> <p><i>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</i></p>	<p>The Probable Ore Reserve is based on that portion of the Indicated Mineral Resource within the mine designs that may be economically extracted and includes an allowance for dilution and ore loss.</p> <p>None of the Probable Ore Reserves have been derived from Measured Mineral Resources.</p> <p>The result appropriately reflects the Competent Person's view of the deposit.</p>
<b>Audits or reviews</b>	
<p><i>The results of any audits or reviews of Ore Reserve estimates.</i></p>	<p>The Ore Reserve estimate, along with the mine design and life of mine plan, has been peer-reviewed by Entech internally.</p>
<b>Discussion of relative accuracy/confidence</b>	
<p><i>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</i></p> <p><i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></p> <p><i>Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></p>	<p>The Silver Swan design, schedule, and financial model on which the Ore Reserve is based has been completed to a Definitive Feasibility study standard, with a corresponding level of confidence.</p> <p>Considerations in favour of a high confidence in the Ore Reserves include:</p> <ul style="list-style-type: none"> <li>- The mining process is well-known, small scale and utilises proven technology</li> <li>- The revenue is derived from a simple DSO model which disregards metallurgical factors</li> <li>- The project, as previously operated, is fully permitted.</li> </ul> <p>Considerations in favour of a lower confidence in Ore Reserves include;</p> <ul style="list-style-type: none"> <li>- Future nickel price and exchange rate forecasts carry an inherent level of risk</li> <li>- There is a degree of uncertainty associated with geological estimates. The Reserve classifications reflect the levels of geological confidence in the estimates.</li> <li>- There is a degree of uncertainty regarding estimates of impacts of natural phenomena including geotechnical assumptions, hydrological assumptions, and the modifying mining factors, commensurate with the level of study.</li> <li>- An offtake agreement is in place with Tsingshan for the direct shipment of Silver Swan ore. The agreement has already been extended until December 2017 and the Company is confident that the agreement can be extended further.</li> </ul> <p>The Ore Reserve is based on a global estimate. Modifying factors have been</p>

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	applied at a local scale.  Further, i.e. quantitative, analysis of risk is not warranted or appropriate at the current level of technical and financial study.

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