

SILVER SWAN TAILINGS – MAIDEN RESOURCE ESTIMATE

15 September 2021

KEY POINTS

- JORC 2012 Mineral Resource for Silver Swan Tailings (SST)
 - **675 kt grading 0.92% Ni and 683 ppm Co containing 6,200 tonnes of nickel and 460 tonnes of cobalt**
- Key results from metallurgical testwork on four composites selected to represent the four quadrants of the SST dam:
 - Ni-recovery of 48% to a rougher flotation concentrate;
 - **Fe:MgO ratio $\geq 10:1$** ;
 - excellent repeatability in the results between the composites tested; and
 - detailed mineralogy confirmed nickel (primarily as pentlandite) and iron sulphides (pyrrhotite / pyrite) reported to flotation concentrate, while rejecting the majority of the MgO.
- Results support concept to ‘co-process’ SST with Black Swan Disseminated (BSD) open pit ore to increase the Fe:MgO ratio thereby improving product marketability
 - low proportion of SST required to be ‘co-processed’ (<10%); and
 - opportunity to improve on the Fe:MgO ratio further by incorporating a cleaner flotation stage.
- Detailed testwork is underway to optimise the SST blend ratio and test the optimal blend ratio with appropriate proportions of the Silver Swan and Golden Swan massive sulphides:
 - results to support a Bankable Feasibility Study (BFS) on restarting the Black Swan Concentrator at the 1.1Mtpa production rate;
 - SST are already at required grind size for flotation;
 - low opex to reclaim and ‘co-process’; and
 - Measured resource provides +six years of mining inventory for blending.
- Poseidon has signed five-year agreement with Norton Gold Fields Pty Ltd (NGF) to access large standing water reserves at NGF’s Golden Cities and Mulgarrie open cut mines:
 - access to water would utilise Poseidon’s existing 24 km Federal Pit pipeline infrastructure; and
 - the agreement complements proposed restart at Black Swan Concentrator and facilitates the potential to ramp-up to nameplate throughput (2.2 Mtpa), subject to availability of ore feed and market conditions.

Poseidon Nickel (ASX: POS, “the Company”) is pleased to provide a maiden resource estimate for the Silver Swan Tailings located at Black Swan project of 675 kt grading 0.92% Ni and 683 ppm Co containing 6,200 tonnes of nickel and 460 tonnes of cobalt.

Managing Director and CEO, Peter Harold, commented: *“The Silver Swan Tailings are a low cost, high Fe:MgO ratio ore feed for our “Fill The Mill” strategy. Combining the Silver Swan tails with the Black Swan disseminated ore feed significantly improves the saleability of the Black Swan concentrate product and will assist with our discussions with potential off-takers as we progress toward a production restart.”*

MINERAL RESOURCE SUMMARY

The Company undertook a sonic drilling programme over the Silver Swan Tailings (SST) impoundment in 2018, with the aim of delineating a Mineral Resource for subsequent treatment. A Block Model was generated by the Company in 2018. In August 2021, Poseidon engaged Optiro Pty Ltd (Optiro) to review the Block Model, the drilling QAQC and carry out a site visit to the SST. The Block Model was validated against the drilling for the key elements and the QAQC data was processed.

Optiro endorsed the Block Model as being representative of the drilling and has reported and classified the tailings according to the JORC Code (2012) as a Measured Mineral Resource. The Mineral Resource estimate for the SST is documented in Table 1.

Table 1: Measured Resource tabulation of the Silver Swan Tailings

Zone	Tonnes	Ni%	Ni t	Cu%	Co ppm	Fe%	MgO%	As%	S%	Density
1	280,600	0.75	2,118	0.02	283	16.7	8.81	0.04	7.56	2.84
2	394,365	1.04	4,082	0.06	967	26.1	4.71	0.17	13.56	3.09
Total	674,964	0.92	6,201	0.04	683	22.2	6.42	0.11	11.06	2.98

Notes:

1. Due to the nature of tailings no reporting cut-off grade has been applied.
2. Mining of the tailings entails the removal of approximately 1m of high MgO and low nickel overburden as waste material.

Introduction and data collection

Poseidon carried out a resource definition drilling programme of Cell 1 of the Silver Swan Tailings, located at the Black Swan mine site, approximately 50 km north of Kalgoorlie. The programme was carried out in early 2018 using sonic drilling on an approximate offset 40 m by 40 m drilling pattern (Figure 1). The programme comprised 57 vertical holes, of which 12 were drilled for metallurgical testing and were not assayed. Details of the hole collars and depths are presented in Appendix A. The holes were drilled with a sonic rig (Figure 2 (left)). Sonic drilling is ideally suited to tailings evaluation as there is no injection of water or other drilling fluids and no use of compressed air to disturb the tailings. The rig generates a solid tube of tailings which is collected in a plastic sleeve (Figure 2 (right)). The sleeve helps to retain moisture for subsequent determinations. Typically, half ‘core’ is submitted for assay using conventional XRF with a fused borate disk.

Quality Assurance/Quality Control (QAQC) and assaying

QAQC was carried out on the drilling. This included the insertion of standards (Certified Reference Materials, or CRMs) in the resource definition samples. The standards were inserted at a rate approximating one in ten, which is above industry levels. The Competent Person reviewed the performance of the CRMs for nickel and notes that all the standards for nickel assay are within one standard deviation of the certified value. While there is either a consistent high or low bias associated with each of the seven CRMs used, this is not significant.

The other QAQC tool applied was the use of pulp duplicates with 12 duplicates, an insertion rate of 4.5%, which is at expected industry levels. Analysis of the duplicate nickel values by the Competent Person shows excellent

precision. It is noted that analysis of the second half of the sonic ‘core’ would have produced a much better test of the sample preparation.

Sample preparation and assaying was carried out by Bureau Veritas in Perth, using XRF of a fused disk. The following analytes were assayed by XRF:

Al₂O₃, As, CaO, Cu, Fe, MgO, MnO, Ni, S, SiO₂. Silver (Ag) and cobalt (Co) were determined by Laser Ablation Inductively Coupled Spectrometry.



Figure 1: Plan view of 2018 sonic drilling showing collars for resource definition and metallurgical holes



Figure 2: Sonic rig drilling on SST dam (left) and example of sonic ‘core’ (right)

Moisture and specific gravity determination

Poseidon carried out moisture determinations for the resource definition samples onsite at the Black Swan mine. This involved bagging the half 'core' samples as soon as possible after drilling and logging, weighing them, and then drying in a small temperature-controlled oven. The weight after drying was recorded and the moisture content determined by calculating the difference of the wet and dry weights as a proportion of the wet weight. Moisture contents of the resource definition samples varied between 4% and 18% with an average of 10% (93 readings). The metallurgical samples, which were analysed by ALS, also had moisture determined, using the same approach. The metallurgical moisture samples (75) had values between 1% and 24.8%, with an average of 11.4%. While the metallurgical moisture determinations are both higher on average and more variable, the difference is not believed to be material, and both sets of measurements have been interpolated into the block model.

Dry in-situ specific gravity (SG), or bulk density determinations, were carried out by ALS on the metallurgical samples. 5-10 cm sections of each metre of 'core' were taken for SG determinations. 73 measurements were taken, with an average of 3.16 t/m³. The material from Silver Swan, which was treated to generate the tailings, was largely massive sulphide, with an in-situ rock density well over 4 t/m³. In the model, the in-situ SG (the dry bulk density) was derived by adjusting the measured SG by the interpolated moisture content.

Details of Mineral Resource Estimate

The Silver Swan Tailings dam was divided into three zones based on the chemistry of the drilling samples. These zones are shown in a typical cross-section through the block model in Figure 3. The top zone, called Zone 3, represents the top metre (approximately) of the tailings. The samples in Zone 3 are characterised by relatively high MgO, low Fe, low Ni and S and low Co and reflect partially the results of surface oxidation and partly a lower-grade feed source. Zone 1, below the surface zone, has samples with moderate nickel, lower Fe, and lower Co, and reflects tailings from the Silver Swan orebody, but with relatively high nickel recovery (hence lower tailings grade). The lowest zone, which contains just under half the total tonnage, also represents tailings from the higher grade, massive sulphide portions of Silver Swan and is characterised by high Ni, Co and Fe, and very low MgO. Zone 2 reflects lower metallurgical recoveries during the earlier part of mining at Silver Swan, and has a small, oxidized layer at its top, reflecting a pause in tailings deposition. These different levels of nickel recovery and ore type are reflected in the in-situ SG measurements, with the top (Zone 3) layer having the lowest average density and the bottom (Zone 2) layer having the highest average density.

The block model was generated using Surpac software, with a parent block size of 12.5 mN by 12.5 mE by 1 m RL, with sub-celling to a factor of eight for volume filling. Separate solids were defined for each of the three estimation zones with sub-celling on the zone boundaries.

Estimation, using an inverse distance squared interpolator, was carried out from the composited sample data for Ni, Cu, Co, As, MgO, Fe, S, Al₂O₃, CaO, MnO, SiO₂, moisture, and in situ (dry) SG. A perspective view of the block model is given as Figure 4, which also shows the resource definition samples and the metallurgical holes. Top cuts were only applied to two variables: cobalt in Zone 1 (at a level of 500 ppm, affecting 3 samples) and SG (at a level of 3.8 t/m³, affecting one sample).

The Competent Person carried out validation of the block model against the informing drill-hole samples for the key variables of interest (Ni, Cu, As, MgO, moisture and in situ SG) by domain, both on a whole-of-domain basis and as profile (swath) plots. In all cases there was less than 5% difference between the composited sample grades and the block model grades, indicating good reproduction in the model. Figure 5 is an example of a slice validation for Ni% in Zone 2, comparing 20 m slices in the E-W direction with the average grades from the drill-holes in the same slice. For this domain the overall nickel block model grade is 1.04% Ni and the average sample grade 1.05% Ni.

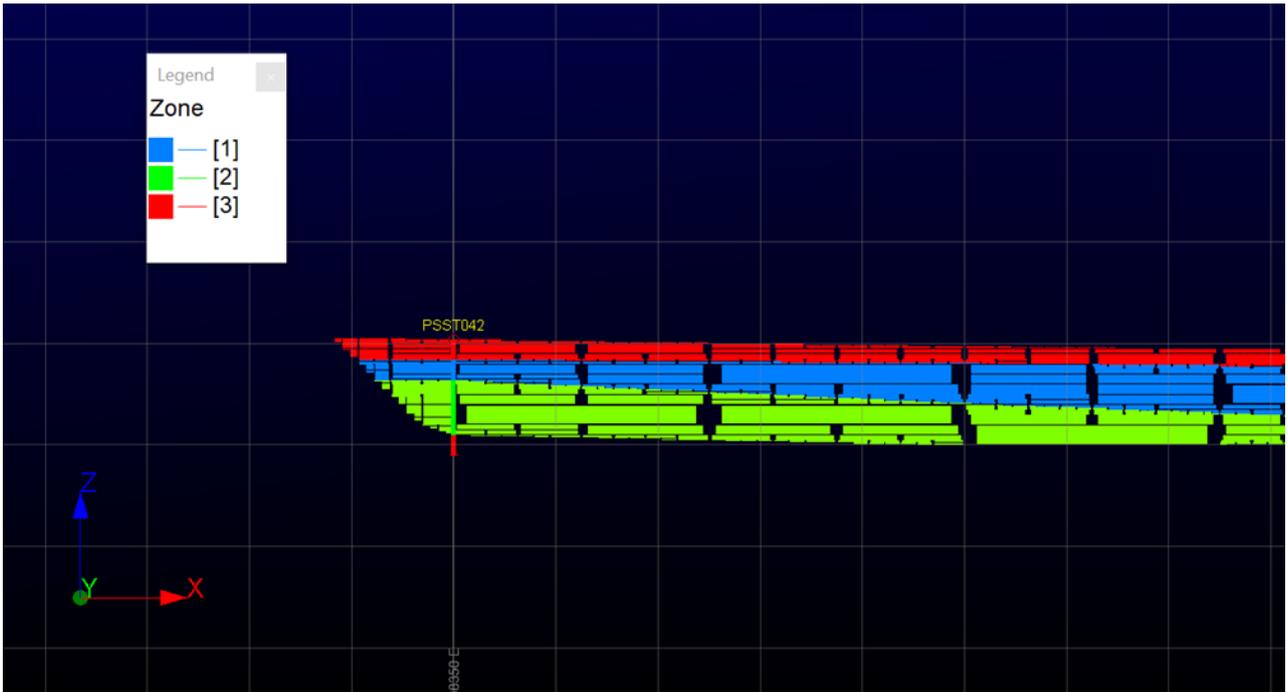


Figure 3: East-west section, looking north, showing the three estimation zones (grid squares are 5 m)

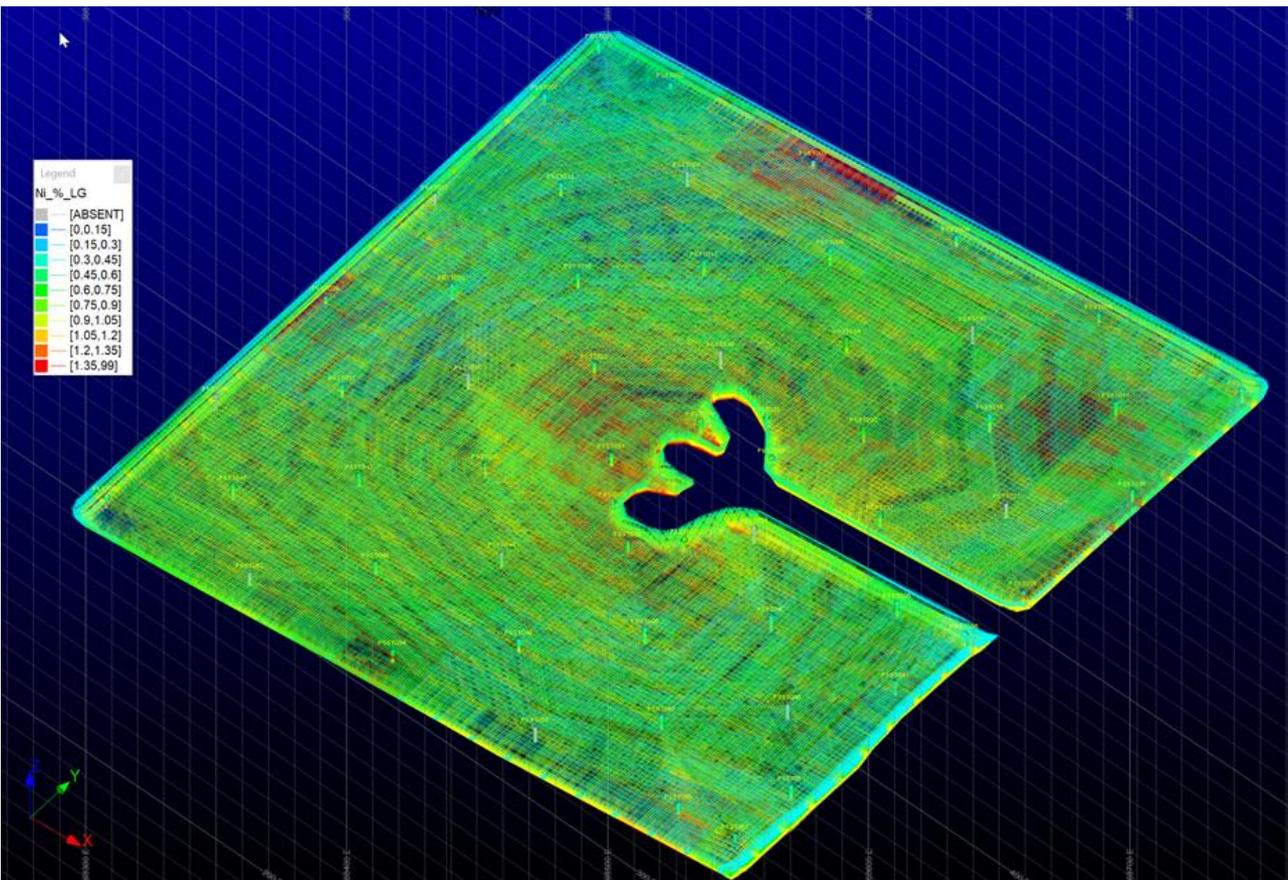


Figure 4: Block model view, looking northwest, coloured on estimated nickel grade together with drilling

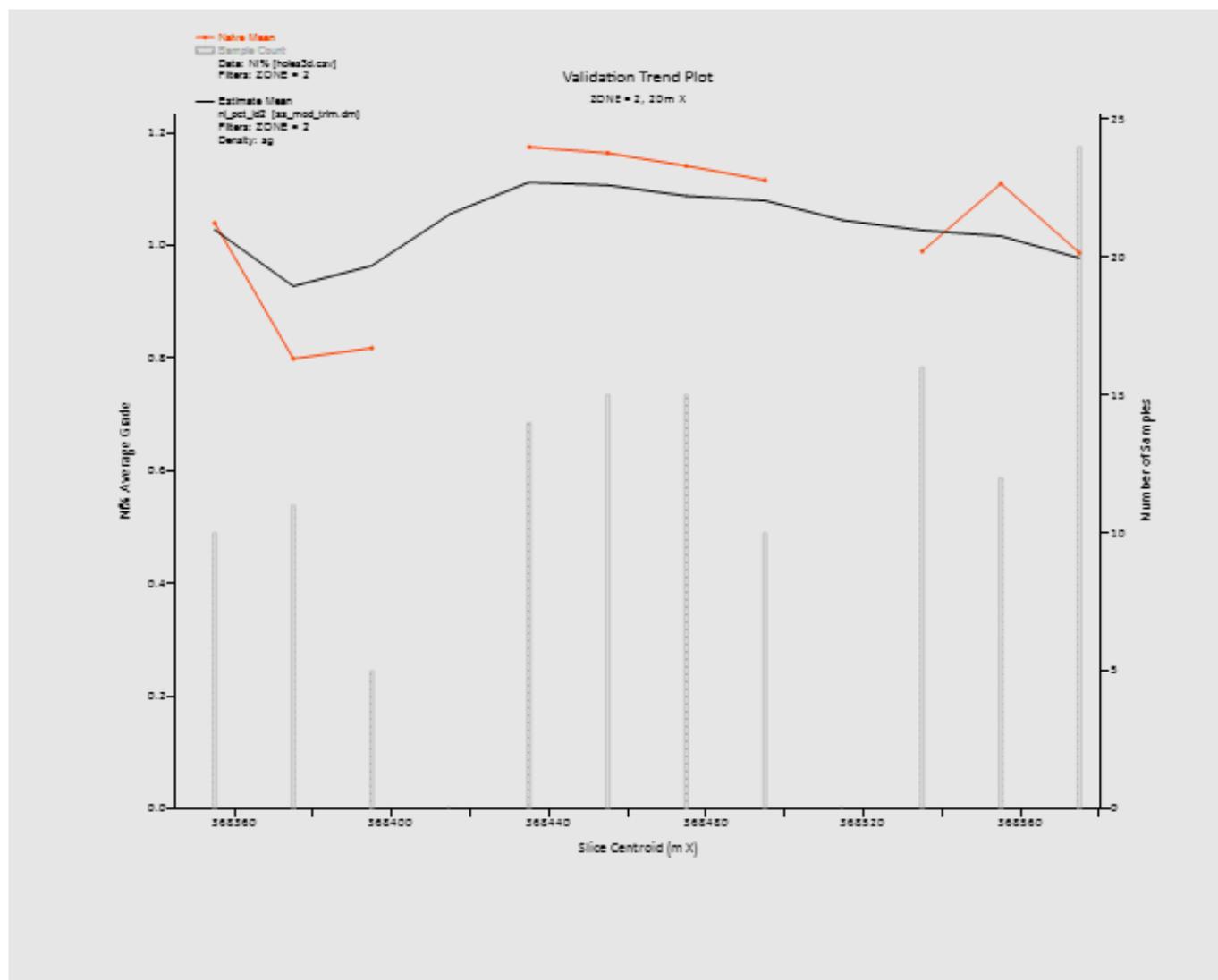


Figure 5: Example of slice (swath) validation for Ni in Zone 2, comparing sample and block grades by 25 m increment in the E-W direction

Reasonable Prospects of Eventual Economic Extraction (RPEEE)

Poseidon is considering removing the top zone of the SST (Zone 3), which is approximately 1 m in thickness, since it is much higher in MgO content, with an average grade of 19%, with a low nickel grade (0.4%). Importantly, the Fe:MgO ratio in-situ is low at 0.5:1. Once this top metre has been removed, the underlying material has an Fe:MgO ratio in-situ such that it can be blended in with fresh material to be mined from the Black Swan pit, material from the recommencement of mining in the lower levels of Silver Swan and potentially with material from Poseidon's Golden Swan mineralisation, which has yet to have a declared Mineral Resource.

Along with the sonic resource definition drilling carried out in 2018, Poseidon generated four composites from the 12 metallurgical holes drilled at the same time. The metallurgical composites were selected to represent the four quadrants of the SST dam to assess any potential for variability in the flotation test results. The flotation testwork, carried out by ALS in Perth in 2018, demonstrated an approximate nickel recovery of around 48% to a rougher flotation concentrate, with excellent repeatability in the results between the metallurgical composites. Importantly, the iron to MgO (Fe:MgO) ratio in the rougher flotation concentrate was 10:1, which is due to the high iron and low MgO in Zones 1 and 2 of the tailings. The detailed mineralogy completed at ALS in 2018 confirmed the flotation of pyrrhotite and pyrite (iron sulphides), along with nickel sulphide (primarily as pentlandite) while the majority of the MgO was rejected to the flotation tailings.

Poseidon intends to 'co-process' (blend) the SST (at a relatively low proportion) with the higher MgO Black Swan disseminated material to increase the Fe:MgO ratio in the final combined flotation concentrate. Given the relatively low cost of recovering the tailings, noting the SST are already at the required grind size for flotation, and the relatively low cost to reclaim and transport the SST to the plant (only 300m), there are Reasonable Prospects of Eventual Economic Extraction, allowing the SST to be classified as a Mineral Resource according to the guidelines of the JORC Code (2012).

Classification and reporting

The resource definition drilling is on an approximate 40m offset grid spacing. Preliminary variography carried out by the Competent Person for nickel in Zone 2 indicates isotropic continuity in the horizontal plane with ranges of around 100m, i.e., more than twice the nominal drill spacing. Given the good QAQC (precision and accuracy) in the data and the excellent validation between the model and the informing samples, the Competent Person is satisfied to classify Zones 1 and 2 of the SST as a Measured Resource under the JORC Code guidelines.

The resource tabulation is presented below in Table 2. Given the nature of the tailings no reporting cut-off grade has been applied.

Table 2: Measured Resource tabulation of the Silver Swan Tailings at zero nickel cut-off grade

Zone	Tonnes	Ni%	Ni t	Cu%	Co ppm	Fe%	MgO%	As%	S%	Density
1	280,600	0.75	2,118	0.02	283	16.7	8.81	0.04	7.56	2.84
2	394,365	1.04	4,082	0.06	967	26.1	4.71	0.17	13.56	3.09
Total	674,964	0.92	6,201	0.04	683	22.2	6.42	0.11	11.06	2.98

Notes::

1. Due to the nature of tailings no reporting cut-off grade has been applied.
2. Mining of the tailings entails the removal of approximately 1m of high MgO and low nickel overburden as waste material.



Peter Harold
Managing Director & CEO
15 September 2021

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The announcement was authorised for lodgement by Peter Harold, Managing Director of Poseidon Nickel Limited.

COMPETENT PERSON STATEMENTS:

The information in this report that relates to the Silver Swan Tailings Mineral Resource is based on, and fairly represents information compiled by Mr Ian Glacken, who is a full-time employee of Optiro Pty Ltd, an independent consultant to Poseidon Nickel Ltd

The information in this report that relates to Golden Swan Exploration Targeting and 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 Member of the Australasian Institute of Mining and Metallurgy.

The information in this report which relates to the Silver Swan Mineral Resource is based on, and fairly represents, information compiled by Mr Steve Warriner, 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 Member of the Australasian Institute of Mining and Metallurgy. The information in this report which relates to the Silver Swan Ore Reserve is based on, and fairly represents, information compiled by Mr Matthew Keenan who is a full-time employee of Entech Pty Ltd and is a Member of the Australasian Institute of Mining and Metallurgy.

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 Warriner, Mr Cervoj, Mr Weeks, Mr Glacken and Mr Keenan have consented to the inclusion in the report of the matters based on their 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.

About Poseidon Nickel Limited

Poseidon Nickel Limited (ASX Code: POS) is a nickel sulphide exploration and development company with three projects located within a 300km radius of Kalgoorlie in the Goldfields region of Western Australia and a resource base of around 400,000 tonnes of nickel and 180,000 ounces of gold.

Poseidon's strategy is focused on the exploration and eventual restart of its established nickel operations in Western Australia where project risk capital and operating costs are low. A critical element of this strategy has been to acquire projects and operations with high levels of geological prospectivity likely to lead to potential substantial extension of the operation's life through the application of modern exploration techniques.

Poseidon owns the Windarra, Black Swan and the Lake Johnston Nickel Projects. In addition to the mines and infrastructure including concentrators at Black Swan and Lake Johnston, these projects have significant exploration opportunities demonstrated by the discovery of the Abi Rose deposit at Lake Johnston and the recent discovery of the Golden Swan mineralisation at Black Swan. The Company is also undertaking a Definitive Feasibility Study on retreating the gold tailings at Windarra given the strength of the A\$ gold price.

Table 1: Nickel Projects Mineral Resources 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)
BLACK SWAN PROJECT															
Black Swan	2012	0.40%	9,600	0.68	64,900	21,100	0.54	113,800	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 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
WINDARRA PROJECT															
Mt Windarra	2012	0.90%	922	1.56	14,500	3,436	1.66	57,500	4,358	1.64	72,000	0.03	1,200	0.13	5,700
South Windarra	2004	0.80%	772	0.98	7,500	-	-	-	772	0.98	7,500	NA	-	NA	-
Cerberus	2004	0.75%	2,773	1.25	34,600	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	1.03	173,530	27,275	0.81	221,300	44,049	0.90	395,530	0.02	7,516	0.03	13,379

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 modelled to produce the Ore Reserves

- **Black Swan Resource** as at 22 July 2014 (see ASX announcement "Poseidon Announces Black Swan Mineral Resource" released 4th August 2014)
- **Silver Swan Resource** as at 5 August 2019 (see ASX announcement "Silver Swan Resource Upgrade" released 5th August 2019)
- **Maggie Hays Resource** as at 17 March 2015 (see ASC announcement "50% Increase in Indicated Resources at Lake Johnston" released 17th March 2015)
- **Mt Windarra Resource** as at 7 November 2014 (see ASX announcement "Poseidon Announces Revised Mt Windarra Resource" released 7th November 2014)
- **South Windarra and Cerberus Resource** as at 30 April 2013 (see ASX announcement "Resource Increase of 25% at Windarra Nickel Project" released 1st December 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.

ORE RESERVE STATEMENT

Table 2: Nickel Projects Ore Reserve Statement

Nickel Sulphide Reserves	JORC Compliance	ORE RESERVE CATEGORY		
		PROBABLE		
		Tonnes (Kt)	Ni% Grade	Ni Metal (t)
SILVER SWAN PROJECT				
Silver Swan Underground	2012	130	5.2	6,800
Black Swan Open pit	2012	3,370	0.63	21,500
TOTAL				
Total Ni Reserves	2012	3,500	0.81	28,300

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.

Silver Swan Underground Reserve as at 26 May 2017 (see ASX announcement "Silver Swan Definitive Feasibility Study" released 26th May 2017) Black Swan Open Pit Reserve as at 5 November 2014 (see ASX announcement "Poseidon Announces Black Swan Ore Reserve" dated 5th November 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 to Table 1 above for the new Silver Swan Resource estimate). At this point it is not known the impact the update to the Silver Swan Resources 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.

Appendix A: Hole collars and depth

Hole ID	DEPTH	DIP	Easting	Northing	Elevation	Hole Type
PSST001	3.9	-90	368350	6637465	375.6622	Resource definition
PSST002	2.3	-90	368375	6637465	375.5755	Resource definition
PSST003	3.8	-90	368425	6637465	375.2291	Resource definition
PSST004	4	-90	368475	6637465	375.2912	Resource definition
PSST005	4.6	-90	368525	6637465	375.1542	Resource definition
PSST006	5	-90	368575	6637465	375.3368	Resource definition
PSST007	4	-90	368350	6637440	375.5865	Resource definition
PSST008	5.8	-90	368400	6637440	375.2138	Metallurgy
PSST009	7	-90	368450	6637440	374.9411	Resource definition
PSST010	7	-90	368500	6637440	375.0183	Metallurgy
PSST011	7	-90	368550	6637440	375.1572	Resource definition
PSST012	5	-90	368375	6637415	375.1909	Resource definition
PSST013	5.7	-90	368425	6637415	374.8074	Resource definition
PSST014	7	-90	368475	6637415	374.7538	Resource definition
PSST015	7	-90	368525	6637415	375.0948	Resource definition
PSST016	5	-90	368575	6637415	375.1913	Resource definition
PSST017	4	-90	368350	6637390	375.3999	Metallurgy
PSST018	6	-90	368400	6637390	374.7903	Resource definition
PSST019	7	-90	368450	6637390	374.4011	Metallurgy
PSST020	7	-90	368500	6637390	374.7675	Resource definition
PSST021	6	-90	368550	6637390	375.1223	Metallurgy
PSST022	6	-90	368375	6637365	374.9766	Resource definition
PSST023	6.5	-90	368425	6637365	374.2949	Resource definition
PSST024	7	-90	368462	6637365	373.9318	Resource definition
PSST025	7	-90	368476	6637377	374.4542	Resource definition
PSST026	6	-90	368487	6637365	374.5744	Resource definition
PSST027	5	-90	368525	6637365	375.0532	Resource definition
PSST028	5	-90	368575	6637365	375.2696	Resource definition
PSST029	4.7	-90	368350	6637340	375.245	Resource definition
PSST030	6	-90	368400	6637340	374.5688	Metallurgy
PSST031	6	-90	368450	6637340	373.8748	Resource definition
PSST032	6	-90	368462	6637325	373.8366	Resource definition
PSST033	6	-90	368487	6637325	374.1647	Resource definition
PSST034	6.1	-90	368500	6637340	374.5615	Metallurgy
PSST035	6	-90	368550	6637340	375.1634	Resource definition
PSST036	6	-90	368572.4	6637342	375.3597	Resource definition
PSST037	5	-90	368375	6637315	374.8973	Resource definition
PSST038	5.7	-90	368425	6637315	374.2661	Resource definition
PSST039	6	-90	368475	6637315	374.0111	Resource definition
PSST040	6.6	-90	368525	6637315	374.6424	Resource definition
PSST041	5.6	-90	368568.5	6637315	375.0915	Resource definition
PSST042	5.7	-90	368350	6637290	375.1884	Metallurgy
PSST043	5	-90	368400	6637290	374.6731	Resource definition
PSST044	6	-90	368450	6637290	374.4439	Metallurgy
PSST045	6	-90	368500	6637290	374.5154	Resource definition
PSST046	6	-90	368550	6637290	374.7667	Metallurgy
PSST047	6	-90	368375	6637265	375.1822	Resource definition
PSST048	5	-90	368425	6637265	374.953	Resource definition
PSST049	5	-90	368475	6637265	374.7195	Resource definition
PSST050	5.6	-90	368525	6637265	374.9255	Resource definition
PSST051	6	-90	368570.4	6637265	375.0407	Resource definition
PSST052	4.7	-90	368350	6637240	375.3909	Resource definition
PSST053	5	-90	368400	6637240	375.419	Metallurgy
PSST054	5	-90	368450	6637240	375.2322	Resource definition

Appendix B: JORC Table 1

SECTION 1 - Sampling Techniques and Data

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

JORC Code explanation	Commentary
Sampling techniques	
<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 down hole 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. 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>The sampling was sonic drilling, which does not use either water or compressed air to preserve the integrity of the sample.</p> <p>Sonic drilling produces a tube of 'core' which is collected in a plastic sleeve.</p> <p>Sonic drilling was used to extract 1 m runs of solid tailings material as a 'core' which was collected in a plastic sleeve and stored in core trays.</p>
Drilling techniques	
<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>Sonic drilling to maximise recovery and minimise disturbance of the tailings material.</p>
Drill sample recovery	
<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>Every run of 'core' was logged and the recovery noted. The nature of the drilling maximises tailings recovery.</p> <p>Whole 'core' samples were recovered and carefully cut in half with a bladed tool. Half 'core' was retained.</p> <p>There is no relationship between recovery and grade.</p>
Logging	
<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>Geological logging (colour, degree of oxidation, moisture content) was recorded for each sample metre.</p> <p>The logging is qualitative.</p> <p>Every sample for every hole (resource definition and metallurgical holes) was logged.</p>
Sub-sampling techniques and sample preparation	
<p><i>If core, whether cut or sawn and whether quarter, half or all core taken. 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 field duplicate/second-half sampling.</i></p> <p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<p>Half of the sonic 'core' was taken.</p> <p>Core drilling used.</p> <p>The sonic 'core' samples were halved and bagged. The samples were weighed before and after drying. The dry samples were delivered to the assay laboratory where they were crushed and pulverised, before a small aliquot was split off for XRF and Laser Ablation/ICPOES assay (silver and cobalt).</p> <p>The sample recovered is homogeneous and thus half core samples taken at random are representative of the whole.</p> <p>The sample sizes are appropriate for the analytes; the grain size is fine (< 40 micron) as the material is tailings, thus there are no issues with sample mass.</p>
Quality of assay data and laboratory tests	
<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p> <p><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></p>	<p>XRF, using a fused disk, was carried out for a suite of analytes. Laser Ablation, followed by ICPOES, was used for silver and cobalt. Both techniques provide a total assay.</p> <p>A handheld XRF was only used for initial assay determination in the field; all handheld assays were replaced by fused disk XRF assays.</p>

JORC Code explanation	Commentary
<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>	CRMs were inserted at a rate of 1 in 10; pulp repeats were inserted at a rate of approximately 1 in 25. Collectively these demonstrate good accuracy and precision.
Verification of sampling and assaying	
<i>The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.</i>	No twinning was carried out, but duplicate samples were submitted. No twinned holes were drilled. Logging and sampling information was collected using a toughened data entry computer and stored in an Access database. The database has been verified and no issues noted. No adjustments were carried out.
Location of data points	
<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control.</i>	Collars were picked up with a DGPS. As the holes are shallow (most less than 6 m in depth) and all vertical, no downhole surveying was used. MGA 94 Zone 51. The surface, pre-existing surface and walls of the Cell 3 tailings dam was accurately surveyed, thus there is good 3D topographic control on the tailings volume.
Data spacing and distribution	
<i>Data spacing for reporting of Exploration Results. 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. Whether sample compositing has been applied.</i>	Resource definition drilling was on an approximate 40 m offset grid. Variogram analysis shows that the range of influence for nickel is at least twice the drill spacing in the X and Y dimensions. Sample compositing has not been carried out as most of the samples were collected on 1 m increments.
Orientation of data in relation to geological structure	
<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>	The tailings were deposited horizontally and the sampling is vertical. The tailings have horizontal control, reflecting the time-based nature of deposition.
Sample security	
<i>The measures taken to ensure sample security.</i>	Samples were collected and transported to the POS Mine Office less than 500 m away by POS personnel, and thence delivered to assay laboratories in Kalgoorlie, also by POS personnel.
Audits or reviews	
<i>The results of any audits or reviews of sampling techniques and data.</i>	No audits or reviews of sampling techniques were carried out. A recent review by the Competent Person shows that the samples were stored and processed appropriately.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Section 2: Reporting of Exploration Results	
Mineral Tenement and Land Tenure Status	
<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>	The Black Swan mine-site and the tailings Cell 1 sit on granted Mining Lease M27/200, owned by 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>	The tailings are on a granted Mining Lease with no issues regarding security of tenure.
Exploration Done by Other Parties	
<i>Acknowledgment and appraisal of exploration by other parties.</i>	No exploration has been carried out by other parties
Geology	
<i>Deposit type, geological setting and style of mineralisation.</i>	The tailings are from mining of the high-grade underground massive nickel sulphide

Silver Swan orebodies. Tailings from the lower-grade Black Swan open pit were deposited in a different Cell.

Drill Hole Information

A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:

- easting and northing of the drill hole collar*
- elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
- dip and azimuth of the hole*
- down hole length and interception depth*
- hole length.*

If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.

See the attached tabulation of the drillhole collars (Appendix A).

Data Aggregation Methods

In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.

Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.

The assumptions used for any reporting of metal equivalent values should be clearly stated.

Assays have been collected for every sample in the resource definition holes. No grade cutting has been applied.

No aggregation has been employed.

No metal equivalent values have been used.

Relationship Between Mineralisation Widths and Intercept Lengths

These relationships are particularly important in the reporting of Exploration Results.

If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.

If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').

The holes have been drilled normal to the deposition of the tailings, i.e. vertically.

Diagrams

Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.

The attached report contains a plan view of all of the collars.

Balanced Reporting

Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.

No assays have been reported in the associated documentation.

Other Substantive Exploration Data

Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.

No other exploration data is relevant to the evaluation of the Silver Swan tailings.

Further work

The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).

Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.

No further work, other than mining of the tailings, is planned.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in the preceding section also apply to this section.)

Section 3: Estimation and Reporting of Mineral Resources	
Database integrity	
<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.</i> <i>Data validation procedures used.</i>	The database was reviewed by the Competent Person, and apart from one incorrect moisture calculation, no errors were noted. Observation of the database and viewing of the remnant half 'core' samples; three-dimensional viewing of the holes with respect to the surveyed tailings volumes.
Site visits	
<i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i> <i>If no site visits have been undertaken indicate why this is the case.</i>	The Competent Person visited the tailings facility on 3 August 2021 and checked the collar positions of some of the holes, finding no errors. The remnant half 'core' was viewed.
Geological interpretation	
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.	The interpretation of the three zones is based upon colour and degree of oxidation and corresponds to the sulphide content of the associated mineralisation. The three zones are readily apparent in core photos and in remnant samples. The composited sonic drilling data was used in its entirety; samples were coded into one of the three estimation zones or as being below the base of the tailings (as defined by a basal liner). There are no alternative interpretations. The three zones have been defined on the sulphide content, nickel, iron and MgO values in the tailings, and reflect three distinct populations.
Dimensions	
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.	The tailings dam (Cell 1) is approximately 220 m square, with a depth of up to 7 m.
Estimation and modelling techniques	
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 relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	Inverse distance squared interpolation has been applied for Ni%, Al ₂ O ₃ %, CaO%, As%, Co ppm, Cu%, Fe%, MgO%, MnO%, S%, SiO ₂ %, moisture %, and in situ Specific Gravity (t/m ³). The cell size was 12.5 mN by 12.5 mE by 1 mRL, with sub-celling down to an eighth of the parent block size. Estimation was into parent cells using Surpac software. There are no check estimates. No assumptions have been made in the reporting of the Mineral Resource about the recovery of by-products. The main deleterious element estimated is arsenic. The average drill spacing is an offset 40 m by 40 m grid. No assumptions have been made regarding the selective mining unit, as the concept is not relevant for tailings recovery. No assumptions have been made regarding the correlation between variables. Three estimation domains were used, based upon nickel grade, MgO and iron grades, also the colour and level of oxidation of the tailings 'cores'. Samples were coded separately into each of the three domains and hard estimation boundaries were applied. Grade cutting was only applied to cobalt assays in zone 1, affecting 3 samples, and dry SG, affecting one sample. The main variables of interest remain uncut. The model was compared to the informing drillhole samples per domain for nickel, sulphur, arsenic, iron and MgO. In all cases the average grades of the samples were within 5% of the volume and density-weighted model grades. Visual validation and validation via swath plots was also carried out.
Moisture	
<i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i>	Moisture measurements were taken, both for the resource definition samples and for the metallurgical samples, and the moisture percentage was estimated into each block. The moisture was determined by weighing the freshly drilled sample (half core) and the sample after drying at 80C or less.

Cut-off parameters	
<i>The basis of the adopted cut-off grade(s) or quality parameters applied</i>	Because of the non-selective nature of tailings recovery not reporting cut-off grade has been applied.
Mining factors or assumptions	
<i>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.</i>	Zone 3, which is the top zone containing partially-oxidised, low nickel, High MgO and low iron material, has not been reported and it is envisaged that this will be scraped off and deposited elsewhere before the underlying tailings are mined. Potential mining methods include mechanical excavation, which is highly probable, or sluicing. The underlying Zones (1 and 2) have been reported in their entirety.
Metallurgical factors or assumptions	
<i>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.</i>	Pilot metallurgical testing of four composites generated from the 2018 sonic drilling has been considered in the derivation of the criteria for Reasonable Prospects of Eventual Economic Extraction.
Environmental factors or assumptions	
<i>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 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>	It is assumed that the overlying (Zone 3) material will be scraped off and redeposited in a suitable storage facility. It is estimated that there is approximately 140,000t of this material.
Bulk density	
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. 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, Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	The metallurgical samples were subject to dry specific gravity determinations at ALS in Perth as part of the testing process, resulting in 73 samples with specific gravity results between 2.64 and 4.13. Bulk density measurements were carried out on dried 10 cm segments of whole sonic 'core'. The reported tonnage is derived from the in-situ bulk density corrected for the interpolated moisture in each block.
Classification	
The basis for the classification of the Mineral Resources into varying confidence categories 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). Whether the result appropriately reflects the Competent Person's view of the deposit.	The entire tailings has been classified as a Measured Resource on the basis of excellent reproducibility of grades in the model, good QAQC on the sonic samples, and good continuity of nickel as measured by the variogram. The classification has taken into account all relevant factors. The classification reflects the Competent Person's view of the deposit.
Audits or reviews	
The results of any audits or reviews of Mineral Resource estimates. 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 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	The Competent Person has reviewed the Mineral Resource estimated by POS staff in 2018 and takes full responsibility for the results. The grades are accurate at the global level, i.e. assuming that the entire tailings dam (apart from the top metre) is removed and treated. It would not be appropriate to assign grades other than at the domain level.

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
These statements of relative accuracy and confidence of the estimate should be compared with production data, where available

The estimate refers to the global TSF tonnage.

No production data is available.