

GOLDEN SWAN MAIDEN RESOURCE

27 October 2021

Key Points

- Indicated Resource at Golden Swan is 111,600t @ 4.7% Ni for 5,200t contained Ni
- Total Indicated and Inferred Resource at Golden Swan is 160,000t @ 3.9% Ni for 6,250t contained Ni
- Golden Swan adds significant Ni tonnes to the high-grade inventory at Black Swan with Indicated Resources of high-grade at Black Swan now 219,600t @ 7% Ni for 15,330t of contained Ni

Poseidon Nickel (ASX: POS) ("Poseidon", "the Company") is pleased to announce the maiden Mineral Resource Estimate (MRE) for the Golden Swan deposit at Black Swan.

Managing Director and CEO, Peter Harold, commented, "The Golden Swan Resource is a significant development in the progress towards restarting operations at Black Swan. Mine studies have commenced to potentially convert the Golden Swan resource to a mine reserve. The Golden Swan resource is located only 120 metres from the drill drive developed earlier this year and could be brought into production in a short time frame.

Along with Silver Swan Reserve, it is believed that two independent high-grade feed sources should assist in de-risking the restart at Black Swan under the Fill the Mill Strategy. Other programs underway as part of the Bankable Feasibility Study include the resource definition drilling program down plunge of Silver Swan, mining studies on open pit and underground resources, metallurgical testwork on blending the various feed sources and capital and operating cost estimates by GR Engineering.

We remain committed to our project schedule of commissioning Black Swan during December 2022."

Golden Swan Resource Tables

The Golden Swan MRE was prepared for Poseidon by independent Resource consultants Optiro Pty Ltd following the completion of the 69 hole, 22,000 m Exploration and Resource drilling programs undertaken by Poseidon since the discovery of the deposit in 2020. A detailed summary of the MRE is presented in Tables 1 and 2 with the JORC 2012 Compliance Tables included as Appendix 1.

		Golden Swan Resource - October 2021										
Туре		Indic	ated			Infe	rred			То	tal	
	kt	Ni %	As ppm	Ni metal (t)	kt	Ni %	As ppm	Ni metal (t)	kt	Ni %	As ppm	Ni metal (t)
Contact	111.6	4.7	390	5,200	8.8	4.7	500	410	120.4	4.7	390	5,610
Hanging Wall	-	-	-	-	39.6	1.6	140	640	39.6	1.6	140	640
Total	111.6	4.7	390	5,200	48.4	2.2	208	1050	160	3.9	332	6,250

TABLE 1: MAIDEN GOLDEN SWAN 2021 MINERAL RESOURCE AT A 1.0% NICKEL CUT-OFF

Note: totals may not sum due to rounding



Туре	MINDOM	Classif.	Volume m ³	Density t/m³	Tonnes	Ni %	Co ppm	Cu %	Fe %	S %	MgO %	As ppm	Ni Tonnes
		Indicated	5,443	3.04	16,566	1.74	411	0.09	11.0	4.1	20.3	467	288
	C10300	Inferred	348	2.96	1,031	1.82	332	0.08	9.6	3.7	16.6	351	19
		Ind + Inf	5,791	3.04	17,597	1.74	406	0.09	10.9	4.0	20.1	460	306
		Indicated	15,464	3.50	54,057	6.05	1,232	0.47	21.8	13.5	15.4	410	3,272
	C10360	Inferred	1,887	3.47	6,547	5.30	1,197	0.37	22.7	15.6	15.3	532	347
Contact		Ind + Inf	17,350	3.49	60,604	5.97	1,228	0.46	21.9	13.8	15.4	423	3,618
Contact		Indicated	12,615	3.25	41,001	4.02	705	0.24	15.7	8.3	20.0	321	1,649
	C10460	Inferred	379	3.25	1,231	3.85	691	0.19	15.7	7.9	19.3	435	47
		Ind + Inf	12,994	3.25	42,232	4.02	704	0.24	15.7	8.3	20.0	324	1,696
		Indicated	33,521	3.33	111,624	4.67	916	0.33	17.94	10.2	17.8	386	5,208
	Combined	Inferred	2,614	3.37	8,809	4.69	1,025	0.31	20.19	13.1	16.0	497	413
		Ind + Inf	36,135	3.33	120,433	4.67	924	0.33	18.1	10.4	17.7	394	5,621
	U10370	Inferred	12,833	3.04	38,976	1.62	306	0.08	8.0	3.2	26.9	145	630
H/W	U10450	Inferred	219	2.97	649	1.01	222	0.06	6.7	1.7	31.0	44	7
	Combined	Inferred	13,052	3.04	39,625	1.61	305	0.08	8.0	3.2	26.9	143	636
		Indicated	33,521	3.33	111,624	4.67	916	0.33	17.9	10.2	17.8	386	5,208
	All	Inferred	15,666	3.09	48,434	2.17	436	0.12	10.2	5.0	25.0	208	1,049
		Ind + Inf	49,187	3.25	160,058	3.91	771	0.27	15.6	8.6	20.0	332	6,257

TABLE 2: MAIDEN GOLDEN SWAN 2021 MINERAL RESOURCE AT A 1.0% NICKEL BY MINERALISED DOMAIN

Methodology

The Golden Swan nickel sulphide deposit is located within the Black Swan Komatiite complex, 450m south of the high-grade Silver Swan massive sulphide deposit. Mineral Resources at Golden Swan have been estimated for three contact (C10460, C10360 and C10300) and two hanging wall mineralised lenses (U10450 and U10370). The contact mineralisation which consists predominantly of massive to semi-massive sulphide, is developed on the contact between an underlying felsic volcanic unit referred to as the Southern Terrace and the overlying Black Swan komatiite (host to the Black Swan disseminated sulphide deposit). Within the overlying Black Swan komatiite succession, minor disseminated/blebby nickel sulphide lenses (hanging wall mineralisation) have been developed adjacent to two of the contact mineralisation lenses (Figure 1). The entire stratigraphy has been intruded by late-stage felsic porphyry dykes, none of which have been observed to date to impact the Golden Swan deposit.

The three contact mineralised lenses at Golden Swan strike north-south, dip steeply east to vertical, with highly variable horizontal widths between 2.0 to 3.6 m. The uppermost lens (C10460) develops approximately 880 m below surface and extends 50 m along strike and 40 m vertically. The second lens (C10360) develops approximately 960 m below surface and extends 70 m along strike and 85 m vertically. The third lens (C10300) commences 1,000 m) below surface and extends for 40 m along strike and 35 m vertically.

The hanging-wall mineralisation occurs as two discrete disseminated sulphides lenses (Figure 1), developed between approximately 0 to 10 m in the hanging-wall (to the east) of the C10460 and C10360 contact lenses. The upper hanging-wall lens (U10450) adjacent to the C10460 lens, commences 900 m below surface, is 65 m along strike, 35 m vertically and has 2.8 m average horizontal width, dipping steeply to the east. The lower hanging-wall lens adjacent to the C10360 lens commences 950 m below surface, is 110 m along strike, 100 m vertically and has 2.6 m horizontal width. The upper two-thirds of the lens dips steeply to the west, and the lower third flattens out with depth to a moderate easterly dip.



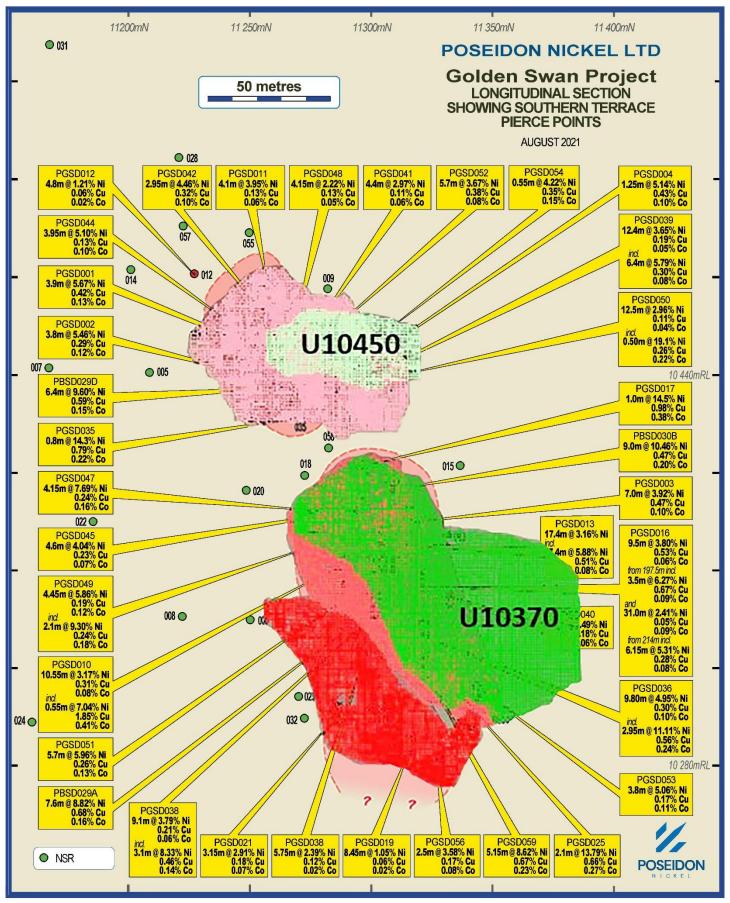


FIGURE 1: MINERAL RESOURCE SHAPES OVERLYING MODELLED SHAPES - CONTACT MINERALISATION.



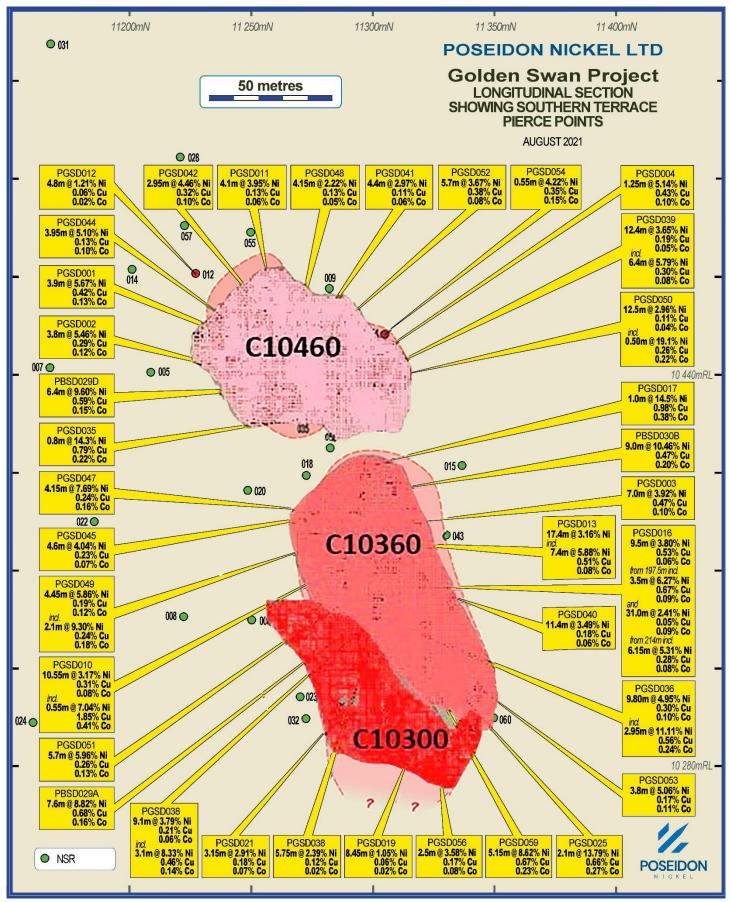


FIGURE 2: MINERAL RESOURCE SHAPES OVERLYING MODELLED SHAPES - HANGINGWALL MINERALISATION OVERLYING CONTACT MINERALISATION PODS.



The C10460 and C10360 lenses have a mix of massive/semi-massive and matrix/disseminated sulphide mineralisation. To constrain the two styles of mineralisation, a categorical indicator (CI) approach within the two lenses was implemented. This provided 3 dimensionally consistent sub-domains within each of the two lenses. The CI approach used a grade indicator of 5% sulphur, and a 50% probability threshold to differentiate massive/semi-massive and the matrix/disseminated mineralisation styles. The CI approach was not required for the C10300 lens as there was no mix of massive/semi-massive and matrix/disseminated style mineralisation.

Kriging neighbourhood analysis using the variography for the contact mineralisation was undertaken to optimise the parent block size, and a three-pass search strategy was employed for all domains. For the contact mineralisation the first estimation pass searched 65 m x 65 m x 7.5 m. The second search pass doubled the search distance, and the final search pass doubled the distance again. Passes one and two used between 6 and 20 samples, and the third pass used between 4 and 12 samples. Within the two contact lenses (C10460 and C1036) which were based upon the CI sub-domains, a restriction of 4 samples per drillhole was used. No such restriction was applied to the C10300 lens.

For the hanging-wall mineralisation the first estimation pass searched 32.5 m x 32.5 m x 7.5 m. The second search pass doubled the search distance, and the final search pass doubled the distance again. Passes one and two used between 6 and 20 samples, and the third pass used between 4 and 12 samples. No restriction on the number of samples per drillhole was used for the hanging-wall mineralisation.

Block grades for nickel, cobalt, copper, iron, magnesium oxide, sulphur, arsenic and measured density were estimated using Ordinary Kriging into mineralisation lenses, with lenses C10460 and C10360 using the CI subdomains. All boundaries were treated as hard.

The Mineral Resource estimate has been validated both visually and statistically. For all estimated lenses, block model grades (domain and global) have been validated against the de-clustered and top-cut input composite grades. Swath plots in northing, easting and elevation directions were also examined, and a visual comparison of the input composite grades against the estimated block grades was completed in cross-section.

The Mineral Resource has been classified into Indicated and Inferred categories following the guidelines of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 (the JORC Code). No Measured Mineral Resources have been defined. The classification criteria were assigned based on the robustness of the input data, the drill hole spacing, geological confidence and grade continuity. The classification reflects the Competent Person's views of the deposit.

Reasonable prospects for eventual economic extraction (RPEEE) have been demonstrated by the previous underground mining at the Cygnet and Silver Swan prospects, which are of comparable volumes and grade and at similar depths and are spatially adjacent to Golden Swan. RPEEE considerations meant that only hanging wall mineralisation adjacent to the contact mineralisation was considered a Mineral Resource.

Indicated Resources have been assigned to mineralisation domains where the drill hole spacing is well informed (spacing less than 25 m in northing and elevation), where the mineralisation correlates with the ultramafic stratigraphy (i.e. higher grades at the stratigraphic footwall with disseminated sulphides reducing away from the basal position), and where the grade and geological continuity can be assumed.

Peter Harold

Managing Director & CEO

27 October 2021

This announcement was authorised for lodgement by the Board of Poseidon Nickel Limited.



COMPETENT PERSON STATEMENTS:

The information in this report that relates to 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 Golden Swan Mineral Resource is based on, and fairly represents, information compiled by Mr Andrew Pearce, Exploration Manager, who is a full-time employee at Poseidon Nickel, and is a Member of The Australian Institute of Geoscientists and Mr Ian Glacken who is a full time employee of Optiro Pty Ltd and is a Fellow of the Australian Institute of Mining and Metallurgy.

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

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

FORWARD LOOKING STATEMENTS:

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

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

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

About Poseidon Nickel Limited

Poseidon Nickel Limited (ASX Code: POS) is a nickel sulphide exploration and development company with three projects located within a radius of 300km from 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 resource increases 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 discovery of the Golden Swan mineralisation at Black Swan in 2020 and subsequent conversion to a Resource in October 2021. The Company completed a Definitive Feasibility Study in July 2021 on retreating the gold tailings at Windarra and Lancefield given the strength of the A\$ gold price.



Mineral Resource Statement

TABLE 3: SILVER SWAN MINERAL RESOURCE ESTIMATE

		Silver Swan Resource - August 2019										
Area		Indic	ated			Infe	rred			То	tal	
	kt	Ni %	As ppm	Ni metal (t)	kt	Ni %	As ppm	Ni metal (t)	kt	Ni %	As ppm	Ni metal (t)
Tundra-Mute	68	9.2	3,200	6,260	59	9.8	3,290	5,800	127	9.5	3,240	12,060
Peking Duck	26	9.7	2,520	2,560	1.2	8.8	4,330	100	27	9.7	2,590	2,660
Fledgling- Canard	12	9.9	2,100	1,160	0				12	9.9	2,100	1,160
Goose	1.7	9	3,180	150	0				1.7	9	3,180	150
Total resource	108	9.4	2,910	10,130	61	9.7	3,310	5,900	168	9.5	3,060	16,030

Silver Swan Resource as at 5 August 2019 (see ASX announcement "Silver Swan Resource Upgrade" released 5 August 2019)

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

TABLE 4: GOLDEN SWAN 2021 MINERAL RESOURCE AT A 1.0% NICKEL CUT-OFF

		Golden Swan Resource - October 2021										
Туре		Indic	ated			Infe	rred			То	tal	
	kt	Ni %	As ppm	Ni metal (t)	kt	Ni %	As ppm	Ni metal (t)	kt	Ni %	As ppm	Ni metal (t)
Contact	111.6	4.7	390	5,200	8.8	4.7	500	410	120.4	4.7	390	5,610
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Total	111.6	4.7	390	5,200	48.4	2.2	208	1050	160	3.9	332	6,250

Note: totals may not sum due to rounding



Appendix 1

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	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.	The Golden Swan prospect has been sampled by underground diamond core that was sampled as half core, the overwhelming majority of which is NQ2 diameter core. Underground diamond drilling completed whilst the mine was operating prior to 2021 used 32 drillholes, totalling 18,286 m of drilling testing the Golden Swan stratigraphy, of which, six drillholes with a total of 4,355 m have intersected mineralisation. In 2021, 60 additional drillholes totalling 16,104 m were drilled from the dedicated drill drive, and 43 of these drillhole intersected mineralisation. The 2021 drilling was all NQ2 diameter core, which was sampled at least 10m either side of logged mineralisation, by cutting the core in half using a Corewise core saw.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	Appropriate QAQC standards and blanks from Geostats were inserted, and duplicates taken as quarter core at selected intervals where mineralisation variability warranted it.
	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	Mineralisation was identified visually using the presence, texture and proportion of nickeliferous sulphide material, and lithology. Samples were divided into logged domains, with no individual sample being greater than 1.2m or less than 0.3m.
Drilling techniques	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).	All drillholes intersecting the mineralisation were drilled after 2006 and were drilled as NQ2 diameter core. The 2021 drilling was conducted by Webdrill using the Diamec Smart 6 Mobile Carrier rig, drilling NQ2 diameter core, with the drillhole being surveyed using the DHS DeviGyro OX tool. The core was orientated using the Trucore Orientation Tool.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed	Total core recovery was calculated on the amount recovered versus the amount drilled. Depths and recovery were recorded on wooden blocks placed in the core trays by the driller at the end of every run. Lost core was also recorded in this way. Core recovery was good, even though frequently fractured.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	Core was recovered via 3m core tube used behind the drill bit, and then transferred from tube to core trays. The 2021 drilling was completed from a dedicated drill drive which optimised the drillhole intersection angle.
	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.	All sampling has been from diamond core and no relationship between grade and sample recovery has been identified at Golden Swan.
Logging	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.	Core was logged into Geobank Mobile, with lithology, alteration, mineralogy, structure, RQD and total core recovery captured. The logging was validated before being exported to the Geobank database. The level of detail is appropriate and supports all levels of Mineral Resource estimation and future mining and metallurgical studies.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Geology logging is qualitative, but RQD and recovery data was collected quantitatively. All of the core has been photographed wet and dry prior to being sampled.



Criteria	JORC Code explanation	Commentary
	The total length and percentage of the relevant intersections logged	All of the drilled core and relevant intersections have been logged.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Core samples are sawn and were sampled as half core, unless duplicates were taken, which required samples to be quarter core.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	All sampling was as diamond core.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	For the 2021 drilling, samples were dispatched to SGS in Perth. Post sample receipt and drying, sample preparation consisted of crushing and pulverisation, followed by four acid digest. The sample preparation is considered appropriate for the variables being assayed.
	Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	Quarter core field duplicates were prepared by halving existing half core samples, at a nominal rate of 1 in 20 (achieved rate was 1 in 15).
	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.	The results from the field duplicates were excellent, showing extremely good repeatability between the original and duplicate samples.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes are appropriate for the grain size of the sampled material.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	Assaying was undertaken using ICP-OES which is considered an appropriate method for the deposit and is considered a total analytical technique.
	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.	No geophysical tools were used.
	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.	CRM standards and blank samples were submitted at nominal rate of 1 in 20 (achieved rate was 1 in 15 for the CRM). The available data exhibited good analytical accuracy.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Sampling was conducted by the logging geologists who are employees of Newexco Exploration Pty Ltd, but there has been no independent or alternative verification of significant intersections Key intercepts were viewed by Optiro onsite.
	The use of twinned holes.	No holes were designed as twinned holes, but hole PBSD0294A (drilled in wedge hole off PBSD029, March 2020) and PGSD038 (drilled in June 2021) were 5.0 m apart in 3D. PBSD029A: 3.0 m true width @ 8.3% Ni, 1543 ppm Co PGSD038: 2.8 m true width @ 7.5% Ni, 1,222 ppm Co. This provides confidence in the consistency of the mineralisation. Both holes were incorporated into the estimate.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Data was collected using Geobank Mobile which utilizes a validation function before data can be exported into the Geobank database.
	Discuss any adjustment to assay data.	The only adjustment to assay data was the conversion of elemental Mg to MgO using the factor: MgO = Mg x 1.658.
Location of data points	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.	All collar surveys were completed to an accuracy of ±10mm. All holes are surveyed downhole using the DHS Devishot tool, with measurements taken every 2 or 3m, at in and out runs across the entire length of the hole at every survey interval. The tool is True North seeking and has an accuracy of +/-1 degree of dip and azimuth. In tool analysis gave an indication of whether the survey passed or failed and successive surveys overlayed in DeviCloud to visually check deviation between surveys with an average survey



Criteria	JORC Code explanation	Commentary
	Specification of the grid system used.	The collar position and downhole surveys were collected on a local grid based on known MGA references, which was used for the previous mining. 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 + 1000m was previously adopted for the Black Swan project.
	Quality and adequacy of topographic control.	Existing topographic controls are considered adequate.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	The nominal drillhole spacing is 15 to 20 mN x 15 to 20 mRL, with occasional drilling infilling as required.
	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.	The data spacing and distribution is relatively uniform and is considered sufficient to establish the degree of geological and grade continuity appropriate for Mineral Resource and Ore Reserve estimation and classification.
	Whether sample compositing has been applied.	All sampling has been done as individual drillholes and no sample compositing has been applied.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Considering the style of mineralisation and mineralised geometry, the orientation of the sampling is not considered to have introduced a sampling bias.
	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.	The orientation of the drilling/sampling and the mineralisation is not related.
Sample security	The measures taken to ensure sample security.	Sampling was conducted on-site by the logging geologists who were employees of Newexco Exploration Pty Ltd, an independent exploration consultancy. No specific sample security measures were taken during sample dispatch and transport to Perth. On arrival at the laboratory, the laboratory reconciled submitted and received samples.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews were completed during drilling.



Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary		
Mineral tenement and land tenure status	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.	The Black Swan Project, which hosts the Golden Swan prospect, is located 42.5km NE of Kalgoorlie. The tenement is registered to Poseidon Nickel Atlantis Operations Pty Ltd, a wholly owned subsidiary of Poseidon Nickel Ltd, following the purchase of the assets. The Black Swan open-pit is centred on M27/39 and extends into M27/200. Historical royalties of 3% NSR exist over the minerals produced.		
	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.	Tenement M27/39 is currently in good standing and is due to expire in 2028. Tenement M27/200 are currently in good standing and is due to expire in 2037. At the time of reporting there are no known impediments to obtaining a licence to operate.		
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The Silver Swan Mine was discovered by MPI Mines Ltd, then was acquired by Lion Ore in 2004. Much of the exploration drilling and development was completed by these 2 companies. In turn Lion Ore 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.		
Geology	Deposit type, geological setting and style of mineralisation.	The Golden Swan deposit is a Kambalda style komatiite hosted nickel deposit.		
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.	 The Golden Swan drillhole information has previously been reported in the following ASX releases: ASX release, 31/08/2021, "Final Assays Received for Golden Swan" ASX release, 16/08/2021, "More High Grade Nickel at Golden Swan" ASX release, 09/08/2021, "More High Grade Nickel at Golden Swan" ASX release, 09/08/2021, "Latest Drilling and Assay Results add to Golden Swan" ASX release, 27/07/2021, "Latest Drilling and Assay Results add to Golden Swan" ASX release, 66/07/2021, "Golden Swan Drilling and DHEM Update" ASX release, 16/06/2021, "Further Golden Swan Drilling Results Add To High Grade Continuity" ASX release, 09/06/2021, "Initial Golden Swan Drilling Results Demonstrate High Grade Continuity" ASX release, 09/06/2021, "Golden Swan Drill Drive Completed and Resource Definition Drilling Underway". ASX release, 18/03/2021, "Golden Swan Drill Drive Completed and Resource Definition Drilling Underway". ASX release, 09/12/2020, "Golden Swan Drill Drive Underway". ASX release, 09/12/2020, "Golden Swan Drill Drive Underway". ASX release, 19/11/2020, "Golden Swan Drill Drive Underway". ASX release, 19/11/2020, "Golden Swan and Southern Terrace continues to grow". ASX release, 19/11/2020, "Golden Swan and Southern Terrace continues to grow". ASX release, 19/08/2020, "Golden Swan and Southern Terrace continues to grow". ASX release, 19/08/2020, "Golden Swan and Southern Terrace continues to grow". ASX release, 19/08/2020, "Golden Swan and Southern Terrace continues to grow". ASX release, 19/08/2020, "Golden Swan and Southern Terrace continues to grow". ASX release, 19/08/2020, "Exceptional Grades Received at Golden Swan and Windarra Gold Tailings Update" ASX release, 26/03/2020, "Second Golden Swan Massive Sulphide Intersection". 		
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. 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	When reporting Golden Swan assay results, a minimum cut-off grade of 0.5% Ni has been used, with no cutting of high grades applied. The Golden Swan drillhole intercepts have previously been reported.		
	aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents have been reported.		



Criteria	JORC Code explanation	Commentary
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 (e.g. 'down hole length, true width not known').	Mineralised widths are reported as down hole lengths. Due to the apparent variability of the Southern Terrace mineralisation, true width cannot be stated with certainty at this time.
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.	 Maps and sections have been supplied with previous ASX releases relating to disclosure of drillhole results: ASX release, 31/08/2021, "Final Assays Received for Golden Swan" ASX release, 16/08/2021, "More High Grade Nickel at Golden Swan" ASX release, 09/08/2021, "More High Grade Nickel at Golden Swan" ASX release, 09/08/2021, "Latest Drilling and Assay Results add to Golden Swan" ASX release, 06/07/2021, "Latest Drilling and Assay Results add to Golden Swan" ASX release, 06/07/2021, "Golden Swan Drilling and DHEM Update" ASX release, 06/07/2021, "Further Golden Swan Drilling Results Add To High Grade Continuity" ASX release, 09/06/2021, "Initial Golden Swan Drilling Results Demonstrate High Grade Continuity" ASX release, 09/06/2021, "Golden Swan Drill Drive Completed and Resource Definition Drilling Underway". ASX release, 18/03/2021, "Golden Swan Drill Drive Completed and Resource Definition Drilling Underway". ASX release, 25/11/2020, "Golden Swan Drill Drive Underway". ASX release, 19/12/2020, "Golden Swan Drill Drive Underway". ASX release, 19/11/2020, "Golden Swan and Southern Terrace continues to grow". ASX release, 19/11/2020, "Golden Swan and Southern Terrace continues to grow". ASX release, 19/0200, "EM Surveys Extends Golden Swan Potential" ASX release, 18/08/2020, "Golden Swan assays confirm exceptional drillhole intersection". ASX release, 18/08/2020, "Second Golden Swan Massive Sulphide Intersection". ASX release, 09/08/2020, "Second Golden Swan Massive Sulphide Intersection". ASX release, 14/0842020, "Exceptional Grades Received at Golden Swan and Windarra Gold Tailings Update" ASX release, 26/03/2020, "New Massive Sulphide Intersection in Golden Swan EM Anomaly"
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.	Mineralisation characteristic of the overlying non-mineralised Black Swan flows are not included, other than where they directly contact the Golden Swan mineralisation.
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.	There is no other exploration data or information available.
Further work	The nature and scale of planned further work (e.g. 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	Resource drilling on the Golden Swan deposit was completed in FN 2021-2022, and as part of that programme, further diamond drilling will be done in the area known as the Southern Terrace in order to extend the known mineralisation of the Golden Swan deposit.



Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	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.	The drillhole data is captured electronically by Poseidon Nickel Ltd (POS) geologists. The data is checked and validated before and after being uploaded to the POS SQL drillhole database, which is managed by a third-party external consultant. The drillhole data was supplied to Optiro as CSV format extracts from SQL drillhole database. The CSV data was then imported into Datamine, and checks performed to test the available data; no errors or discrepancies were identified.
	Data validation procedures used.	Validation steps were completed on the drillhole data supplied to Optiro. During input and desurveying in Datamine Studio RM, checks for overlapping intervals and gaps in downhole interval files, checks that assays where within expected ranges, that the end of hole depths matched logged/sample data, there were no FROM-TO discrepancies in the downhole data, the rate of change of the down hole surveys were with expected ranges. After importing the data, the logged lithology/alteration were within expected assay ranges, logging was spatially consistent, and no material discrepancies were identified.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	Optiro CP Ian Glacken conducted a site visit on the 04 th of August, whilst exploration drilling was still underway.
	If no site visits have been undertaken indicate why this is the case.	A site visit has been undertaken.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	As a function of the tight spaced drillhole spacing (nominally 10 mN x 10 mRL) and relatively consistent geology in the mineralisation, there is good confidence in the geological interpretations. Estimation has been restricted to mineralised lithologies and domains consistent with the extensive previous mining operations.
	Nature of the data used and of any assumptions made.	All diamond drillholes that tested the stratigraphy were used to inform the interpretations and estimate. This includes holes drilled when the mine was previously in production and which matched the drilling from the 2021 campaign.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	The evidence from the previous mining operation makes large scale alternative interpretations unlikely. There is scope for very localised variability, but the impact is considered to be only of very local significance.
	The use of geology in guiding and controlling Mineral Resource estimation.	Initial mineralised envelopes were prepared based on the ultramafic stratigraphy (whether located at the felsic-ultramafic contact or ultramafic hangingwall stratigraphy), nickeliferous sulphide texture (massive/semi-massive and disseminated sulphides), in combination with nickel and sulphur grades. Within the contact mineralisation, the mineralisation was categorised as either dominantly massive/semi-massive or dominantly disseminated sulphides using a 5.0% sulphur indicator and a 50% probability threshold. Estimation was then undertaken within the contact domain and sulphide category. The ultramafic domains have a consistent disseminated sulphide texture and were estimated on a domain basis exclusively.
	The factors affecting continuity both of grade and geology.	Nickel is hosted within the Black Swan Komatiite Complex, a large series of ultramafic komatiite flows. The massive sulphide Golden Swan mineralisation is located within the basal komatiite flow of the Black Swan Complex. Controlling factors include presence of ultramafic host, location within the ultramafic stratigraphy, and the texture of the sulphide mineralisation.



Criteria	JORC Code explanation	Commentary
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	 There are three contact massive sulphide domains: C10460 – located on the basal ultramafic contact, dipping 70-75° to vertical towards 110°, approximately 50 m along strike, 40 m vertically, averaging 3.2 m horizontally and with the top of the mineralisation located approximately 880 m below surface. C10360 – located on the basal ultramafic contact, dipping 70-75° to vertical towards 110°, approximately 70 m along strike, 85m vertically, averaging 3.6 m horizontally and with the top of the mineralisation located approximately 960 m below surface. C10300 – located on the basal ultramafic contact, has a near vertical dip with variable dip directions flipping between 095° and 275°. This mineralisation is approximately 40 m along strike, 35m vertically, averaging 2.1 m horizontally and with the top of the mineralisation located approximately 1,000m below surface. In addition there are two hangingwall ultramafic domains adjacent to the contact mineralisation, but located entirely within the ultramafic stratigraphy: U10450 – is adjacent to but approximately 5 m to the east of the C10460 domain, the U10450 domain dips at 80° towards 110°. This domain is approximately 60 m along strike, 25m vertically, averaging 2.5 m horizontally, and with the top of the mineralisation located approximately 60 m along strike, 50 m vertically, averaging 2.6 m horizontally, and with the top of the mineralisation located approximately 65 m along strike, 50 m vertically, averaging 2.6 m horizontally, and with the top of the mineralisation located approximately 65 m along strike, 50 m vertically, averaging 2.6 m horizontally, and with the top of the mineralisation located approximately 65 m along strike, 50 m vertically, averaging 2.6 m horizontally, and with the top of the mineralisation located approximately 65 m along strike, 50 m vertically, averaging 2.6 m horizontally, and with the top of the mineralisation located approximately 960m below surface.
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.	Estimation was undertaken using 1.0 m composite samples. The grades of variable populations exhibited low variability and did not require top-cutting. As a function of the low variability ordinary kriging was selected as the preferred estimation technique, which is considered appropriate. A dynamic anisotropy search strategy was used to control the search direction and a three-pass search neighbourhood adopted for the estimate. The contact mineralisation used a search distance of 65 m in the plane of the mineralisation and 7.5 m across. The ultramafic mineralisation used a search distance was doubled for the second pass and quadrupled for the last estimation pass, with the first pass informing 95% of the Mineral Resource. All domains used a minimum of 6 and a maximum of 20 samples for search passes 1 and 2. The third search pass used a minimum of 4 and a maximum of 12 samples, which informed less than 0.5% of the mineralisation. For the C10460and C10360 contact mineralisation, a maximum of 4 samples per drillhole was used. The other domains had no such restriction applied. Within the contact mineralisation the maximum distance of extrapolation is 44 m and within the ultramafic domain the maximum distance of extrapolation is 55 m. Estimation was completed using Datamine RM software (v1.6.87.0),
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	This is a maiden Mineral Resource estimate and no alternative check estimates are available; there has been no production as yet from the Mineral Resource.
	The assumptions made regarding recovery of by- products.	There are no assumptions about the recovery of by-products.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	Nickel, cobalt, copper and density were estimated. Iron, sulphur, arsenic and magnesium oxide have been estimated to assist with future mine planning assessment.



Criteria	JORC Code explanation	Commentary
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	The parent cell size was reviewed using Kriging Neighbourhood Analysis and the final parent block size of 5.0 mN x 1.25 mE x 5.0 mRL was selected. This compares to average drillhole spacing of 10 mN x 10 mRL with samples spaced 1.0 m downhole. The first pass search was 65 m along strike and down dip.
	Any assumptions behind modelling of selective mining units.	No assumptiosn regarding the mining SMU have been used.
	Any assumptions about correlation between variables.	For the contact mineralisation there is good positive correlations (R > 0.8) between nickel and cobalt, iron, sulphur, and density, and a good correlation with magnesium oxide. The nickel correlation with copper is poor to moderate (R >0.49) while there is no correlation between nickel and arsenic. For the hangingwall ultramatic mineralisation, there are moderate to good positive correlations (R > 0.75) for nickel, cobalt, copper, iron and sulphur. However, the correlation between these elements and density, magnesium oxide and arsenic is variable, ranging from poor to moderate at best.
	Description of how the geological interpretation was used to control the resource estimates.	The Mineral Resource estimate was constrained within interpretations of the nickeliferous contact or ultramafic lenses. The massive/semi-massive sulphide contact mineralisation was then categorised as either massive/semi-massive or disseminated sub- domains within that lens, and are located along the contact between the meta-sediment and ultramafic contact. The ultramafic mineralisation is disseminated nickel sulphides wholly contained within the ultramafic lithology.
	Discussion of basis for using or not using grade cutting or capping.	Following a review of the histogram, cumulative distribution, mean/variance analysis combined with all domain and grade/variables having low variances and coefficients of variance, no caps or top-cuts were required.
	The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	The estimates were initially validated visually in section and plan and there was good correlation between the composite and estimate. The whole of domain averages for the estimates were then compared with the naïve and declustered composite samples and again there was good correlation between the two. Swath plots were then used to test the estimate and again, there was good correlation and the sample trends had been maintained.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	The density was measured with natural moisture. This approach is the same as was used during the previous operational phase, with the core being fresh, non-porous and competent.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied	The Mineral Resource was interpreted using the massive nickel sulphide texture and stratigraphic position of the mineralisation. The Mineral Resource has been reported using a cut-off grade of 1.0% nickel which reflects a nominal cut-off.
Mining factors or assumptions	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.	The current Golden Swan mineralisation commences approximately 880 m below surface and is exclusively an underground Mineral Resource and is amenable to narrow vein mining methods.



Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	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.	It has been assumed that the previous successful mining and treatment of the Silver Swan, Cygnet and Black Swan material implies the Golden Swan material will be amenable with the historical processing using conventional sulphide floatation processes.
Environmental factors or assumptions	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	Golden Swan mineralisation is located within the previously mined Black Swan Project, which operated within established environmental legislation and practices that are industry standard. As the project has previously been mined and treated, the existing waste storage facilities, procedures and environmental considerations are not expected to pose any issues to the resumption of mining.
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 (and specific gravity) has been measured from diamond core using the immersion method. The density measurements contain natural moisture, is fresh, not-porous, competent and the natural moisture content is not considered material. Only measured density values were used for the estimation of density.
	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,	Bulk density measurements were routinely collected for all underground drill core submitted for analysis. The core is not porous, and porosity is negligible. Density was obtained from all submitted samples and hence, reflects all rock and alteration zones.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	As a function of the moderate to good nickel-density correlation, density was estimated from the composited core density data using the same estimation domains and parameters as the nickel grade.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories	The classification of Mineral Resources was completed by Optiro using a range of criteria, including confidence in the geological and mineralisation model, grade and geological continuity and the available drillhole spacing. The Indicated Mineral Resource is of a moderate confidence. These areas are considered to have a moderate to high confidence in the geological interpretation, are considered well informed supported by a nominal drill spacing less than 20 mN x 20 mRL, with suitable drillhole intersection angles, and where grade and geological continuity can be assumed. The Inferred Mineral Resource is of a low confidence in the geological interpretation, are considered poorly informed supported by a nominal drill spacing greater than 20 mN x 20 mRL, and/or with increasingly acute drillhole intersection angles, and where grade and geological continuity is implied but cannot be assumed.
	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).	The classification has taken into account of all relevant factors and is in line with industry acceptable standards.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The Mineral Resource classification applied to the September 2021 maiden Golden Swan Mineral Resource appropriately reflect the Competent Person's view of the deposit.



JORC Code explanation	Commentary
The results of any audits or reviews of Mineral Resource estimates.	The September 2021 maiden Golden Swan Mineral Resource has been reviewed internally by Optiro Pty Ltd, but has not been externally reviewed.
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 current Mineral Resource classification suitably reflects the relative accuracy of the Mineral Resource. No statistical procedure has yet been undertaken to quantify the relative accuracy.
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	The September 2021 maiden Golden Swan Mineral Resource is considered a global estimate.
These statements of relative accuracy and confidence of the estimate should be compared with production data, where available	There has been no mining of the Golden Swan mineralisation.
	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 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