

ASX Announcement

HIGH-GRADE INTERSECTIONS AT SILVER SWAN INCLUDING 15 METRES AT 17.92% NICKEL

20 December 2021

HIGHLIGHTS

- Latest infill drilling assay results within the Tundra-Mute Inferred Resource boundary has identified an area of continuous well-developed massive nickel sulphides. Results include:
 - o PTMD005: 12.9m @ 10.63% Ni from 241.1m
 - o PTMD007: 6m @ 11.36% Ni from 257m
 - o PTMD014: 11m @ 13.26% Ni from 288m
 - o PTMD015: 3.5m @ 16.30% Ni from 287.9m
 - o PTMD018: 15m @ 17.92% Ni from 265m
- Three untested conductive down hole EM plates recently identified (>15,000 Siemens). The
 plates are potentially due to the presence of well-developed nickel sulphides and are located in
 extensional positions to the existing Silver Swan High Grade Resources. Further EM surveys are
 scheduled
- High priority underground drilling programs continue at both Tundra Mute and below the Black Swan Open pit from the Gosling Drill Drive

Poseidon Nickel (ASX: POS) ("Poseidon", "the Company") is delighted to provide the following update on the recent exploration activity on the Silver Swan Channel which is aimed at increasing the high-grade resource and reserve base for the "Feed the Mill Strategy".

Managing Director and CEO, Peter Harold, commented, "we are delighted that the recent Silver Swan drilling has returned a series of high-grade results which will most certainly add tonnes to the resource base at Tundra-Mute. While these results are very significant on their own, the fact that the down hole EM survey has returned strong EM conductors is a good indication that there is additional high-grade mineralisation in the vicinity of the existing know mineralisation. These are fantastic results and demonstrate the prospectivity of the Silver Swan Channel."

Silver Swan Resource Exploration Program

The Resource Infill drilling program in Tundra-Mute is continuing with 23 holes completed and two more in progress with the most significant results outlined in Table 1, **including the exceptional intersection seen in PTMD018 of 15m at 17.92% Ni from 265m.** The long section showing the pierce points is shown as Figure 1.



TABLE 1: TUNDRA-MUTE ASSAYS TO DATE

	From (m)	To (m)	Down Hole Interval (m)	Estimated True Width (m)	Ni%	Cu%	Co ppm
Tundra-Mu	te						
PTMD001	259.6	261.15	1.55	1.30	12.98	0.36	2814
inc	259.8	260.85	1.05	0.88	15.67	0.22	2886
PTMD002	273.4	274	0.6	0.50	1.31	0.05	378
PTMD003	251.15	253.1	1.95	1.64	6.66	0.21	1503
inc	251.45	251.9	0.45	0.38	10.60	0.16	2040
and	252.25	252.45	0.2	0.17	14.20	0.16	2940
and	259	265	6	5.03	1.22	0.07	266
PTMD005	241.1	254	12.9	11.3	10.63	0.43	1342.98
inc	243.8	249.7	5.9	5.1	17.44	0.65	2217.80
PTMD007	257	263	6	5.1	11.36	0.40	2080
inc	257.95	258.75	0.8	0.7	16.70	0.34	2270
and	259.65	261.1	1.45	1.2	18.22	0.27	2816
PTMD010	281	283.55	2.55	2.1	2.89	0.11	567
inc	282.8	283.55	0.75	0.6	6.34	0.22	1260
and	285	285.45	0.45	0.4	7.93	0.10	1552
PTMD014	288	299	11	9	13.26	0.45	2076
inc	117	126	9	7.4	15.31	0.48	2340
PTMD015	287.9	291.4	3.5	2.9	16.30	0.51	2499
and	293.5	295	1.5	1.3	6.91	0.55	1211
PTMD018	265	280	15	12.7	17.92	0.60	2699
inc	270.3	272.5	2.2	1.9	19.74	0.58	2596
and	277	278.5	1.5	1.3	21.20	0.35	2630

Awaiting assays for the following holes:

Tundra-Mute: PTMD019, PTMD021, PTMD025

Assays have been received for the following holes which contained No Significant

Result (NSR):

Tundra-Mute: PTMD012

Holes Not Assayed

Tundra-Mute: PTMD004, PTMD006, PTMD008, PTMD009, PTMD011, PTMD013,

PTMD016, PTMD017, PTMD020, PTMD022



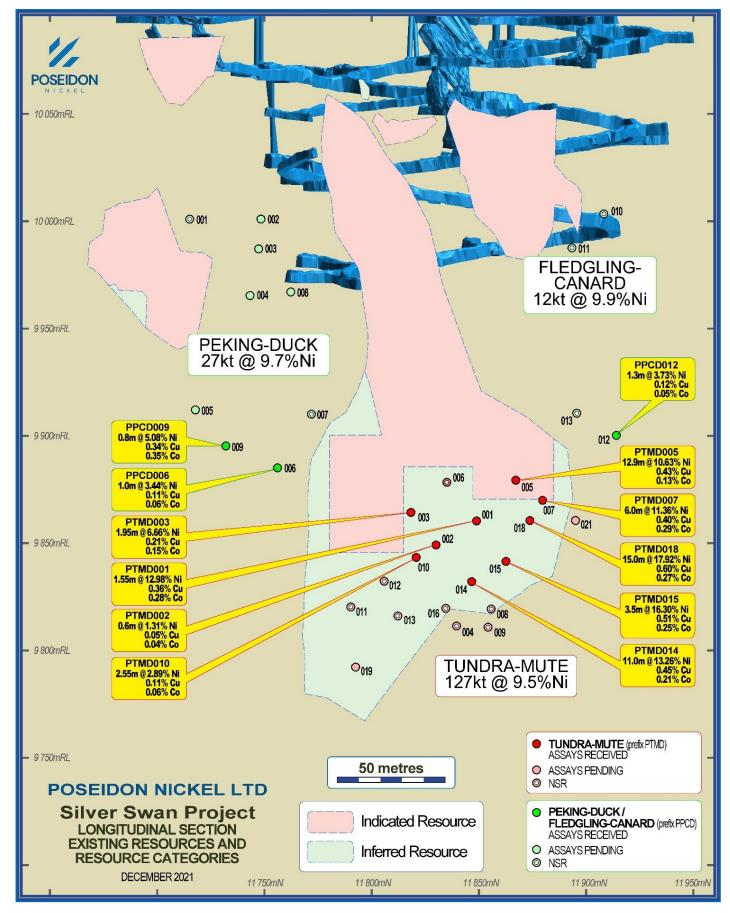


FIGURE 1: LONG SECTION SHOWING SILVER SWAN PIERCE POINTS AND INTERCEPTS



Down Hole Electro Magnetic Survey

Eight drill holes were surveyed by Vortex Geophysics using an Atlantis Down Hole Electro Magnetic (DHEM) probe between 26 November and 6 December 2021 with the interpretation of the results carried out by Newexco. The survey highlighted seven plates with a conductance of >15,000 Siemens which is considered highly conductive. Within the Silver Swan setting, these readings are often indicative of the presence of massive sulphides. These plates are shown in relation to Tundra-Mute in Figure 2.

When compared against drilling data, four of the plates can be explained using historical drilling and will not be tested further. These plates are shown as light purple in Figure 2. The untested plates are shown as darker purple in Figure 2. The full table of results is included as Table 2. In relation to these untested plates the following information is relevant:

- **PTMD022_EOH** is a newly identified EM plate down plunge of the Silver Swan Mines is greater than 70m from any other drilling. Drilling stops quickly after passing the footwall contact due to ground conditions limiting the full effectiveness of the platform EM hole.
- PTMD005_EOH is a relatively small plate with historical drilling surrounding it constraining its extent. Follow up drilling is being considered.
- PTMD011_EOH is a small plate that is located on the lower edge of the Tundra-Mute inferred shape. Other drilling intersecting the periphery of the plate were thin but mineralisation could potentially be better developed elsewhere in the plate. Follow up drilling is being considered.

Other DHEM to be undertaken will be in Hole PTMD023 which is in progress -Figure 2. The results of the DHEM survey will provide important additional information to correlate existing high-grade intersections and determine its potential extents. The information will guide further drill testing in the area.

TABLE 2: SILVER SWAN DHEM NEW MODEL PLATE PROPERTIES

Plate_Name	х	У	Z	Dip	Dip_	Rotation	Length	Depth_	Conductivity-
					Direction			Extent	Thickness
PPCD005_006_009_p1	10534.72	11751.02	10006.89	64.83	121.41	34.07	29	66	28350
PPCD005_120m	10565.09	11717.17	9924.886	81.91	111.41	58.32	16	21.1	2000
PPCD005_130m	10570.7	11720.4	9928.3	81.91	111.41	58.32	16	21.1	2000
PPCD005_70m	10537.4	11747.3	9988.4	64.83	121.41	10	25	22	28350
PPCD005_EOH?	10577.59	11711.76	9903.019	72.03	123.18	52.12	22.5	12	15900
PPCD006_140m_v1	10598.7	11777.2	9904.8	75.6	114.3	-2.38	25	25	18000
PPCD009_60m	10552.9	11772.5	9989.5	64.83	121.41	10	25	27	28350
PPCD010_30m	10551	11860.9	10020.4	62.1	101.3	29.7	20	20	10000
PPCD010_60m	10582	11896.8	9999.7	62.1	101.3	29.7	15	15	6000
PPCD013_Background	10614.59	12131.6	9804.94	70.32	100.95	-18.89	250	250	2000
PTMD011_EOH?_V1	10632.1	11780.4	9846.4	57.3	121.32	-5.4	30	25	15000
PTMD021_Background	10518.7	12204.6	10025.2	70.32	100.95	-13	250	250	2000
PTMD022_EOH?	10696.2	11793.4	9719.6	80.5	91.6	-16.7	25	30	18000



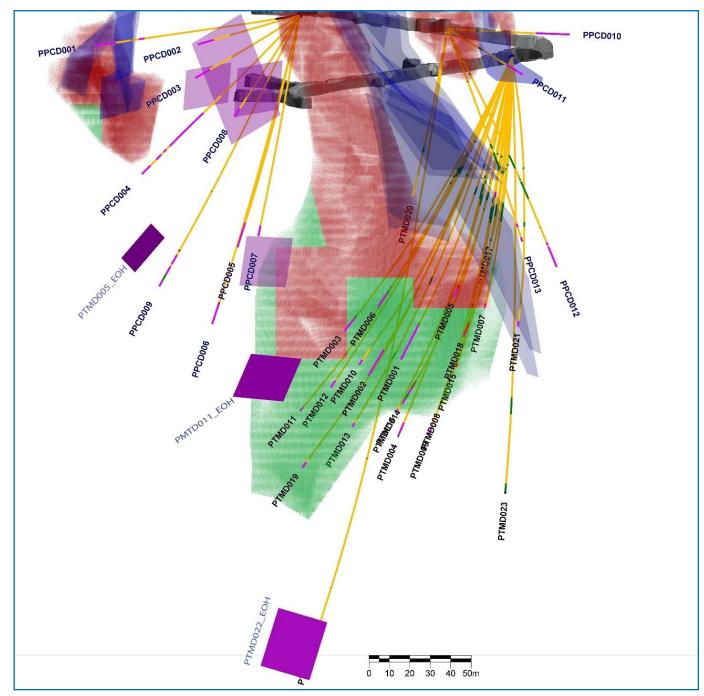


FIGURE 2: NEW DHEM PLATES SHOWN IN RELATION TO TUNDRA-MUTE AND PEKING DUCK/FLEDGLING CANARD DRILLING

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



Peter Harold Managing Director & CEO

20 December 2021



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 over 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 Golden Swan resource at Black Swan. The Company has also completed a Definitive Feasibility Study on retreating the gold tailings at Windarra and Lancefield given the strength of the A\$ gold price.

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.

Mr Pearce has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code 2012). Mr Pearce 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.

Mineral Resource Statement

SILVER SWAN MINERAL RESOURCE ESTIMATE

		Silver Swan Resource - August 2019										
Area	Indicated			Inferred				Total				
	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



Appendix 1

TABLE 3: TUNDRA-MUTE PROGRAM COLLAR DETAILS

CollarID	EAST	NORTH	RL	Dip	Azimuth (True)	TD (m)
Tundra-Mu	ite					
PTMD001	10424.96	11895.72	9992.93	-32.8	62.7	297.2
PTMD002	10424.96	11895.72	9992.93	-33.9	67.7	299.7
PTMD003	10424.96	11895.72	9992.93	-32.9	72.8	268.4
PTMD004	10424.96	11895.72	9992.93	-35.4	62.4	323
PTMD005	10424.96	11895.72	9992.93	-29.3	58.0	258.4
PTMD006	10424.96	11895.72	9992.93	-30.6	68.3	259.2
PTMD007	10424.96	11895.72	9992.93	-31.2	55.1	264
PTMD008	10424.96	11895.72	9992.93	-36.6	57.8	304
PTMD009	10424.96	11895.72	9992.93	-37.7	58.9	314.4
PTMD010	10424.96	11895.72	9992.93	-35.5	69.0	290.6
PTMD011	10424.96	11895.72	9992.93	-36.5	74.5	306.2
PTMD012	10424.96	11895.72	9992.93	-34.4	71.9	296.8
PTMD013	10424.96	11895.72	9992.93	-36.9	67.7	316.1
PTMD014	10424.96	11895.72	9992.93	-34.8	59.6	313.5
PTMD015	10424.96	11895.72	9992.93	-32.8	56.6	292
PTMD016	10424.96	11895.72	9992.93	-35.1	63.7	310
PTMD017	10424.96	11895.72	9992.93	-32.4	55.6	171
PTMD018	10424.96	11895.72	9992.93	-32.2	54.6	283.3
PTMD019	10424.96	11895.72	9992.93	-38.2	70.5	26
PTMD020	10531	11864	10007	-55.7	69.5	101.0
PTMD021	10424.96	11895.72	9992.93	-30.3	49.5	285.0
PTMD022	10531	11864	10007	-61.8	69.4	342.0
PTMD023	10424.96	11895.72	9992.93	-44.1	52.6	316.0
PTMD024	10424.96	11895.72	9992.93	-25	67.5	2.0
PTMD025	10424.96	11895.72	9992.93	-33.8	75.2	295.2



Appendix 2

JORC Code, 2012 Edition – Table 1 report template

Section 1 Sampling Techniques and Data

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

Criteria	J	ORC Code explanation	C	ommentary
Sampling techniques	•	Nature and quality of sampling (eg 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.	•	NQ2 core was sampled at least 10m either side of logged mineralisation by cutting the core in half using a Corewise core saw. Samples were divided into logged domains, with no individual sample being greater than 1.2m or less than 0.3m. Appropriate QAQC standards and blanks from Geostats were inserted, and duplicates taken in quarter core at selected intervals where mineralisation variability warranted it.
Drilling techniques	•	Drill type (eg core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).	•	Drilling has been conducted by Webdrill using the Diamec Smart 6 Mobile Carrier rig. The holes were drilled in NQ2 and the core was orientated using the Trucore Orientation Tool. The hole was surveyed using the DHS DeviGyro OX tool.
Drill sample recovery	•	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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.	•	Core was recovered via 3m core tube used behind drill bit, and then transferred from tube to core trays. 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 through frequent broken ground.
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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged.	•	Core was logged into Geobank Mobile. Logging was done for Geology, structure, RQD and a check against drilling records for recovery. Holes were validated before being exported to the Geobank database. After logging, all core was photographed inboth dry and wet images. The photographs are stored on site.



Criteria	JORC Code explanation	Commentary
Sub- sampling techniques and sample preparation	 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. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all subsampling stages to maximise representivity of samples. 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. Whether sample sizes are appropriate to the grain size of the material being sampled. 	Core was sampled as half core, unless duplicates were taken which required samples to be quarter core.
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. 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. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	 Samples have been dispatched to SGS lab in Perth. After crushing and pulverizing they are analysed by 4-acid ore grade digest with ICP-OES finish.
Verification of sampling and assaying	·	 Sampling was conducted by the logging geologists who are employees of Newexco Data is collected using Geobank Mobile which utilises a validation function before data can be exported into the Geobank database
Location of data points		 All collar surveys were completed to an accuracy of ±10mm. A local grid based on known MGA references was created. The Department of Land Information (formerly the Department of Land Administration) benchmark UO51 on the Yarri Road opposite 14 Mile Dam was used to tie the survey control stations to the Australian Height Datum (AHD). A height datum of AHD + 1000m was adopted for the Black Swan project. All holes are surveyed using the DHS Devishot tool. Shots were taken every 2 or 3m on 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 were overlayed in DeviCloud to visually check deviation

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Criteria	J	ORC Code explanation	C	ommentary
Data spacing and distribution	•	Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological	•	between surveys with an average survey used as the base for modelling. The holes drilled form part of a program that is intended to bring the mineral occurrence to Indicated status. The nominal spacing is 40x40m, with infill drilling to be conducted as
	•	and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied.		required to comply with resource modelling requirements.
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. 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.	•	Drill core is oriented using the Trucore Ori.
Sample security	•	The measures taken to ensure sample security.	•	N/A
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 security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	The Black Swan open pit is centred on M27/39 and extends into M27/200. Silver Swan is wholly located on M27/200. They are located 42.5km NE of Kalgoorlie. They are registered to Poseidon Nickel Atlantis Operations Pty Ltd, a wholly owned subsidiary of Poseidon Nickel Ltd.
Exploration done by other parties	 Acknowledgment and appraisal of exploration by other parties. 	The Silver Swan orebody was discovered by MPI Mines Ltd in 1995, an subsequently acquired by Lion Ore in 2004. Much of the exploration drilling and development was completed by these two companies. In turn Lion Ore was taken over by Norilsk in 2007 and continued mining and developing the underground mine at Silver Swan until 2010. Poseidon Nickel purchased the project from Norilsk in late 2014.
Geology	 Deposit type, geological setting and style of mineralisation. 	 The Silver 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:	The current drill hole information is listed as Table 3 in Appendix One of this document.
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 	 When reporting Silver Swan assay results, a cut off grade of 1.0% Ni has been used.

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Criteria	JORC Code explanation	Commentary
	 be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	
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'). 	 Mineralised widths are reported as down hole lengths. Due to the uneven nature of the Felsic footwall, true width of the reported assays 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. 	 No significant new discovery reported. All current drilling is shown on the Long Section (Figures 1) with significant intercepts highlighted on the diagram and included as Table 1. Collar locations and drill dip and azimuth are included as Table 3.
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. 	 Mineralised intervals >1.0% from each assay received that are consistent with Silver Swan mineralisation for this announcement are shown in Table 1. Intervals below this threshold as well as unsampled intervals are listed below the table.
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.	DHEM Surveys were conducted by Vortex Geophysics. Interpretation of the results was done by Newexco Ltd. Significant plates to this announcement are shown in Figure 2.
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. 	 Resource drilling on the Black Swan deposit was commenced in FY 2021-22, and as part of that program further diamond drilling will be done in the area in order to extend the known mineralisation.