

QUARTERLY REPORT 31 DECEMBER 2020

29 January 2021

HIGHLIGHTS

- **Golden Swan Exploration**

- Down Hole Electromagnetic (DHEM) surveys identify a number of new conductors both along strike and down dip, extending the footprint of a contiguous series of open-ended DHEM plates to 170m by 60m
- DHEM surveys also detected two new plates located in the footwall of the Southern Terrace surface, suggesting an opportunity for mineralisation to be hosted on multiple surfaces
- Drill hole PBS0029D intersected a strongly mineralised interval of massive/matrix nickel sulphides, returning **6.4m (3.7m true width) @ 9.60% Ni** on the Southern Terrace basal contact including **1.6m (0.9m true width) @ 14.89% Ni**
- Preliminary metallurgical testwork of Golden Swan drill core returned excellent results:
 - Nickel recovery > 90%
 - Nickel grade >13% in concentrate
 - Negligible arsenic in concentrate
 - Very attractive Fe:MgO ratio (>50:1)
- **Drilling has re-commenced from the Silver Swan decline into the Southern Terrace**

- **Golden Swan Drill Drive**

- Golden Swan Drill Drive construction project commenced early December 2020 with completion scheduled for the end of Q1 2021

- **Windarra Gold Tailings Project**

- Lancefield Tailings JORC Resource of 1.5 Mt @ 1.25 g/t Au containing 62,000oz gold
- Lancefield Tailings being incorporated into the Windarra Gold Tailings Project Definitive Feasibility Study which is due for completion late Q1 2021

- **Corporate/Finance**

- Successful \$10M placement to accelerate high-grade nickel sulphide exploration at Black Swan
- Cash position of \$20.1 million on 31 December 2020, up from \$15.2 million at the end of the September 2020 quarter

Poseidon Nickel (ASX: POS, “the Company”) is pleased to report on its activities for the December quarter 2020.

Managing Director and CEO, Peter Harold, commented: *“The December quarter saw the Company achieve a number of significant milestones including the commencement of the Golden Swan drill drive, which once completed, will allow resource drilling and a well-supported \$10 million placement to fast-track exploration.*

The successful installation of the underground electromagnetic fixed loop provided high quality DHEM results on the existing Golden Swan EM conductors and further EM surveys identified new EM anomalies, extending the footprint of Golden Swan DHEM plates. In addition, two EM anomalies were identified in the footwall of the Southern Terrace, indicating potential for mineralisation to be hosted outside the existing Golden Swan zone.

A third intersection, 50m up plunge from the previous two intersections confirmed high-grade nickel sulphides in the newly identified upper extension of the Golden Swan mineralised zone. The three intersections to date demonstrate the significance of the Golden Swan discovery. Furthermore, preliminary metallurgical testwork indicates Golden Swan could produce a high-grade nickel concentrate with low impurities which would be very attractive to nickel smelters globally.

On the back of the successful Golden Swan discovery, the strong nickel price and buoyant equity markets, the Company raised \$10 million via a placement through Morgans Corporate Limited, increasing our cash position to \$20 million at 31 December. The placement has provided the Company with the necessary funds to accelerate our exploration activities at Black Swan and aggressively explore the Southern Terrace, which hosts the high-grade Golden Swan discovery. Funds from the placement have been allocated to completing the Golden Swan drill drive, the Golden Swan resource drilling program, further exploratory drilling and EM surveys within the Southern Terrace and Resource to Reserve conversion drilling of the Silver Swan Resource. All these activities are aimed at building a sufficient high-grade inventory at Black Swan to allow mining to recommence after a 10-year hiatus.

Our aim is to have a maiden resource reported for Golden Swan during Q3 2021 and then move straight into mining studies and processing options which include Direct Shipping Ore (DSO) or restarting the Black Swan Concentrator. We hope to have all these studies completed by the end of calendar year 2021.”

Golden Swan Exploration

The Company continued its focus on progressing the Golden Swan high-grade nickel sulphide discovery over the December 2020 quarter with a number of significant advancements achieved:

- **Golden Swan EM footprint expanded** - using the recently installed underground electromagnetic loop, DHEM surveys identified three new EM anomalies extending the Golden Swan footprint of a contiguous series of open-ended DHEM plates to 170m by 60m (see new plates presented in Figure 1);
- **New EM plates discovered** - DHEM surveys also identified two new EM plates that indicate potential for southern extension of the Golden Swan mineralisation approximately 50m below the Southern Terrace surface to the south of known mineralisation (see new plates presented in Figure 1);
- **Third intersection of the Golden Swan mineralised zone** – hole PBS0029D assay results returned **6.4m (3.7m true width) @ 9.60% Ni** on the Southern Terrace basal contact including **1.6m (0.9m true width) @ 14.89% Ni**. The latest intersection is 50m up plunge of previously announced intersections (see Figure 1); and
- **Excellent metallurgical results** - preliminary testwork on a metallurgical composite sample prepared from the core from diamond drill hole PBS0030B at Golden Swan returned excellent recoveries to a high grade concentrate with low impurities and an Fe;MgO ratio >50:1.

With the drill drive development currently progressing the Company is continuing to execute its strategy of building a high-grade nickel sulphide inventory at Black Swan.

Once the drill drive is completed, drilling will start with the aim of proving up a Mineral Resource for Golden Swan. In addition, further exploration drilling of the Southern Terrace below the Golden Swan mineralisation has recently commenced and will continue over the March 2021 quarter.

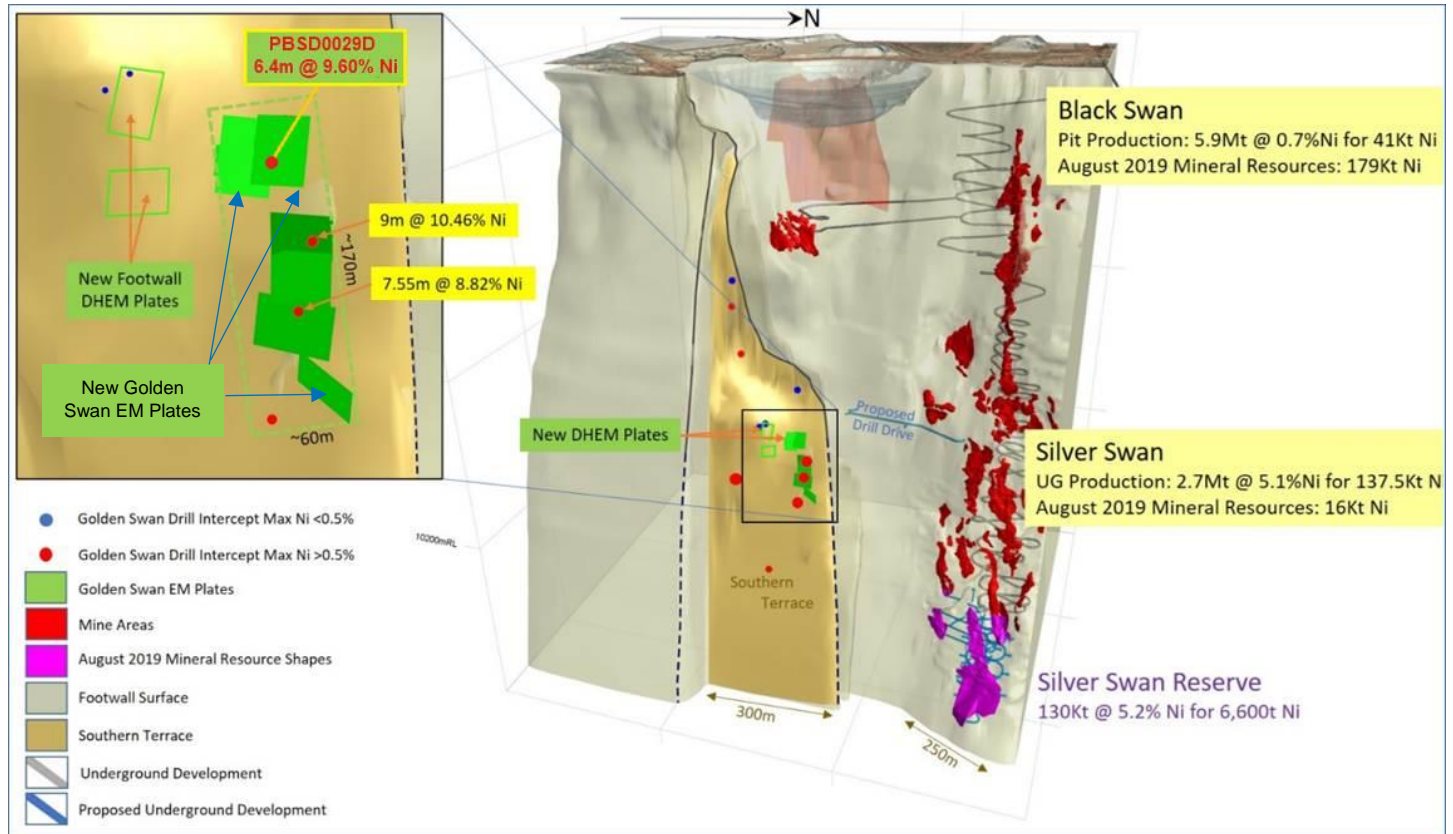


FIGURE 1 – SUMMARY OF PROJECT ADVANCEMENTS ACHIEVED OVER THE DECEMBER 2020 QUARTER

DHEM Surveys and the Golden Swan Extension

The Company completed a DHEM survey late in the September 2020 quarter in diamond drill hole PBSD0029C, beneath and down dip from the Golden Swan mineralisation. The survey was the first to utilise the recently installed underground geophysical transmitter loop, which provides stronger EM signal and removes the influence of conductive overburden that had historically been challenging for EM survey interpretations at Black Swan.

The maiden survey using the new fixed loop was very successful, delivering high quality geophysical data confirming the location, orientation and validity of EM conductors previously identified and discovering an additional high conductance plate down-dip (see Figure 1). The newly modelled EM plate measured 54m north-south along strike and 22m in the sub-vertical plunge/dip direction plate and is located on the basal contact position.

Subsequent to the DHEM survey reported in hole PBSD0029C, a further DHEM survey was conducted in diamond drill hole PBSD0031, which is positioned approximately 120m to the south of the existing Golden Swan mineralisation. This DHEM survey identified a new high conductance anomaly that extends the potential strike of the Golden Swan mineralisation. The two newly modelled EM plates are contiguous, along strike to the south of both existing mineralised drill intersections and EM plates and increase the potential strike of upper parts of Golden Swan mineralisation by 60m in a north-south direction (refer to ASX Release dated 20 October 2020).

All plates identified along the Golden Swan mineralisation returned high conductance. Given there are no known other conductive sources to provide false anomalies at Black Swan, these new anomalies are interpreted to represent massive sulphides.

Combined with a potential dip extent of 170m, the opportunity for the Golden Swan mineralisation to grow continues to increase. Many of the individual orebodies previously discovered and mined in the Silver Swan Channel have strike extents less than that now being revealed at Golden Swan, as shown in Figure 1.

New footwall EM plates identified – potential for another mineralised system

In addition to the EM plates that indicate the potential extension of the Golden Swan mineralisation, the survey in hole PBS0031 identified two new EM plates approximately 50m beneath the Southern Terrace surface to the south of known mineralisation. These new footwall EM plates, shown projected onto the Southern Terrace model in Figure 1, present an exciting opportunity for a new mineralised system to be discovered proximal to Golden Swan. These two moderate conductance plates are interpreted by the Company to represent nickel sulphide mineralisation located within an interpreted ultramafic re-entrant feature beneath the main Southern Terrace horizon. The Golden Swan drill drive will provide an ideal location to drill test these new anomalies.

New Drill Intersection and Assay Results

During the quarter the Company intersected the Golden Swan mineralisation 50m up plunge of hole PBS0030B, with drill hole PBS0029 returning **6.4m (3.7m true width) @ 9.60% Ni** on Southern Terrace basal contact including **1.6m (0.9m true width) @ 14.89% Ni**. This third intersection continues a series of high grade nickel sulphide intersections at Golden Swan over a 170m dip extent (refer to ASX Release dated 19 November 2020).



FIGURE 2 - GOLDEN SWAN MASSIVE SULPHIDE INTERSECTION IN HOLE PBS0029D

The intersection in hole PBS0029 occurred at the contact between the Black Swan mineralised komatiite flow and the underlying felsic unit. The stratigraphic contact is termed the “Southern Terrace” and was identified as a significant exploration opportunity by the Company, just 300m to the South of the Silver Swan workings.

TABLE 1 - GEOLOGICAL DETAILS OF PBSD0029D

From	To	Interval	True Width	Geology
621.71	656.35			Felsic Southern Terrace – Base of sequence
656.35	657.95	1.6	0.9	Massive Sulphides (99% Sulphides*)
657.95	659.7	1.75	1.0	Semi-Massive Sulphide (85% Sulphides*)
659.7	662.75	3.05	1.7	Net-Textured Sulphides (40% Sulphides*)
662.75	664.15	1.4	0.8	Ultramafic + disseminated sulphides (2% Sulphides*)

* Sulphide species for all intervals: 40% Pyrrhotite, 30% Pentlandite/Millerite, 30% Pyrite

This latest and highest intersection confirms that the additional DHEM responses are due to the presence of nickel sulphides (refer Figure 1). Hole PBSD0029D may also indicate that the previously identified separate DHEM plates outlining the known Golden Swan mineralisation are a continuous horizon of nickel sulphides accumulating upon the Southern Terrace.



FIGURE 3 - NET-TEXTURED MATRIX NICKEL SULPHIDES WITHIN THE BLACK SWAN MINERALISED FLOW UNIT

TABLE 2 - DRILL HOLE DETAILS

Hole ID	Local E	Local N	Local RL	Depth	Dip	Local Azi	Comment
PBSD0029D	10173.8	11302.6	11012	964.3	-68	89	Wedge Hole

Assay results for hole PBSD0029D are presented in Table 3.

TABLE 3 - SIGNIFICANT INTERSECTIONS FOR HOLE PBSD0029D

Hole ID	Geology	m From	m To	Interval	True Width	Ni%	Cu%	Co ppm	As ppm
PBSD0029D	Massive + Net-textured Sulphides	656.35	662.75	6.4	3.7	9.60	0.59	1455	558
including	Massive Sulphides	656.35	657.95	1.6	0.9	14.89	0.65	2250	428

All significant intersections for the Golden Swan drill program to date are summarised in Table 4. The thickness and high grade of all intersections achieved to date demonstrate the significance of the Golden Swan discovery.

TABLE 4 - SIGNIFICANT INTERSECTIONS FOR GOLDEN SWAN

Hole ID	Geology	m Fom	m To	Interval	True Width	Ni%	Cu%	Co ppm	As ppm
PBSD0029A	Massive + Stringer Sulphides	740.2	747.75	7.55	4.3	8.82	0.68	1633	425
Including	Massive Sulphide	743.65	745.75	2.1	1.2	15.86	0.52	2819	445
PBSD0029A	Matrix Sulphide	761.55	762.45	0.9	0.5	6.52	2.04	1750	700
PBSD0029A	Matrix Sulphide	810.6	811.55	0.95	0.4	1.50	0.06	346	73
PBSD0030B	Massive + Stringer Sulphides	691.94	700.94	9	4.5	10.46	0.47	2022	118
Including	Massive Sulphide	691.94	696.5	4.56	2.3	13.81	0.41	2769	50
Including	Massive Sulphide	700.2	700.94	0.74	0.4	17.35	1.24	2400	50
PBSD0030C	Stringer Sulphides	669.8	672.5	0.5	0.25	2.47	0.73	700	50
PBSD0030C	Semi-Massive Sulphides	692.45	693	0.55	0.3	10.04	0.40	2150	700
PBSD0029D	Massive + Net-textured Sulphides	656.35	662.75	6.4	3.7	9.60	0.59	1455	558
including	Massive Sulphides	656.35	657.95	1.6	0.9	14.89	0.65	2250	428

Metallurgical Testwork

A metallurgical composite sample was prepared from the core of diamond drill hole PBSD0030B, which intersected massive and disseminated nickel mineralisation from 691m down hole. The assayed interval was 9m (4.5m true width) at 10.46% Ni (refer to ASX Release dated 18 August 2020). The location of hole PBSD0030B is shown in Figure 1. Conventional rougher/cleaner flotation with a single stage of cleaning produced a high-grade concentrate grading 13.6% Ni at a 95.1% recovery and an Fe:MgO ratio of 10.2. Incorporating of a pre-float stage to remove naturally floating minerals, prior to the sulphide flotation, produced concentrate grading 14.1% Ni with a 93.9% recovery and an Fe:MgO ratio of 50.5 (refer to ASX Release dated 17 August 2020)

The composite sample was prepared by Strategic Metallurgy Pty Ltd (“Strategic”) with guidance from the Company. The sample intervals were obtained from quarter core from drill hole PBSD0030B (downhole interval 691.8m to 704.8m). The sample selection was guided by an experienced mining engineer and geologist employed by the Company to ensure the appropriate representation of anticipated true-width mining dilution. The metallurgical composite comprised the following downhole intervals from hole PBSD0030B:

- 0.94m felsic footwall (<0.1% Ni)
- 5.70m massive sulphides (12.2% Ni)
- 2.53m stringer and blebby sulphides in ultramafic (1.5% Ni)
- 0.74m massive sulphides (17.4% Ni)
- 2.06m blebby sulphides in ultramafic (1.1% Ni)
- 1.00m ultramafic, weakly mineralised (0.8% Ni)

The objective of the testwork program was to assess the response of the sample to conventional sulphide flotation techniques. The testwork was undertaken by Strategic at its laboratory in Perth.

Metallurgical samples were crushed to minus 3.35mm and split into 1kg sub-samples for flotation testwork. The program assessed the natural flotation response of the sample and a preliminary assessment of the depression of MgO and iron sulphides to improve the final concentrate grade. The flotation regime utilised conventional polymeric depressants and xanthate collectors.

The head assay of the composite is outlined in Table 5 and the flotation results are summarised in Table 6.

TABLE 5: COMPOSITE HEAD ASSAY

	Ni (%)	Fe (%)	S (%)	MgO (%)
Head assay	9.25	30.7	22.5	7.72

TABLE 6: RESULT SUMMARY

Test	Rougher	Cleaner		
	Recovery (%)	Recovery (%)	Ni%	Fe:MgO
JR05	96.6			
JR06	93.9	93.9	14.1	50.5
JR07	98.4	95.1	13.6	10.2
JR08	98.2	94.4	13.6	10.7

The Golden Swan sample responded well to flotation, yielding a high recovery of nickel to saleable grade concentrate. The head grade of the sample is high with respect to both nickel and sulphur, confirming the massive sulphide nature of the sample. Given the high nickel grade, obtaining saleable concentrate (nominally >13% nickel) is relatively straightforward, with and without a single stage of cleaning.

Assessment of Pre-float Stage

The natural flotation of the Golden Swan sample (pre-float with no reagents) yielded a relatively high mass pull to a concentrate (9.5% Ni) grading 21.0% MgO (Test JR05). The pre-float concentrate resulted in only a 1.86% Ni loss. Visual observations indicate that the naturally floating material is talc-like, however this requires mineralogy to confirm. Subsequent sulphide flotation yielded a 13.1% Ni concentrate and cleaning improved the grade to 14.1% Ni at 93.9% recovery with a very high Fe:MgO ratio of 50.5 (Test JR06). This excellent result highlights the potential to utilise a pre-float stage prior to conventional flotation to significantly improve the Fe:MgO ratio.

Assessment without Pre-float Stage

Given the presence of floating gangue, a conventional depression regime using guar was trialled (Test JR07). The result yielded very high nickel recovery of 98.4% to a rougher concentrate grading 11.7% Ni. A subsequent single stage of cleaning produced saleable concentrate grading 13.6% Ni with 95.1% recovery and Fe:MgO ratio of 10.2. The primary diluent in Test JR07 concentrate is iron sulphide.

Test JR08 investigated the use of an iron sulphide depressant (S7621A) in conjunction with guar to increase the final concentrate grade. Initial depression of iron sulphide minerals was achieved, allowing intermediate concentrate grades as high as 22.4% Ni to be collected. However, subsequent flotation resulted in the recovery of iron sulphides, reducing the final concentrate grade to 13.6% Ni at 94.4% recovery. The conditions trialled in Test JR08 cleaner stage were sub-optimal with respect to the depressant dose. Subsequent metallurgical testwork will be focussed on improving the grade recovery profile with an emphasis on iron sulphide depression.

The very positive results indicate nickel mineralisation within the Golden Swan mineralised zone is highly amenable to conventional sulphide flotation techniques, yielding high nickel recoveries and saleable grade nickel concentrate with exceptional concentrate quality (ie. high Fe:MgO ratio, low impurities). Additional metallurgical testwork is underway.

Golden Swan Drill Drive

The Company has contracted WestAuz Mining Pty Ltd (“WestAuz”) to develop a 400m drill drive from the existing Silver Swan decline to facilitate resource definition and ongoing exploration drilling at Golden Swan and the wider Southern Terrace. WestAuz mobilised personnel and equipment to Black Swan in late November and fired the first cut on Tuesday 8 December.

The drill drive is being developed in competent footwall felsic rocks and when completed will be positioned approximately 200m from the known mineralisation. WestAuz is an experienced underground mining contractor, based in Kalgoorlie with significant experience in underground development and mining.

The drill drive is expected to be completed late in the March 2021 quarter.

Next Steps

Once the Golden Swan drill drive is completed, the Company will immediately commence resource definition drilling on the Golden Swan mineralisation. The contract for the resource drilling was awarded to Webdrill in late December.

In addition to the resource drilling at Golden Swan, the Company will undertake diamond drilling from underground to further test the potential of the Southern Terrace to host additional high-grade nickel mineralised zones. **Drilling into the Southern Terrace commenced from the Silver Swan decline in mid-January.**

Windarra Gold Tailings

Lancefield Tailings

During the quarter the Company declared a JORC 2012 Mineral Resource for the Lancefield Gold Tailings Project. As previously announced the Company purchased an option to acquire the right to treat the Lancefield Gold Tailings (refer to ASX Release dated 17 August 2020). If the option is exercised, the Company will enter into a Royalty and Right to Treat Agreement with the licence holder of the Lancefield Tailings granting the Company the exclusive right to reprocess the Lancefield gold tailings at Windarra.

The Lancefield Tailings Mineral Resource estimate was generated following a sonic drilling program undertaken during the quarter which complimented a resource definition drilling program completed in 2009. The 2020 drilling program comprised 23 holes, 10 of which twinned the previous drilling and 13 of which were additional holes. In addition to the 2020 drilling program, an extensive pulp re-assay program was carried out on the rejects from the 2009 drilling program.

The Mineral Resource summary for the Lancefield Gold Tailings is presented in Table 7.

TABLE 7: LANCEFIELD GOLD TAILINGS PROJECT MINERAL RESOURCES TABULATION

Lancefield Gold Tailings Project – Mineral Resource (JORC 2012)					
Resource category	Tonnes (kt)	Density t/m ³	Gold g/t	Silver g/t	Gold ounces
Indicated	1,210	1.75	1.27	3.6	49,300
Inferred	338	1.75	1.2	3.5	13,100
Total	1,548	1.75	1.25	3.6	62,300

Notes:

The Lancefield gold tailings estimate in Table 7 has been reported on the following basis:

- no cut-off grade has been used to report the resource, as the potential mining method dictates removal of the entire dam;
- a dry bulk density of 1.75 t/m³ has been used to derive tonnages; and
- resource numbers in Table 7 may not sum exactly due to rounding.

Optiro Pty Limited (“Optiro”) was commissioned to supervise the 2020 drilling program at the Project, carried out by Geosonic Drilling on behalf of the Company. The details below have been provided in compliance with Section 5.8.1 of the ASX Listing Rules:

- At the time of the 2020 drilling a LIDAR drone survey was flown over the tailings, providing an accurate location and volume of the tailings volume. Both the Cervantes drilling and the Company drilling was ‘draped’ onto the LIDAR pickup, providing centimetre accuracy in the vertical dimension.
- QAQC for the 2020 program included duplicate core assays at a rate of 1 in 20, and the insertion of Certified Reference Materials (CRMs) at a rate of 1 in 8. One of the CRMs used was low grade and could be considered as a blank. Samples from the 2020 drilling were assayed for gold by fire assay at SGS in Perth, and for silver, arsenic, copper, nickel, iron and sulphur using Inductively Coupled Plasma (ICP).
- The re-assay of 87 pulps in 2020 from the 2009 drilling program showed an overall 11% lower gold assay. The comparison of the 10 2020 holes and their 2009 twins showed that, on an overall hole average, the 2020 assays were 21% lower. However,

many of the 2009 holes were not drilled to the base of the tailings, whereas all of the 2020 holes intersected the underlying pre-depositional surface.

- Within the defined volume a block model was generated, comprising 25 m by 25 m by 1 m cells, with sub-celling to fill the enclosed volume. The modelled volume was within 0.2% of the surveyed volume. Ordinary block kriging was used to estimate grades, which were composited to 1 m from the 2020 drilling (largely on 1m) and the 2009 drilling (largely on 0.75m). Eight of the 2009 holes, which could not be satisfactorily located and which were drilled in the walls, were removed from the data set used for estimation. The removal of these holes does not materially affect the estimated grade and they have partially been replaced by 2020 drilling.
- Variograms were generated for gold, showing good grade continuity, and a 200 m (north-south) by 50 m (east-west) by 1m (vertical) search was used. Gold variograms were used for the other elements. A very small number of un-estimated blocks were allocated the default tailings grade and were classified as Inferred material. Model grades were validated visually against the drilling, compared overall against the weighted sample grade (with a difference of less than 2%), and compared locally using profile (swath) plots. All estimated grades match the sample grades.
- It is assumed that the Company will remove all of the material from Lancefield by truck and shovel and transport it to Windarra for processing therefore there will be no selective mining and no reporting cut-off grade.
- The tailings area represents the original depositional zone, which is still in situ, and an area to the north and the east reflecting various small vat leaching operations carried out since the mine closure in 1994. The original tailings have been classified as Indicated Resources and the re-deposited area as Inferred Resources. Despite the QAQC showing an overestimation of gold grade in the 2009 drilling, the Competent Person considers that any potential bias is within the error implied by the Indicated and Inferred classification.
- The Company has provided the Competent Person with costs based upon a model of trucking the Lancefield Tailings to Windarra and treating there together with the Windarra Gold Tailings. These costs suggest that the estimate satisfies the Reasonable Prospects of Eventual Economic Extraction (RPEEE) criteria required for classification according to the 2012 JORC Code.

Definitive Feasibility Study

The Lancefield Gold Tailings will now be incorporated into the Definitive Feasibility Study currently being undertaken on the North and South Tailings Dams at Windarra that contain an Indicated Mineral Resource totalling 105,000oz gold (refer to ASX Release dated 22 June 2020). The Definitive Feasibility Study is due for completion late in Q1 2021.

Operating Update

Black Swan

Primary activities at Black Swan over the quarter supported the Golden Swan exploration program and commencement of the Golden Swan drill drive. WestAuz mobilised to site late November with the first cut made on 8 December 2020.

Windarra

With the exception of progressing the gold tailings project, only care and maintenance activities were conducted at Windarra over the period.

Lake Johnston

Lake Johnston remained on care and maintenance during the quarter.

As previously announced the Company is currently undertaking a strategic review of the Lake Johnston asset to determine the best way to progress the project given the more positive outlook for nickel. Lake Johnston remains a valuable asset to Poseidon. Resource allocation (personnel and funds) directed toward Black Swan and Windarra may restrict the potential for Lake Johnston to present value in a timeframe similar to the other two projects. The strategic review may include divestment, joint venture, updated restart studies, recommencing exploration or other avenues that are value accretive for Poseidon shareholders.

COVID Update

There was no further easing of COVID restrictions in Western Australia over the quarter. The Company and its contractors continue to operate within the safe operating parameters as per the WA Government requirements.

Financial

During the quarter the Company received commitments to raise \$10 million (before costs) through a private placement (the "Placement") of ordinary shares in Poseidon to clients of Morgans Corporate Limited, which acted as sole lead manager of the Placement. The Placement was successfully completed during December 2020 and the funds received prior to quarter end. As at 31 December 2020, the Company had cash and current investments totalling \$20.1 million.

The Company intends to use the funds raised for the following purposes:

- To complete the Golden Swan Drill Drive;
- Undertake up to 15,000 metres of diamond core resource drilling on the Golden Swan mineralisation;
- Undertake additional diamond drilling from surface and/or underground to further the test to potential of the Southern Terrace to host additional high grade nickel mineralised zones;
- Additional down hole electromagnetic surveys;
- Resource to Reserve drilling of the Silver Swan orebody to increase the Reserve base; and
- for general working capital purposes

Over the December 2020 quarter, Poseidon's net cash outflow from operating and investing activities totalled \$4.5 million. Expenditures included \$3.3 million of exploration and evaluation costs, of which \$0.2 million was spent progressing the Golden Swan drill drive, \$1.3 million on exploration activities and \$0.2 million on the Windarra gold tailings project. The remainder of exploration and evaluation costs relate to operations supporting these projects and care & maintenance activities across the three sites.

Total quarterly expenditure of \$4.5 million was underbudget compared to the forecast of \$4.8 million.

There were no production or development activities conducted over the quarter and as such no production or development expenditures were incurred.

Related party expenses over the quarter totalled \$0.1 million:

- \$18,119 paid to Black Mountain Metals Pty Ltd for consultancy services provided to Poseidon with regards to technical studies conducted on Poseidon's mining assets;
- \$13,942 paid to Unearthed Geological Consulting (Non-Executive Director Peter Muccilli) for consultancy services provided for exploration activities undertaken by Poseidon; and
- \$104,189 fees paid to Directors.

Poseidon has forecasted expenditure of \$6.1 million over the following quarter, of which \$3.1 million is estimated to continue development of the Golden Swan drill drive, \$1.2 million to fund exploration programs and \$0.1 million on the Windarra Gold Tailings Project.

Poseidon continues to assess its ongoing funding requirements and will carry on engaging with potential financiers in parallel with progressing projects, in particular the Black Swan restart and Windarra gold tailing project.

Other

There were no material changes in mineral tenements during the period (as shown in Appendix 4).

This Quarterly Activities Report was authorised for release by the Poseidon Board of Directors.



Peter Harold

Managing Director and CEO

29 January 2020

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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 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.

MINERAL RESOURCE STATEMENT

Table 1: Nickel Projects Mineral Resource Statement

Nickel Sulphide Resources	JORC Compliance	Cut Off Grade	MINERAL RESOURCE CATEGORY												
			INDICATED			INFERRED			TOTAL						
			Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Tonnes (Kt)	Ni% Grade	Ni Metal (t)	Co% Grade	Co Metal (t)	Cu% Grade	Cu Metal (t)
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 modified 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 is aware that the 2019 upgrade to the Silver Swan Indicated Resource will materially affect the Silver Swan Reserve above which was based upon the 2015 Silver Swan Resource Estimate (refer to Table 1 above for the new Silver Swan Resource estimate). Such information is based on the information compiled by the Company's Geologists and the Competent Persons as listed below in the Competent Person Statements.

The Company is not aware of any 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.

Mining Tenements Held as at 31 December 2020

AREAS OF INTEREST – WESTERN AUSTRALIA	TENEMENTS	ECONOMIC ENTITY'S INTEREST
Windarra Nickel Assets	MSA 38/261, G38/21, L38/121, L39/184, L38/199, L38/218, L39/221	100%
Windarra South	MSA 38/261, L38/119, L38/122, L38/220	100%
Woodline Well	M39/1075, L39/224	100%
Pool Well	M38/1244, M38/1245, L38/118	100%
Lake Johnston Nickel Assets	E63/1067, G63/0008, G63/0005, L63/0051, L63/0052, L63/0055, L63/0057, M63/0163, M63/0282, M63/0283, M63/0284, M63/0292, M63/0293, M63/0294, M63/0522, M63/0523, M63/0524, E63/1784	100%
Black Swan Nickel Assets	M27/0039, M27/0200, M27/0214, M27/0216, L27/0057, L27/0058, L27/0059, L27/0074, L27/0075, L27/0077, L27/0078, L24/0219, L24/0222, G27/2	100%

E = Exploration Licence M = Mining Lease MSA = Mining Tenement State Act PL = Prospecting Licence L = Miscellaneous Licence

Mining Tenements Acquired or Disposed during the December 2020 quarter

Nil

Beneficial Percentage Interests Held in Farm-In or Farm-Out Agreements during the December 2020 Quarter

Nil

Beneficial Percentage Interests Held in Farm-In or Farm-Out Agreements Acquired or Disposed of during the December 2020 Quarter

Nil

COMPETENT PERSON STATEMENTS:

The information in this report that relates to Exploration Results is based on, and fairly represents, information compiled and reviewed by Mr Graham Leaver, who was an employee of Poseidon Nickel, and is a Member of The Australian Institute of Geoscientists.

The information in this report which relates to the Black Swan Mineral Resource is based on, and fairly represents, information compiled by Mr Andrew Weeks who is a full-time employee of Golder Associates Pty Ltd. The information in this report which relates to the Black Swan Ore Reserve is based on, and fairly represents, information compiled by Mr Andrew Weeks who is a full-time employee of Golder Associates Pty Ltd and who is a Members of the Australasian Institute of Mining and Metallurgy.

The information in this report which relates to the Silver Swan Mineral Resource is based on, and fairly represents, information compiled by Mr Steve Warriner, who was a full-time employee at Poseidon Nickel, and is a Member of The Australian Institute of Geoscientists and Mr Kahan Cervoj who is a full time employee of Optiro Pty Ltd and is a Fellow of the Australasian Institute of Mining and Metallurgy. The information 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.

The information in this report which relates to the Lake Johnston Mineral Resource is based on, and fairly represents, information compiled by Mr Steve Warriner, who was a full-time employee at Poseidon Nickel, and is a Member of The Australian Institute of Geoscientists and Mr Andrew Weeks who is a full-time employee of Golder Associates Pty Ltd and is a Member of the Australasian Institute of Mining and Metallurgy. The information in this report which relates to the Lake Johnston Ore Reserves Project is based on, and fairly represents, information compiled by Mr Matthew Keenan who is a full time employee of Entech Pty Ltd and is a Member of the Australasian Institute of Mining and Metallurgy.

The information in this report that relates to Mineral Resources at the Windarra Nickel Project and Gold Tailings Project 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 Ian Glacken who is a full time employee of Optiro Pty Ltd and is a Fellow of the Australasian Institute of Mining and Metallurgy. The Windarra Project contains Mineral Resources which are reported under JORC 2004 Guidelines as there has been no Material Change or Re-estimation of the Mineral Resource since the introduction of the JORC 2012 Codes. Future estimations will be completed to JORC 2012 Guidelines.

Mr Leaver, 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 Leaver, Mr Warriner, Mr Cervoj, Mr Weeks, Mr Glacken and Mr Keenan have consented to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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

FORWARD LOOKING STATEMENT – INFERRED RESOURCE STATEMENTS:

The Company notes that an Inferred Resource has a lower level of confidence than an Indicated Resource and that the JORC Codes, 2012 advises that to be an Inferred Resource it is reasonable to expect that the majority of the Inferred Resource would be upgraded to an Indicated Resource with continued exploration. Based on advice from relevant competent Persons, the Company has a high degree of confidence that the Inferred Resource for the Silver Swan deposit will upgrade to an Indicated Resource with further exploration work.

The Company believes it has a reasonable basis for making the forward looking statement in this announcement, including with respect to any production targets, based on the information contained in this announcement and in particular, the JORC Code, 2012 Mineral Resource for Silver Swan as of May 2016, together with independent geotechnical studies, determination of production targets, mine design and scheduling, metallurgical testwork, external commodity price and exchange rate forecasts and worldwide operating cost data.

FORWARD LOOKING STATEMENTS:

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

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

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

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

Poseidon Nickel Limited

ABN

60 060 525 206

Quarter ended ("current quarter")

31 December 2020

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation (if expensed)	(1,228)	(3,589)
(b) development	-	-
(c) production	-	-
(d) staff costs	(431)	(884)
(e) administration and corporate costs	(776)	(1,511)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	14	196
1.5 Interest and other costs of finance paid	(7)	(236)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other – sundry income	48	68
1.9 Net cash from / (used in) operating activities	(2,380)	(5,956)

2. Cash flows from investing activities		
2.1 Payments to acquire:		
(a) entities	-	-
(b) tenements	-	-
(c) property, plant and equipment	(55)	(58)
(d) exploration & evaluation (if capitalised)	(2,087)	(3,454)
(e) investments	-	-
(f) other non-current assets	-	-

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	11	11
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	(2,131)	(3,501)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	10,000	10,000
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(559)	(559)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	(25,115)
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	9,441	(15,674)

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	15,163	45,224
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(2,380)	(5,956)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(2,131)	(3,501)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	9,441	(15,674)

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	20,093	20,093

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	10,578	1,156
5.2	Call deposits	9,515	14,007
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	20,093	15,163

6. Payments to related parties of the entity and their associates

6.1	Aggregate amount of payments to related parties and their associates included in item 1	130
6.2	Aggregate amount of payments to related parties and their associates included in item 2	6

**Current quarter
\$A'000**

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments

7. Financing facilities

Note: the term "facility" includes all forms of financing arrangements available to the entity.

Add notes as necessary for an understanding of the sources of finance available to the entity.

	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1	Loan facilities	-
7.2	Credit standby arrangements	-
7.3	Other (please specify)	-
7.4	Total financing facilities	-

7.5 Unused financing facilities available at quarter end

-

7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

8.	Estimated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (Item 1.9)	(2,380)
8.2	Capitalised exploration & evaluation (Item 2.1(d))	(2,087)
8.3	Total relevant outgoings (Item 8.1 + Item 8.2)	(4,467)
8.4	Cash and cash equivalents at quarter end (Item 4.6)	20,093
8.5	Unused finance facilities available at quarter end (Item 7.5)	
8.6	Total available funding (Item 8.4 + Item 8.5)	
8.7	Estimated quarters of funding available (Item 8.6 divided by Item 8.3)	4.5

8.8 If Item 8.7 is less than 2 quarters, please provide answers to the following questions:

1. Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?

Answer: N/A

2. Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

Answer: N/A

3. Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer: N/A

Compliance statement

- This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- This statement gives a true and fair view of the matters disclosed.

Date: 29 January 2021

Authorised for release by the Board of Poseidon Nickel Ltd

Notes

- This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
- If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
- Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
- If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
- If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.