POSEIDONNICKEL

17th March 2015

50% Increase in Indicated Resources at Lake Johnston

Highlights

- **50% increase in Indicated Resources* at the Lake Johnston Maggie Hays deposit**
- **Re-estimated resource base for Maggie Hays of:**
  - **3.5 million tonnes @ 1.49% for 52,000 tonnes of contained nickel**
- **Drilling programme has been defined to increase Indicated Resources at Maggie Hays further and develop the newly identified Western zone**
- **Resource update excludes the high grade Emily Ann North deposit on the site which is expected to add over 25% to the announced contained nickel and lift average grades further**

Poseidon Nickel Limited (ASX:POS) ("Poseidon") is pleased to confirm that it has completed its geological review of the Maggie Hays deposit located at the Lake Johnston site. As a result of the work completed, a much higher proportion of the mineralisation is in the JORC Code (2012) Indicated category, rather than the lower confidence Inferred category. Approximately 80% of the drilled resource is now in the Indicated category. This improvement is a key step in the definition of the likely project life by increasing confidence in the shape, grade and position of the mineralisation to be mined. The results will be used to develop the mine schedule which is the last outstanding step in the engineering development process prior to Reserve Estimation.

The Lake Johnston project consists of two mined deposits approximately 3.6km apart called Maggie Hays and Emily Ann. The update has been undertaken only for the Maggie Hays deposit as this is where mining is expected to restart initially. Emily Ann North is a smaller but higher grade unmined deposit adjacent to the Emily Ann mine which Poseidon believes could be mined in the future. However the access to this mineralised zone is through the Emily Ann mine which is currently flooded. Additional work and development is required to assess the Emily Ann mines suitability for operations.

The Maggie Hays mine has been maintained in good operational condition with near immediate access to the nickel mineralisation.

Poseidon has contracted engineering consultants to commence a detailed mine planning and scheduling programme ahead of the Ore Reserve Estimation process. The Engineers will look at maximising the ore extraction and redeveloping the mine infrastructure to better access the ore zones. This work is several months ahead of our original schedule.

**compared to Poseidon's ASX announcement released in December 2014*

Technical work undertaken

Following the initial resource estimated released in December 2014, the company recognised additional drilling data was available and that there were survey issues with the North Shoot mineralisation wireframes. This reduced the geological confidence in the initial North Shoot resource modelling, resulting in an Inferred category being assigned. The company announced on the 18th February 2015 that it had located 100 missing drill holes including 29 which had to be resampled and assayed. The drilling database was restored and updated as well as the correction of the North Shoot survey issues. In conjunction with this, a large amount of face mapping from the North Shoot was identified and digitised into 3D mining software to give accurate wireframe control.

Golder Associates were contracted to update the resource block-model and re-estimate the Maggie Hays JORC mineral resource as shown in Table 1. The Mineral Resource at the Maggie Hays underground deposit has been re-estimated (using 0% nickel cut-off grade for massive sulphide domains, with a 0.8% nickel cut-off grade applied for disseminated domains) to be;

3.5 million tonnes @ 1.49% Ni for 52,000 tonnes of contained nickel metal
which includes an Indicated Mineral Resource of
2.6 million tonnes @ 1.60% Ni for 41,900 tonnes of contained nickel metal

This brings Poseidon's total nickel inventory encompassing the company's three nickel projects in Western Australia to **380kt of total contained nickel metal** (Table 2).

Table 1: Lake Johnston Mineral Resource as at 20th February 2015 (using 0% nickel cut-off grade for massive sulphide domains, with a 0.8% nickel cut-off grade applied for disseminated domains)

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
LAKE JOHNSTON PROJECT											
Maggie Hays-North Shoot	2012	0.8%	800	1.86	14,700	400	13.1	5,900	1,200	1.66	20,600
Maggie Hays-SLC Disseminated	2012	0.8%	100	1.36	800	400	1.02	4,200	500	1.06	5,000
Maggie Hays-SLC Massive	2012	0.0%	100	3.82	3,800	-	-	-	100	3.82	3,800
Maggie Hays-Suture Zone Disseminated	2012	0.8%	1500	1.13	16,900	-	-	-	1,500	1.13	16,900
Maggie Hays-Suture Zone Massive	2012	0.0%	200	3.27	5,700	-	-	-	200	3.27	5,700
TOTAL											
Total Ni Resources	**2012**	**~0.8%**	**2,600**	**1.60**	**41,900**	**900**	**1.17**	**10,100**	**3,500**	**1.49**	**52,000**

Note: totals may not sum exactly due to rounding.

The following detailed information includes data required to be published by Poseidon as part of a Resource announcement as defined by the JORC (2012) code.

LAKE JOHNSTON MINERAL RESOURCE ESTIMATION

Following the completion of the Lake Johnston Project acquisition from OJSC MMC Norilsk Nickel ("Norilsk Nickel") in November 2014, Poseidon announced an initial JORC 2012 compliant resource statement. Poseidon engaged Golder Associates Pty Ltd (Golder) to re-estimate and update the Maggie Hays Mineral Resource as Golder had carried out the previous estimate as well as previous reviews of historical resource estimation work for Norilsk Nickel. Accordingly, Golder was familiar with the drill database and previous resource work.

The Mineral Resource was classified in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition). The classification was based principally on geological confidence, drill hole spacing and grade continuity from available drilling data and underground mapping. Golder has consented to the release of the attached Mineral Resource statement (Table 1) and Attachment A as required under the JORC Code, 2012 Edition.

The Maggie Hays Mineral Resource has been reported at a 0% nickel cut-off grade for massive sulphide domains, with a 0.8% nickel cut-off grade applied for disseminated domains to best reflect the potentially economic mineralisation within the Mineral Resource. For mine planning purposes, ore loss and dilution should be considered.

MAGGIE HAYS RESOURCE ASSUMPTIONS AND METHODOLOGY (Extracted from Golder report)

The Maggie Hays Mineral Resource estimate is shown in Table 1 and has been classified and reported in accordance with the JORC Code, 2012 Edition guidelines. The Mineral Resource has been estimated using Ordinary Kriging, taking into account the following criteria:

- A selection of available drilling data as of 6 February 2015 was used for the Mineral Resource estimate. The data was restricted to drill holes that were of high confidence in position, and intersected mineralisation at appropriate angles. The drilling data was collected over several decades by numerous operating companies. Recent corrections by POS have been made to the database to correct the spatial positioning of holes that had previously been deemed as inaccurate. Therefore this resource update includes samples that previous estimates excluded.

- Statistical and geostatistical analyses were carried out on drilling data composited to 2m downhole intervals for disseminated ore and host rock domains. Drilling data was composited to 1 m downhole intervals for narrow, massive, sulphide mineralisation. The analyses included variography to model the spatial continuity of the grades within each domain.

- The Ordinary Kriging interpolation method was used for the estimation of Ni, As, Co, Cu, Fe, MgO and S using variogram parameters defined from the geostatistical analysis. Estimates of components other than Ni are not as reliable due to missing and unassayed sample intervals, hence the Mineral Resource relates to Ni mineralisation only.

- Mineral Resource classification was based principally on geological confidence, drill hole spacing and grade continuity from available drilling data and underground mapping.

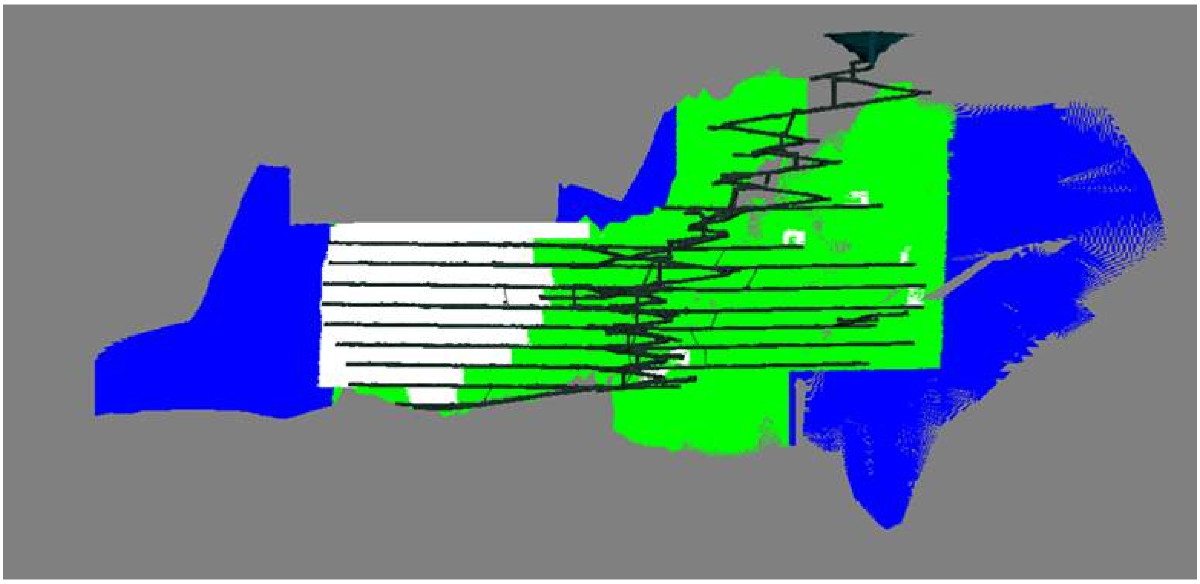

Figure 1: Maggie Hays Long-Section (Looking West), location of JORC Resources (green=Indicated, blue=Inferred), existing mining infrastructure (black) and mined out stope blocks (white).

Geology & Geological Interpretation

The Maggie Hays deposit is located approximately 500km east of Perth in the Southern Cross Province in the Archean Yilgarn Craton. Mineralisation is hosted in intrusive ultramafic rocks of the Lake Johnston Greenstone Belt. Disseminated and massive sulphides are hosted by the Central Ultramafic Unit, and massive and stringer sulphides by felsic volcanic rocks.

Maggie Hays, along with the Emily Ann deposit, form the Lake Johnston Operation (LJO).

Golder created sections through the disseminated mineralisation wireframes that were developed during the period the mine was in operation. The sections were then re-interpreted and snapped to drill holes using assay grades and lithological logging as a guide.

The North Shoot mineralisation was re-interpreted by Poseidon using the updated survey information for drill holes and utilising the corrected underground face mapping positioning. Poseidon interpreted the North Shoot to be a single unit of massive sulphide containing some splayed lenses. Due to the re-positioning of drill holes and face mapping from updated survey information, North Shoot mineralisation is considered of higher confidence than in previous estimates. In these areas, where drill hole information and development drive face mapping exist, the resource category status was updated to Indicated. Areas of the North Shoot where drilling is still wide-spaced and no development drives exist; these areas retained their Inferred resource category status.

Another massive sulphide mineralisation zone was also modelled by Poseidon south of the North Shoot in an area known as the Suture Zone. The sections were interpreted and snapped to drill holes using assay grades and lithological logging as a guide.

The geological interpretation is validated by drilling, underground chip sampling, geological mapping and mining activity.

Sampling and Sub-Sampling Techniques

Diamond drill core and reverse circulation (RC) drilling were used to obtain samples. Diamond core has been split on lithological contacts for sampling purposes. Sampling protocols are not known for individual campaigns of drilling, however historical reports refer to a combination of quarter, half and whole core analysis. Sampling technique documentation has not been sighted by Golder, but it is recorded in the drilling database that sampled core includes quarter, half and full core sampling. Poseidon re-sampling included quarter and half core analysis.

Drilling Techniques

Poseidon supplied Golder with an Access Database and Golder created a drill hole database for use in the resource estimate. The database includes 1092 drill holes, which comprise of diamond drilling core and RC chip sampling. The estimation utilised only those holes of sufficient confidence, therefore 989 drill holes were used for estimation purposes. The database was compiled using information outlined in previous estimation work by McDonald Speijers, which identified the provenance of drill holes and the likely accuracy, and utilising updated survey information checked and updated by Poseidon. It is not known if core was oriented.

Criteria Used for Classification

Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).

The classification of Mineral Resources was completed by Golder based on geological confidence, drill hole spacing and grade continuity. The Competent Person is satisfied that the result appropriately reflects his view of the deposit.

Continuous zones meeting the following criteria were used to define the resource class:

<u>Indicated Resource</u>

- Two or more drill holes no further than 40 m apart confirming grade continuity.
- Underground development and mapping confirming the relative positioning of the mineralised domains

<u>Inferred Resource</u>

- Single drill holes or large spatial separation between drill holes (more than 40 m).

Sample Analysis Method

Assays are by four acid digest and OES finish method and four acid digest with AAS finish.

Estimation Methodology

Mineralisation was estimated within domains defined by lithological and assay information. Statistical analysis of sample data in the composite file was used for estimation purposes. The block size is 5 m (X) by 10 m (Y) by 5 m (Z). The sub-block size is 0.625 m (X) by 1.25 m (Y) by 0.625 m (Z) to achieve acceptable resolution of geological domains.

Using parameters derived from the modelled variograms, Ordinary Kriging (OK) was used to estimate average block grades for Ni, As, Cu, Co, Fe, MgO and S. The estimation was conducted in three passes for Ni with the search size increasing for each pass. In some domains, where blocks had not been filled after three passes, a fourth pass was used to fill the remaining blocks. Estimation for the remaining components was estimated in two passes. If blocks were still not filled after the second pass, then a default around the average grade was applied. These secondary components are not included in the Mineral Resource. All grade estimates were made to the parent cell size. The model was validated visually and statistically using swath plots and comparisons to sample statistics.
Areas of depleted mine workings were removed from the model in order to yield the final Mineral Resources.

Cut-off Grade and Basis for Selected Cut-off Grade

No high-grade cuts were applied by Golder in the estimation of Ni grades, but spatial constraining was used to limit the influence of high grade sample intersections in “waste” domains to prevent excessive extrapolation of ore grade mineralisation. Reporting at cut-off grades of 0.8% Ni for disseminated mineralisation is consistent with previous analysis of breakeven cut-off grades. Massive sulphides form distinct units where application of cut-off grade is not appropriate.

Mining and Metallurgical Methods, Parameters and Other Material Modifying Factors

Golder assumed any future mining would likely continue with sub-level caving of disseminated mineralisation and a form of stoping for North Shoot massive sulphides.

The block model uses a parent cell size of 5 m (X) by 10 m (Y) by 5 m (Z), Sub-block size is 0.625 m (X) by 1.25 m (Y) by 0.625 m (Z). These were primarily determined by data availability and the dimensions of the mineralisation. As grade estimates were made to the parent cell size, this defines the effective selectivity of the Mineral Resource estimate.

The extent of the existing mining voids was based on surveyor’s pickups of the southern sub-level cave and North Shoot stopes. The most conservative approach was taken, with the greatest extent of the sub-level cave depleted in the model.

Other Information

The Lake Johnston concentrator has a capacity of approximately 1.5 Mtpa based on historically demonstrated mill capacity. The concentrator was shutdown in April 2013 by Norilsk before being placed into care and maintenance. Poseidon Nickel is planning to operate the concentrator at approximately 1.0 Mtpa throughput rates with ore supplied initially from Maggie Hays underground operations, the disseminated caved ore, North zone and potentially the suture zone. The plant will be refurbished and minor modifications to the flowsheet and reagents will be made to allow for the reduced throughput. A scope and cost for this refurbishment has been generated as part of the Study.

The plant is an existing and proven concentrator with a demonstrated capacity to process nickel sulphide ores from Maggies Hays and Emily Anne. The metallurgical process is conventional, well understood and has many years of operational experience to support the flotation response of the Lake Johnston pentlandite and millerite ore. An assessment of the concentrate produced at Lake Johnston confirmed that a quality smeltable highly sort after concentrate was typically produced with no expected penalties.

The site has a large number of approvals issued under the *Mining Act* and *Environmental Protection Act*. Approvals remain current for the project and can be transferred to Poseidon as part of the change in ownership. Environmental impacts were assessed as part of obtaining the above approvals. No significant impacts are considered to result from the project. Geochemical characterisation studies have been conducted on Lake Johnston waste rock and tailings. Lake Johnston waste rock and tailings were both determined to be Potentially Acid Forming (PAF) similar to Windarra.

Project land disturbance appears to be within approved amounts. No additional land disturbance beyond approved amounts will be required for waste rock and tailings management. Works for the tailings storage facility tails lift were commenced prior to the project being placed on care and maintenance. These works were not completed and, as such, certification of the works by the Department of Environment Regulation (DER) could not be obtained. The Works Approval authorising construction of the 4 metre tailings embankment raise has since been resubmitted to the regulator.

COMPETENT PERSON'S STATEMENT

The information in this report which relates to the Maggie Hays Mineral Resource is based on information compiled by Andrew Weeks who is a full-time employee of Golder Associates Pty Ltd, and Member of the Australasian Institute of Mining and Metallurgy. Andrew Weeks has sufficient relevant experience to the style of mineralisation and type of deposit under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012).

MINERAL RESOURCE STATEMENT

Table 2: 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
WINDARRA PROJECT											
Mt Windarra	2012	0.90%	922	1.56	14,000	3,436	1.66	57,500	4,358	1.64	71,500
South Windarra	2004	0.80%	772	0.98	8,000	-	-	-	772	0.98	8,000
Cerberus	2004	0.75%	2,773	1.25	35,000	1,778	1.91	34,000	4,551	1.51	69,000
BLACK SWAN PROJECT											
Black Swan	2012	0.40%	9,600	0.68	65,000	21,100	0.54	114,000	30,700	0.58	179,000
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
TOTAL											
Total Ni Resources	2004 & 2012		**16,667**	**0.98**	**163,900**	**27,214**	**0.79**	**215,600**	**43,881**	**0.86**	**379,500**

Note: totals may not sum exactly due to rounding

Table 3: Gold Tailings Project Mineral Resource Statement

Gold Tailings Resources	JORC Compliance	Cut Off Grade	Mineral Resource Category								
			Indicated			Inferred			TOTAL		
			Tonnes (Kt)	Grade (g/t)	Au (oz)	Tonnes (Kt)	Grade (g/t)	Au (oz)	Tonnes (Kt)	Grade (g/t)	Au (oz)
WINDARRA GOLD TAILINGS PROJECT											
Gold Tailings	2004	NA	11,000	0.52	183,000	-	-	-	11,000	0.52	183,000
TOTAL											
Total Au Resources	2004		**11,000**	**0.52**	**183,000**	**-**	**-**	**-**	**11,000**	**0.52**	**183,000**

Note: totals may not sum exactly due to rounding.

ORE RESERVE STATEMENT

Table 4: Nickel Project Ore Reserve Statement

Nickel Sulphide Reserves	JORC Compliance	Ore Reserve Category		
		Probable		
		Tonnes (Kt)	Ni% Grade	Ni Metal t
WINDARRA PROJECT				
Mt Windarra	2004	498	1.78	9,000
Cerberus	2004	1,221	1.30	16,000
BLACK SWAN PROJECT				
Black Swan	2012	3,370	0.63	21,500
TOTAL				
Total Ni Reserves	2004 & 2012	**5,089**	**0.91**	**46,500**

Note: totals may not sum exactly due to rounding.

Notes

The information in this report that relates to the Windarra Nickel Project, Mineral Resources is based on information compiled by Neil Hutchison, General Manager of Geology at Poseidon Nickel, who is a Member of The Australian Institute of Geoscientists and Ian Glacken who is a full time employee of Optiro Pty Ltd and is a Fellow of the Australasian Institute of Mining and Metallurgy.

The information in this report that relates to Ore Reserves at the Windarra Nickel Project is based on information compiled by Denis Grubic, who is a Member of The Australasian Institute of Mining and Metallurgy as well as a full time employee of Rock Team Pty Ltd.
The information in this report which relates to the Lake Johnston Mineral Resource is based on information compiled by Andrew Weeks who is a full-time employee of Golder Associates Pty Ltd. The information in this report which relates to the Black Swan Mineral Resource and Ore Reserves is based on information compiled by Andrew Weeks as well as Francois Bazin of IMC Mining Pty Ltd. Both are Members of the Australasian Institute of Mining and Metallurgy.

Mr Hutchison, Mr Glacken, Mr Weeks, Mr Bazin and Mr Grubic all have sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code 2012). Mr Hutchison, Mr Glacken, Mr Weeks, Mr Bazin and Mr Grubic have consented to the inclusion in the report of the matters based on his information in the form and context in which it appears.
This document contains Mineral Resources and Ore Reserves which are reported under JORC 2004 Guidelines as there has been no Material Change or Re-estimation of the Mineral Resource or Ore Reserves since the introduction of the JORC 2012 Codes. Future estimations will be completed to JORC 2012 Guidelines.

CORPORATE DIRECTORY

Director / Senior Management
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Chris Indermaur — Non-Executive Chairman
Geoff Brayshaw — Non-Executive Director
Robert Dennis — Non-Executive Director
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Home Exchange
The Company's shares are listed
on the Australian Securities Exchange
and the home exchange is Perth
ASX code: POS

ATTACHMENT A
JORC (2012) Table 1
Maggie Hays

Section 1 Sampling Techniques and Data

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

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. *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 (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.*	Diamond drill core and reverse circulation (RC) drilling were used to obtain samples. Diamond core has been split on lithological contacts for sampling purposes. Sampling protocols are not known for individual campaigns of drilling, however historical reports refer to a combination of quarter, half and whole core analysis. Assays are by four acid digest and OES finish method and four acid digest with AAS finish. Historical Genalysis (Intertek) assaying was completed using four acid digest with AAS finish. Samples collected by Poseidon during 2015 were analysed by SGS Laboratories using Sodium Peroxide Fusion digest with AES finish.
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.).	Golder created a drill hole database for use in the resource estimate. The database includes 1092 drill holes, which comprise of diamond drilling core and RC chip sampling. The estimation utilised only those holes of sufficient confidence, therefore 989 drill holes were used for estimation purposes. The database was compiled using information outlined in previous estimation work by McDonald Speijers, which identified the provenance of drill holes and the likely accuracy, and utilising updated survey information checked and updated by Poseidon. It is not known if core was oriented.
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.*	Drilling recovery is not recorded in databases.

JORC Code explanation	Commentary
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.*	A sophisticated hierarchical lithological coding system based on observed properties was used for geological logging. Lithologies are recorded separately and an abbreviated code for plotting sections included. Mineralisation and structural data was recorded in separate tables.
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 sub-sampling 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.*	Sampling technique documentation has not been sighted by Golder, but it is recorded in the drilling database that sampled core includes quarter, half and full core sampling. Preparation techniques are not known for the samples processed prior to 2015. 2015 Poseidon sampling was completed on diamond drill core. Sampling was completed on lithological contacts. Half core sampling was completed on holes not previously sampled. When resampling, quarter core was taken.
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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	There are records of laboratory assay repeats, standards and duplicates, though the percentage of standards in not known. Golder has relied on the assessment of assay quality by previous practitioners, principally as described in the McDonald Speijers (2008) Mineral Resource report.
Verification of sampling and assaying	
The verification of significant intersections by either independent or alternative company personnel.	Underground workings have intersected significant mineralisation intervals. Underground drives and

JORC Code explanation	Commentary
The use of twinned holes. *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* *Discuss any adjustment to assay data.*	development faces have been mapped by geologists to aid the interpretation of lithology contacts and mineralised lodes. The accuracy of these maps have been investigated by Poseidon and, where possible, updated to correctly position the underground face mapping.
Location of data points	
Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. *Specification of the grid system used.* *Quality and adequacy of topographic control.*	Mine workings have been surveyed by employees of the various owning companies during underground mining development. Long surface drill holes of uncertain survey positions were systematically replaced with underground drilling to improve spatial accuracy of sample locations and domain boundary positions. Local mine grid coordinates were used for the estimation. Drill holes used in the database have been checked for location validity, and where required and possible, surveys have been updated to reflect their true position within the ore body. This work was undertaken by Poseidon using a range of validation techniques.
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 and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* *Whether sample compositing has been applied.*	Drill spacing was used as a factor in establishing the degree of confidence in the estimate, influencing the Ore Reserve classification. Golder composited drilling data to 2 m downhole composite intervals for disseminated ore and host rock domains. Drilling data was composited to 1 m downhole intervals for narrow, massive sulphide mineralisation.
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.*	Where drilling intersected mineralisation at high angles, the holes were not included in the database used in the estimation. Most holes drilled from surface, which have some uncertainty in spatial positioning, were replaced with underground drilling, or have had the survey positioning checked for validity and have had the spatial positioning updated where possible.
Sample security	
The measures taken to ensure sample security.	There are no documented details available for sample security.
Audits or reviews	
The results of any audits or reviews of sampling techniques and data.	There are no documented reviews of audit or review for sampling.

Section 2 Reporting of Exploration Results

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

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.*	Maggie Hays Mine is situated on M63/163 and the plant is located on M63/283 which are located 190km SW of Kalgoorlie. Both tenements are registered to Poseidon Nickel Olympia Operations Pty Ltd, a wholly owned subsidiary of Poseidon Nickel Ltd. A long standing Native Title Agreement (since 1997) exists with the Ngadju People and will be continued by Poseidon Nickel. The tenements are located within the buffer zone of the Bremer Range Priority Ecological Community and within the Proposed Nature Reserve 82. Lake Johnston Plant commenced operation in 2001 and there are no known impediments to continue operating in this area. There are no royalties or other interests held.
Exploration Done by Other Parties *Acknowledgment and appraisal of exploration by other parties.*	LionOre Australia and Norilsk Nickel Australia previously completed exploration, drilling and mining of the Lake Johnston project until Poseidon's acquisition in late 2014.
Geology *Deposit type, geological setting and style of mineralisation.*	Nickel mineralisation at Maggie Hays is interpreted as an intrusive style ultramafic body, not extrusive Kambalda style lava flows. Nickel mineralisation occurs as disseminated sulphides and lenses of massive sulphide
Drill hole information	Holes used are surface or underground diamond drill holes diamond and RC drill holes.
Data aggregation methods	N/A
Relationship between mineralisation widths and intercept lengths	N/A
Diagrams	See body of report.
Balance reporting	The reporting is factual & balanced. Where Poseidon or Golder has made assumptions and/or interpreted data, these are clearly identified.
Other substantive exploration data	The modelling supports the vast drilling database that was acquired with the purchase of the Lake Johnston Project. Historical assessments and estimations by other consultants or previous owners have been used to guide certain aspects of this resource update and are identified in the detailed resource estimation report.
Further work	Poseidon are undertaking a range of resource definition and mine planning programmes in addition to this resource update.

Section 3 Estimation and Reporting of Mineral Resources

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

JORC Code explanation	Commentary
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. *Data validation procedures used.*	Logging and assay data has been uploaded in to an Access database. Some of this data is believed to have been transcribed from previous spreadsheets. The database has some errors, data inaccuracies and omissions. In these instances, information was not used for the Mineral Resource estimate. It does not contain sample and assay quality control information. Golder has seen no evidence of validation of drill hole data, however, underground workings have intersected mineralisation as drilled.
Site visits	
Comment on any site visits undertaken by the Competent Person and the outcome of those visits. *If no site visits have been undertaken indicate why this is the case.*	Golder undertook a site visit in August 2014 to view the surface and underground workings and infrastructure. The further visit was conducted in January 2015.
Geological interpretation	
Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. *Nature of the data used and of any assumptions made.* *The effect, if any, of alternative interpretations on Mineral Resource estimation.* *The use of geology in guiding and controlling Mineral Resource estimation.* *The factors affecting continuity both of grade and geology.*	Golder created sections through the disseminated mineralisation wireframes that were developed during the period the mine was in operation. The sections were then re-interpreted and snapped to drill holes using assay grades and lithological logging as a guide. The North Shoot mineralisation was re-interpreted by Poseidon using the updated survey information for drill holes and utilising the corrected underground face mapping positioning. Poseidon interprets the North Shoot to be a single unit of massive sulphide containing some splayed lenses. Due to the re-positioning of drill holes and face mapping from updated survey information, North Shoot mineralisation is considered of higher confidence than in previous estimates. In these areas, where drill hole information and development drive face mapping exist, the resource category status was updated to Indicated. Areas of the North Shoot where drilling is still wide-spaced, and no development drives exist retained their Inferred resource category status. Another massive sulphide mineralisation zone was also modelled by Poseidon south of the North Shoot in an area known as the Suture Zone. The sections were interpreted and snapped to drill holes using assay grades and lithological logging as a guide. Underground mapping was conducted and is believed to have been used in the construction of original wireframes. Wireframe locations were honoured where supported by drilling data. The geological interpretation is validated by drilling, underground chip sampling, geological mapping and mining activity.

Dimensions	
The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	The Mineral Resource associated with the Maggie Hayes deposit runs along a strike length of approximately 1000 m north-south and approximately 450 m east-west in a series of thin lenses. Drilling has intercepted Ni mineralisation at up to 600 m below surface. The deposit is split between, the 'North Shoot' mineralisation, disseminated and massive southern Cave Zone, with a disseminated and massive sulphide Suture Zone connecting the north and south areas.
Estimation and modelling techniques	
The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* *The assumptions made regarding recovery of by-products.* *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* *Any assumptions behind modelling of selective mining units.* *Any assumptions about correlation between variables.* *Description of how the geological interpretation was used to control the resource estimates.* *Discussion of basis for using or not using grade cutting or capping.* *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	Mineralisation was estimated within domains defined by lithological and assay information. Statistical analysis of sample data in the composite file was used for estimation purposes. The block size is 5 m (X) by 10 m (Y) by 5 m (Z). The sub-block size is 0.625 m (X) by 1.25 m (Y) by 0.625 m (Z) to achieve acceptable resolution of geological domains. Using parameters derived from the modelled variograms, Ordinary Kriging (OK) was used to estimate average block grades for Ni, As, Cu, Co, Fe, MgO and S. The Ni estimation was conducted in three passes with the search size increasing for each pass. In some domains, where blocks had not been filled after three passes, a fourth pass was used to fill the remaining blocks. All grade estimates were made to the parent cell size. Estimation for the remaining components was made in two passes. If blocks were still not filled after the second pass, then a default around the average grade was applied. These secondary components are not included in the Mineral Resource. The model was validated visually and statistically using swath plots and comparisons to sample statistics. The estimation smoothing effect was validated globally for the main mineralised domains against a Discrete Gaussian change of support model. Areas of depleted mine workings were removed from the model in order to yield the final Mineral Resources.
Moisture	
Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Golder used default assumed densities for each domain, taking into account the rock type, mineralisation and information from previous work by McDonald Speijers. These densities assume a dry density and do not include moisture

Cut-off parameters	
The basis of the adopted cut-off grade(s) or quality parameters applied.	No high-grade cuts were applied by Golder in the estimation of Ni grades, but spatial constraining was used to limit the influence of high grade sample intersections in "waste" domains to prevent excessive extrapolation of ore grade mineralisation. Reporting at cut-off grades of 0.8% Ni for disseminated mineralisation is consistent with previous analysis of breakeven cut-off grades. Massive sulphides form distinct units where application of cut-off grade is not appropriate.
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.	Golder assumed any future mining would likely continue with sub-level caving of disseminated mineralisation and a form of stoping for North Shoot massive sulphides. The block model uses a parent cell size of 5 m (X) by 10 m (Y) by 5 m (Z), Sub-block size is 0.625 m (X) by 1.25 m (Y) by 0.625 m (Z). These were primarily determined by data availability and the dimensions of the mineralisation. As grade estimates were made to the parent cell size, this defines the effective selectivity of the Mineral Resource estimate. The extent of the existing mining voids was based on surveyor's pickups of the southern sub-level cave and North Shoot stopes. The most conservative approach was taken, with the greatest extent of the sub-level cave depleted in the model.
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.	The Lake Johnston concentrator has a capacity of approximately 1.5 Mtpa based on historically demonstrated mill capacity. The concentrator was shutdown in April 2013 by Norilsk before being placed into care and maintenance. Poseidon Nickel is planning to operate the concentrator at approximately 1.0 Mtpa throughput rates with ore supplied initially from Maggie Hayes underground operations, the disseminated caved ore, North zone and potentially the suture zone. The plant will be refurbished and minor modifications to the flowsheet and reagents will be made to allow for the reduced throughput. A scope and cost for this refurbishment has been generated as part of the study. The plant is an existing and proven concentrator with a demonstrated capacity to process nickel sulphide ores from Maggie Hays and Emily Anne. The metallurgical process is conventional, well understood and has many years of operational experience to support the flotation response of the Lake Johnston pentlandite and millerite ore. An assessment of the concentrate produced at Lake Johnston confirmed that a quality smeltable highly sort after concentrate was typically produced with no expected penalties.

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.	As the project has previously been mined, there are existing waste storage facilities and environmental considerations are not expected to pose any issues to the resumption of mining activity. The site has a large number of approvals issued under the *Mining Act* and *Environmental Protection Act*. Approvals remain current for the project. Environmental impacts were assessed as part of obtaining the above approvals. No significant impacts are considered to result from the project. Geochemical characterisation studies have been conducted on Lake Johnston waste rock and tailings. Lake Johnston waste rock and tailings were both determined to be Potentially Acid Forming (PAF) similar to Windarra. Project land disturbance appears to be within approved amounts. No additional land disturbance beyond approved amounts will be required for waste rock and tailings management. Works for the tailings storage facility tails lift were commenced prior to the project being placed on care and maintenance. These works were not completed and, as such, certification of the works by the Department of Environment Regulation (DER) could not be obtained. The Works Approval authorising construction of the 4 metre tailings embankment raise has since been resubmitted to the regulator.
Bulk density	
Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.* *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	Density measurements were largely made using the water immersion technique. However, the database does not contain information on the origin of density measurements and there are some conflicting points on the provenance of density measurements in the database tables. Based on previous work done by McDonald Speijers, and knowledge of the area, Golder applied default densities for each geological unit.
Classification	
The basis for the classification of the Mineral Resources into varying confidence categories. *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* *Whether the result appropriately reflects the Competent Person's view of the deposit.*	Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition). The classification of Mineral Resources was completed by Golder based on geological confidence, drill hole spacing and grade continuity. The Competent Person is satisfied that the result appropriately reflects his view of the deposit. Continuous zones meeting the following criteria were used to define the resource class: <u>Indicated Resource</u>

	■ Two or more drill holes spaced no further than 40m apart confirming grade continuity. ■ Underground development and mapping confirming the relative positioning of the mineralised domains. Inferred Resource ■ Single drill holes or large spatial separation between drill holes (more than 40 m).
Audits or reviews	
The results of any audits or reviews of Mineral Resource estimates.	This Mineral Resource estimate is based on data and information from previous resource estimates completed by McDonald Speijers and Golder.
Discussion of relative accuracy/confidence	
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 data, where available.*	The relative accuracy is reflected in the Mineral Resource classification discussed above. This Mineral Resource estimate includes knowledge gained from mining recovery data during production.