

QUARTERLY REPORT

31 DECEMBER 2010

COMPANY OVERVIEW

Poseidon is a Nickel exploration and development company focussed on the historic Windarra Nickel Project in the N.E. Goldfields.

The Windarra Nickel Project consists of an existing open pit and underground mine at South Windarra and Mount Windarra respectively as well as 24 kilometres of highly prospective and under-explored host mineralisation.

To date, Poseidon has defined 97,767 tonnes of JORC code compliant nickel sulphide resources at the Windarra Nickel Project. This comprises of 62,200 tonnes of contained nickel at Mt Windarra, adjacent and below the existing underground infrastructure representing a low cost entry to the market; as well as a maiden 25,269 tonne nickel resource at the Cerberus deposit and 10,298 tonnes of contained nickel at South Windarra.

ASX CODE: POS

*see attached resource statement



COMPANY HIGHLIGHTS

- US\$20m of additional funding secured from Harbinger
 - Restart of the mine rehabilitation imminent
 - Current phase of diamond drilling of Cerberus completed
 - Seismic survey completed at South Windarra Extension and Weebo Well
 - Completion of an independent geological review of the Mt Windarra and Cerberus mineral resources
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- Poseidon has secured a US\$20 million Convertible Note funding facility from two private investment funds managed by New York-based Harbinger Capital Partners LLC (“Harbinger”). The Convertible Notes are convertible at the Harbinger Funds’ election into fully paid ordinary shares at a fixed price of AU\$0.30 per share which represents a significant premium of circa 42% to the 30-day VWAP of Poseidon shares at the time. The Notes have a 6-year term and carry a coupon of 0% per annum for the initial 3 years and 5% thereafter.
 - The capital raising is subject to shareholder approval at a general meeting that the Company is planning to hold in early March. The Company is currently preparing the Notice of Meeting together with an Independent Expert Report containing full details including terms and conditions, for ASIC approval and distribution to shareholders in advance of the general meeting.
 - The proceeds of the issue of the Convertible Notes will be used to continue the development of the Windarra Nickel Project as well as ongoing exploration activities and feasibility studies. In particular the Company will:
 - Complete the de-water and refurbishment works at the Mt Windarra nickel mine with operations recommencing in March 2011;
 - Significantly expand the drilling program at Mt Windarra, Cerberus and the South Windarra prospects during the 1st quarter of 2011 to increase resources and reserves;
 - Complete the funding required for the concentrator plant.
 - In addition, Harbinger has agreed to extend the term of the existing US\$15 million Convertible Notes issued in June 2008 for a further 6 years with the same coupon terms as the new Notes. The existing 2008 Notes will, under the terms of the new agreement, have a conversion price of AU\$0.40 and the interest payable from June 2011 will now be deferred for a further 3 year term.

EXPLORATION UPDATE

Cerberus

Poseidon recently announced that final results of the 2010 drilling campaign from the Cerberus nickel deposit have delivered continued improvements.

A best result of **4.07m @ 3.00%** nickel was intersected in PND0104 which includes **1.57m @ 5.42%** nickel at the base of the mineralised channel (Table 1). This intersection occurs within the core of the upper high grade zone of mineralisation (Figures 1 & 2). This supports the previously announced result in holes PNDRC0088 and PNDRC0089 which returned better than expected nickel grades.

The Cerberus resource currently stands at 1 million tonnes at 2.45% Ni for 25,269 tonnes of Inferred Resources (Table 2) and will require a resource re-calculation, to commence in the first quarter of 2011, which would be expected to lead to an expansion of the JORC compliant resource.

The drilling programme at Cerberus comprised of six drill holes which aimed to extend the interpreted boundaries and test the grade and continuity of the upper zone of mineralisation in order to expand the size of the resource as well as potentially increasing its JORC status.

These drill holes have successfully confirmed the real potential for growing the Cerberus resource nearer to surface than the earlier geological modelling estimates (Figure 2).

Table 1: Cerberus Significant Intersections

Hole Id		m From	m To	Length	%Ni	mpc	Comment
PNRCD0088		176.55	178.18	1.63	2.03	3.3	
PNRCD0089		216.17	219	2.83	3.24	9.2	
	<i>incl</i>	217	218	1.00	4.91		High grade core
		228.36	228.7	0.34	0.99	0.3	footwall stringer
PND0102		237.89	238.38	0.49	1.77	0.9	Upper Lode
		240.3	246	5.70	0.75	4.3	Central Lode
		247.55	251.95	4.40	1.32	5.8	Lower Lode
	<i>incl</i>	250.17	251.95	1.78	2.49		
PND0103		294.77	298.13	3.36	0.84	2.8	Upper Lode
		304	306	2.00	1.18	2.4	Lower Lode
PND0104		243.5	247.57	4.07	3.00	12.2	Lower Lode
	<i>incl</i>	246	247.57	1.57	5.42		High grade Base
PND0105		172.75	174.12	1.37	3.55	4.9	Lower Lode
	<i>incl</i>	173.72	174.12	0.4	5.25		High grade Base

Note: $mpc = length \times \% Ni$.

Currently high grade mineralisation has been intersected at a vertical depth of 160m below surface and potential exists in the southern up-dip position to bring mineralisation to within 100-120m of the surface greatly assisting in the potential economic viability of the deposit. The upper high grade zone is open in a number of directions and requires additional drilling. Potential also exists to link the upper and lower high grade zones to form a continuous zone as there is no drilling along sections through 6839000mN or 6839200mN.

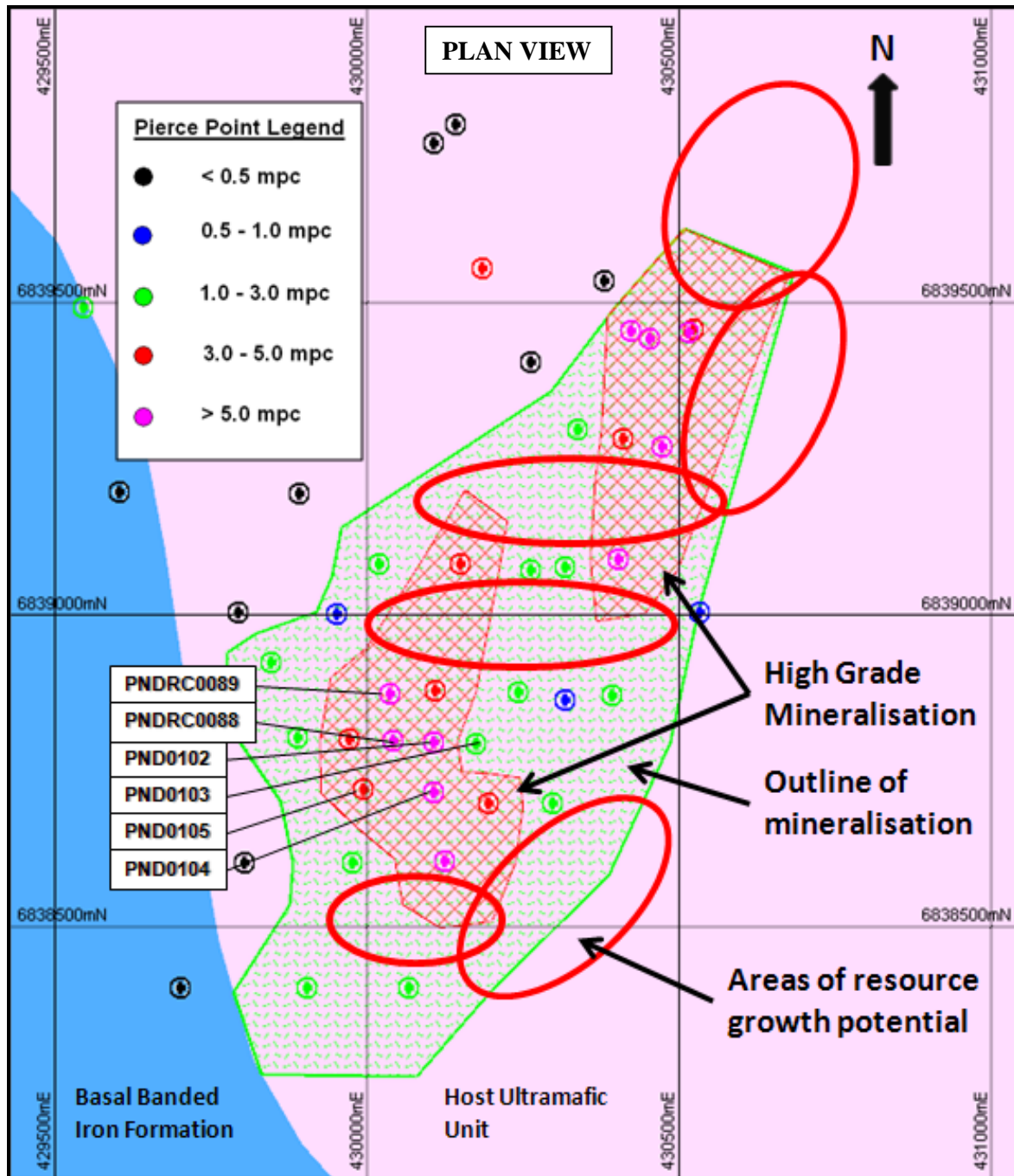


Figure 1: Plan view of the Cerberus Deposit showing outline of mineralisation and recent intersection locations. Intersection pierce points are coloured by thickness (m) x nickel % grade (pc) to define the grade-thickness contours of the deposit (ie. 2m @ 2% Ni = 4 mpc).

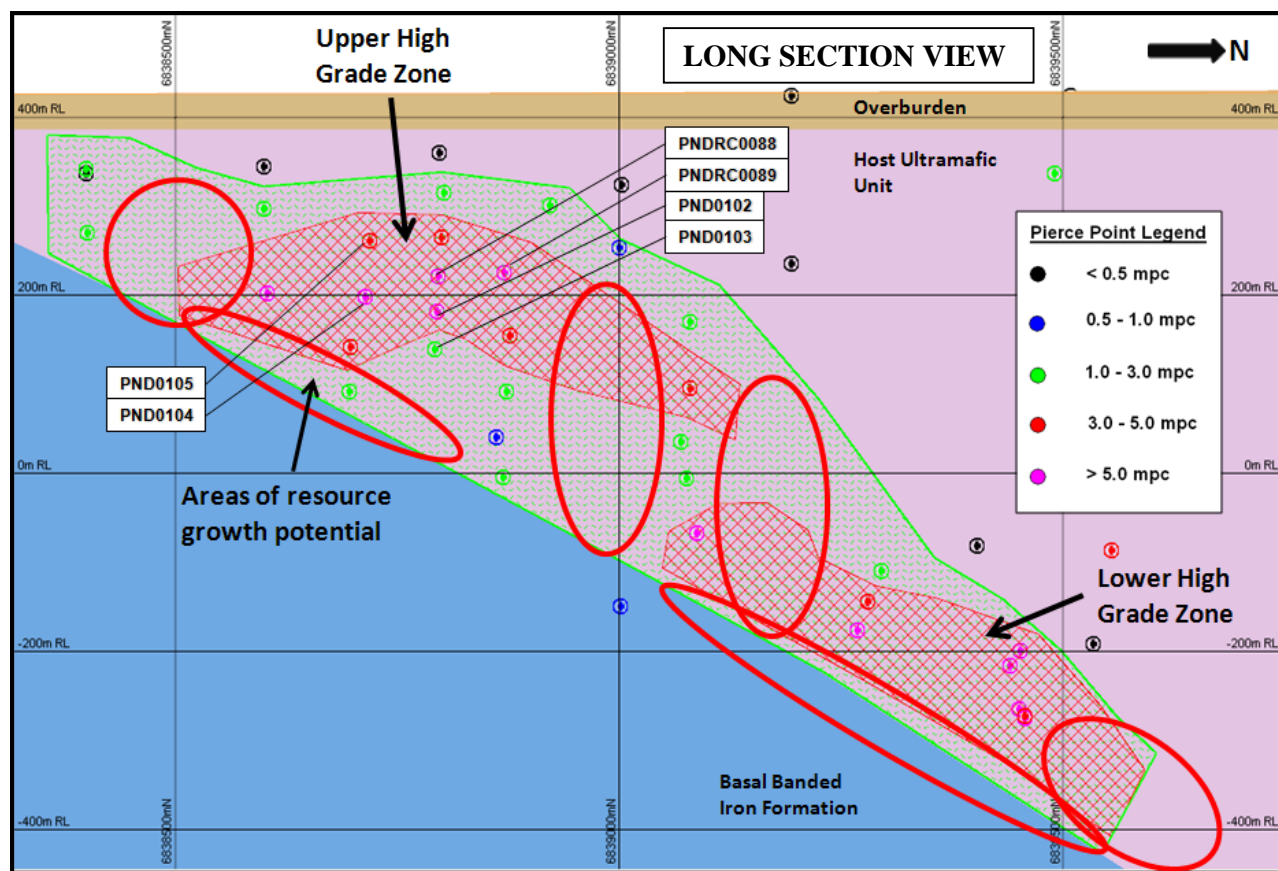


Figure 2: Long section looking west at the Cerberus Deposit showing recent intersection locations. Opportunity to extend the resource exists in the up-dip southern area were the deposit could come to within 100m of the surface. The two high grade zones may link up as the central area is untested as well as the down-dip deeper positions.

Regional Exploration

During the quarter Poseidon contracted HiSeis Pty Ltd to undertake seismic surveys over the South Windarra Extension (east) and the Weebo Well Intrusion project areas.

HiSeis Pty Ltd is a purpose built company whose major shareholder is the Curtin University. HiSeis was designed to seamlessly take the intellectual property developed by the Centre for High Definition Geophysics (CHDG) at Curtin University and offer it as a commercial service to the mining industry. The focus of the company is high resolution hard rock seismic surveying in mining sites.

The work commenced in late November with the geological objective of providing acoustic images of the ultramafic rocks at the Windarra Nickel Project, to help in the targeting of nickel sulphide ore systems.

A 2 dimensional (2D) seismic survey was completed to the east of the South Windarra mine along the interpreted lava channel trend (Figure 3) and comprised three radiating lines, each 4km in length with 10m geophone spacing's and 20m shot spacing's. A track mounted bob cat with a 750kg accelerated drop weight device (Figure 4) was used as a seismic shot source instead of the conventional explosive charges, greatly reducing the environmental impact of the survey. Drilling of the defined targets is likely to commence in the 1st quarter of 2011.

At the Weebo Well Intrusion area, which is situated 7km south-southeast of Mt Windarra, a 3 dimensional (3D) seismic survey was undertaken in early December. The aim of the survey was to refine drilling targets to support the Exploration Incentive Scheme (EIS) grant of \$150,000 that the company was awarded by the Department of Mines and Petroleum. Drilling of the Weebo Well Intrusion is scheduled for the 2nd quarter of 2011.

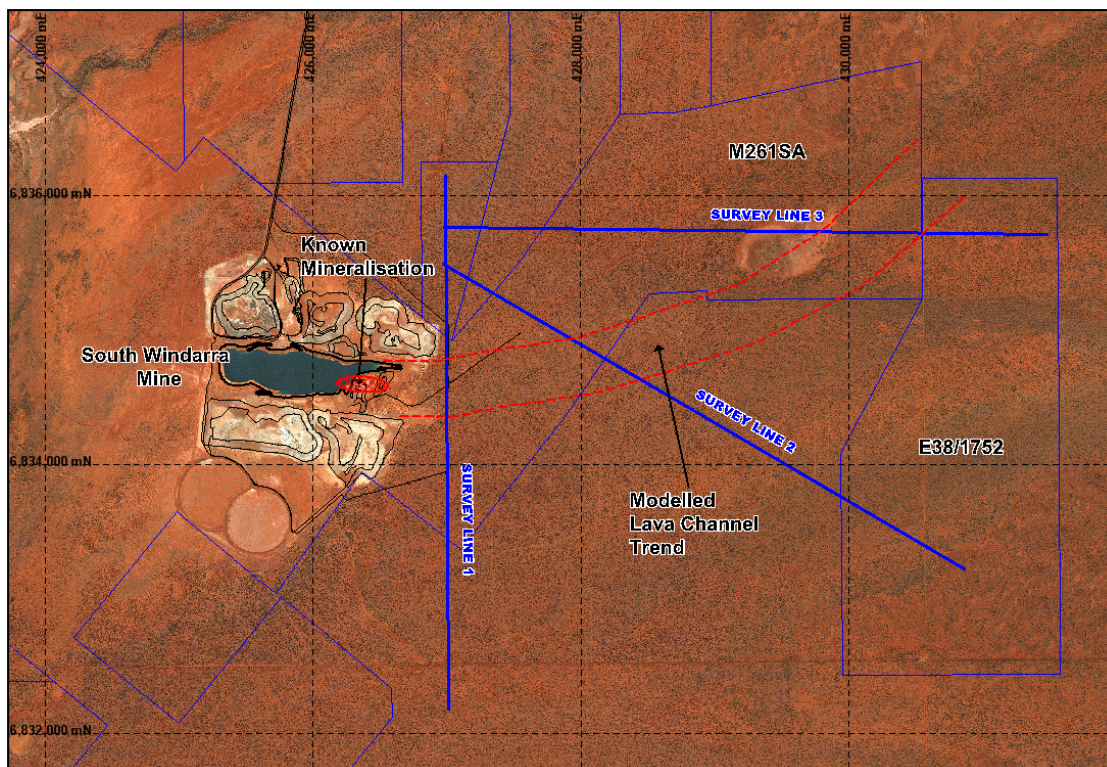


Figure 3 – 2D seismic lines designed to map the interpreted position of the lava channel which hosts the South Windarra nickel ore body.



Figure 4 – A low impact track mounted bob cat with a 750kg accelerated drop weight device was used as a seismic shot source.

Independent Geological Review

In October 2010 the Company contracted Optiro Pty Ltd to complete an independent geological review of the Mt Windarra and Cerberus Mineral Resources. The review was intended to provide independent endorsement regarding the veracity and robustness of the estimates for Poseidon's fundraising purposes. Optiro's guiding principle in the validation was to ensure that the Mineral Resource models matched the input drillhole data to a level of accuracy which is commensurate with the resource classification applied. This involved visual and quantitative checks of the block model against the drillhole composites, then completing ordinary kriging model estimates. Another important aspect was to confirm Poseidon's reported resource figures.

Optiro used the block models of all ore shoots provided by Poseidon to validate the Mt Windarra and Cerberus Mineral Resources and found that Poseidon's reported numbers are sound. Optiro found the differences in the reported metal content to be negligible, with the Mt Windarra Resource actually increasing by 436 tonnes of nickel metal to 62,200 tonnes of contained nickel metal (Tables 2 and 3).

Optiro was able to reproduce, to a high degree of accuracy, the reported resource figures provided by Poseidon in all cases. Optiro was satisfied that the models presented by Poseidon (and in the case of the Mt Windarra CDG Deeps, revised by Optiro) fairly reflect the geological models and the drilling data provided to Optiro by Poseidon. Moreover, Optiro is satisfied that Poseidon has classified and reported the models in accordance with the JORC Code.

The resources have been classified as either Indicated or Inferred according to the JORC Code (2004), and approximately 25% of the total tonnage at Mt Windarra has been allocated to the Indicated category. Optiro endorses this classification as being appropriate for the relative levels of data density and data quality, apart from the lower portion of F Shoot, which was reclassified from Indicated to Inferred.

Optiro's revised Mineral Resource for Mt Windarra is summarised in Table 2. This has been reported in accordance with the JORC Code and is endorsed by Optiro for public release.

Table 2: Mt Windarra Revised Resource Statement

Mt Windarra Nickel Sulphides		Resource Category								
		Indicated			Inferred			TOTAL		
		Tonnes	Ni% Grade	Ni Metal t	Tonnes	Ni% Grade	Ni Metal t	Tonnes	Ni% Grade	Ni Metal t
A Shoot					85,000	2.19	1,900	85,000	2.19	1,900
A-HW Shoot		340,000	1.06	3,600				340,000	1.06	3,600
B Shoot					80,000	1.42	1,100	80,000	1.42	1,100
CGD Deeps	C	120,000	1.61	1,900	1,100,000	2.10	23,100	1,220,000	2.05	25,000
	D				525,000	1.48	7,800	525,000	1.48	7,800
	G				1,090,000	1.48	16,100	1,090,000	1.48	16,100
G Shoot (Upper)		375,000	1.17	4,400	35,000	1.01	400	410,000	1.16	4,800
F Shoot		75,000	1.81	1,400	40,000	1.29	500	115,000	1.62	1,900
Total Sulphide		910,000	1.24	11,300	2,955,000	1.72	50,900	3,865,000	1.61	62,200

Table 3: Windarra Nickel Project Resource Statement

Windarra Nickel Project Sulphides	Cut Off Grade	Resource Category								
		Indicated			Inferred			TOTAL		
		Tonnes	Ni% Grade	Ni Metal t	Tonnes	Ni% Grade	Ni Metal t	Tonnes	Ni% Grade	Ni Metal t
Mt Windarra	0.75%	910,000	1.24	11,300	2,955,000	1.72	50,900	3,865,000	1.61	62,200
South Windarra	0.90%	820,326	1.15	9,434	82,404	1.05	864	902,730	1.14	10,298
Cerberus	1.50%				1,033,328	2.45	25,269	1,033,328	2.45	25,269
Total Sulphide		1,730,326	1.20	20,734	4,070,732	1.89	77,033	5,801,058	1.69	97,767

Note: The information in this report relates to Exploration Results and Mineral Resources based on information compiled by Mr N Hutchison who is a Member of The Australian Institute of Geoscientists. Mr Hutchison has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.' He has 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 received and does not accept responsibility for the accuracy or adequacy of this release.

OPERATIONS

- The Premier and Minister for State Development has approved Poseidon's request for a further two year extension of time to the deadline within the Poseidon Nickel State Agreement 1971. This will enable the underground mine refurbishment and necessary studies to be completed and a proposal to be submitted to the Department of State Development as required by this agreement.
- Tenders for the supply and installation of the second stage dewatering pumps required to complete the mine dewatering have been issued with the aim of having this equipment operational during the 1st quarter 2011 by which time the first stage of pumping to 165 meters vertically will have being completed. In addition, the Company has commenced negotiation with a number of other companies for the supply of equipment and consumables required for the restart of underground operations.
- At the end of the quarter the Company reactivated the contract for the refurbishment of the underground mine and as a result of the ongoing high standards of care and maintenance through the period, Poseidon will be able to recommence the rehabilitation of the underground mine during March 2011.

FINANCIAL

- As at 31 December 2010, the Company had cash and receivables of \$1.49 million which includes cash on hand of \$0.74 million plus an interest bearing receivable of \$0.75 million that is held in escrow from the sale of the Ghana gold project to Hodges Resources. The conditions of the sale agreement are expected to be finalised shortly.

- On 23 December the Company announced that it had secured a US\$20m Convertible Note funding facility from New York-based Harbinger Capital Partners LLC and its affiliates. The Convertible Notes are subject to shareholder approval at a general meeting which the Company is planning to hold in early March 2011.

MARKET INFORMATION

- Figure 4 below shows the underlying correlation between Poseidon's share price and the LME Nickel price over the last 18 months.

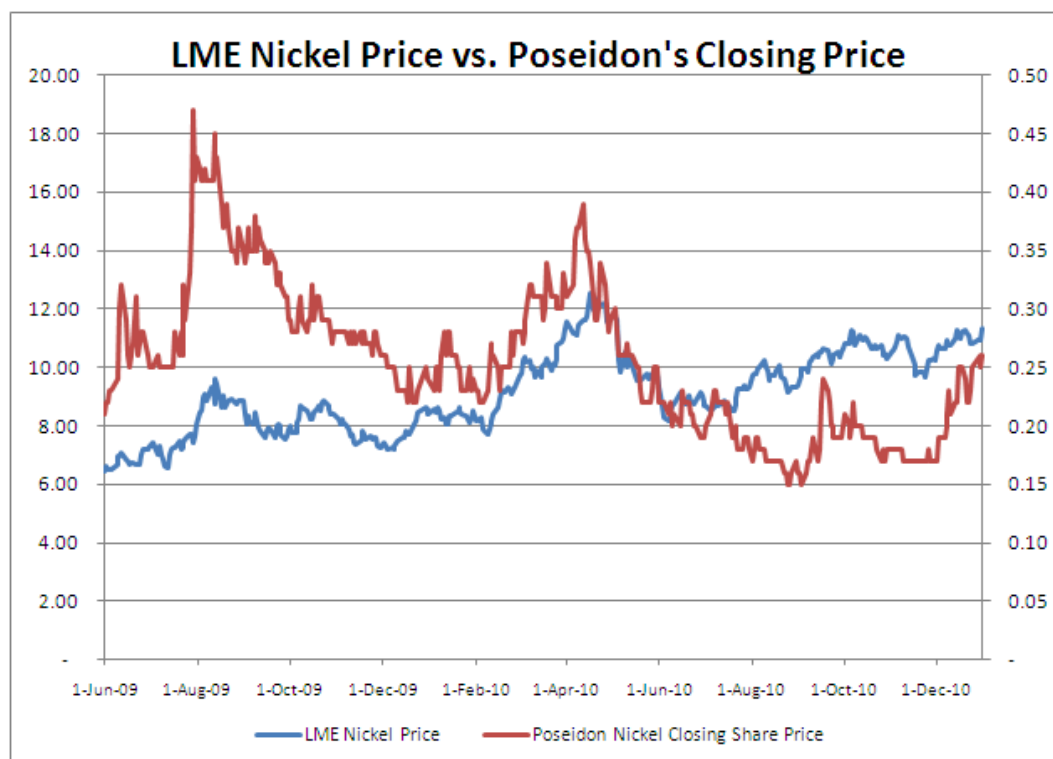
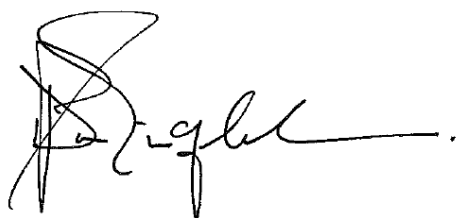


Figure 4: Poseidon share price graph

CORPORATE

- In line with Poseidon's policy to only pay Directors fees in shares in order to retain the cash reserves of the Company, 321,860 Fully Paid Ordinary Shares were issued in lieu of Directors fees for the quarter to September under the terms of the Director Share Plan. The shares were issued on 20 December 2010 at a deemed issue price of \$0.1948, based upon the volume weighted average sale price ("VWAP") for the 90 days prior to the expiration of the quarter. The payment of shares as opposed to cash is intended to reduce the cash cost to the Company.
- In accordance with the resolutions passed at the AGM, the Company has issued the following options:
 - 3,000,000 November 2016 Incentive Options to Mr D Singleton in his capacity of Chief Executive Officer ("CEO") of the Company. The purpose of the options is to provide a market linked incentive package and to align the objective of the CEO to shareholders.

- 750,000 Unlisted Director Options as part of the incentive scheme for Directors' and to ensure that the Company continues to attract and retain the highest calibre of professionals whilst maintaining the Company's cash reserves.
- 750,000 Unlisted Exertion Options to Mr C Indermaur in recognition of the considerable additional demand that has been placed on Mr Indermaur during the last financial year.



David P.A. Singleton
MANAGING DIRECTOR &
CHIEF EXECUTIVE OFFICER

27th January 2011

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CORPORATE DIRECTORY

Director / Senior Management

David Singleton	Managing Director & Chief Executive Officer
Andrew Forrest	Non-Executive Chairman
Geoff Brayshaw	Non-Executive Director
Richard Monti	Non-Executive Director
Chris Indermaur	Non-Executive Director
Ross Kestel	Company Secretary

Corporate Enquiries

Mr David Singleton – MD & CEO
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F: 61 8 9382 4760

E: admin@poseidon-nickel.com.au

Shareholder Enquiries

Enquiries concerning shareholdings should be addressed to:

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331-335 Hay Street
SUBIACO WA 6008
P: 61 8 9382 8799
F: 61 8 9382 4760

Registered Office

Level 2, Spectrum
100 Railway Road
SUBIACO WA 6008
P: 61 8 9367 8133
F: 61 8 9367 8812

Media Enquiries

Mr Paul Downie
FD Third Person
P: 61 8 9386 1233 M: 0414 947 129
E: paul.downie@fdthirdperson.com.au

Home Exchange

The Company's shares are listed on the Australian Securities Exchange and the home exchange is Perth
ASX code: POS

Appendix 5B

Mining exploration entity quarterly report

Introduced 1/7/96. Origin: Appendix 8. Amended 1/7/97, 1/7/98, 30/9/2001, 01/06/2010.

Name of entity

Poseidon Nickel Limited

ABN

60 060 525 206

Quarter ended ("current quarter")

31 December 2010

Consolidated statement of cash flows

Cash flows related to operating activities		Current quarter \$A'000	Year to date (6 months) \$A'000
1.1	Receipts from product sales and related debtors	-	-
1.2	Payments for		
(a)	exploration and evaluation	(1,255)	(1,934)
(b)	development	-	-
(c)	production	-	-
(d)	administration	(804)	(1,442)
1.3	Dividends received	-	-
1.4	Interest and other items of a similar nature received	56	86
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Other - sundry income	38	85
Net Operating Cash Flows		(1,965)	(3,205)
Cash flows related to investing activities			
1.8	Payment for purchases of:		
(a)	prospects	-	-
(b)	equity investments	-	-
(c)	other fixed assets	-	-
1.9	Proceeds from sale of:		
(a)	prospects	-	-
(b)	equity investments	-	-
(c)	other fixed assets	-	-
1.10	Loans to other entities	-	-
1.11	Loans repaid by other entities	-	-
1.12	Other	-	-
Net investing cash flows		-	-
1.13	Total operating and investing cash flows (carried forward)	(1,965)	(3,205)

+ See chapter 19 for defined terms.

Appendix 5B
Mining exploration entity quarterly report

1.13	Total operating and investing cash flows (brought forward)	(1,965)	(3,205)
	Cash flows related to financing activities		
1.14	Proceeds from issues of shares, options, etc.	160	3,216
1.15	Proceeds from sale of forfeited shares	-	-
1.16	Proceeds from borrowings	-	-
1.17	Repayment of borrowings	(14)	(38)
1.18	Dividends paid	-	-
1.19	Other - share issue costs	(45)	(161)
	Net financing cash flows	101	3,017
	Net increase (decrease) in cash held	(1,864)	(188)
1.20	Cash at beginning of quarter/year to date	2,600	924
1.21	Exchange rate adjustments to item 1.20	-	-
1.22	Cash at end of quarter	736	736

Payments to directors of the entity and associates of the directors

Payments to related entities of the entity and associates of the related entities

		Current quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	121
1.24	Aggregate amount of loans to the parties included in item 1.10	-

1.25 Explanation necessary for an understanding of the transactions

On 20 December 2010, 321,860 ordinary shares were issued at a price of \$0.1948 per share as approved by the Shareholders at the November 2010 Annual General Meeting. The shares were issued to the Non-Executive Directors in lieu of Directors Fees for the September 2010 quarter. This has not been included in the above cash flow.

Non-cash financing and investing activities

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

N/A

2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

N/A

Financing facilities available

Add notes as necessary for an understanding of the position.

+ See chapter 19 for defined terms.

	Amount available \$A'000	Amount used \$A'000
3.1 Loan facilities	15,619	15,619
3.2 Credit standby arrangements	-	-

Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	800
4.2 Development	-
4.3 Production	-
4.4 Administration	650
Total	1,450

Reconciliation of cash

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.

	Current quarter \$A'000	Previous quarter \$A'000
5.1 Cash on hand and at bank	732	1,097
5.2 Deposits at call	4	1,503
5.3 Bank overdraft	-	-
5.4 Other	-	-
Total: cash at end of quarter (item 1.22)	736	2,600

Changes in interests in mining tenements

	Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1 Interests in mining tenements relinquished, reduced or lapsed	N/A			
6.2 Interests in mining tenements acquired or increased	N/A			

+ See chapter 19 for defined terms.

Issued and quoted securities at end of current quarter

Description includes rate of interest and any redemption or conversion rights together with prices and dates.

		Total number	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1	Preference securities <i>(description)</i>				
7.2	Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3	*Ordinary securities	194,895,247 50,000 375,000	194,582,116 50,000 375,000	\$0.102 \$0.102	\$0.002 \$0.062
7.4	Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs	7,694,082	7,694,082		
7.5	*Convertible debt securities <i>Unsecured</i>	15,906,681 This is an estimate only based on an average exchange rate of 0.943.	-	USD\$0.943	The Notes have a six year term convertible into fully paid ordinary shares at AUD\$1.00.
7.6	Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7	Options <i>Listed</i> <i>Listed</i> <i>Unlisted</i> <i>Unlisted</i> <i>Unlisted</i> <i>Unlisted</i> <i>Unlisted</i> <i>Unlisted</i>	6,157,403 1,000,000 2,500,000 9,267,436 115,000,000 533,000 2,000,000 4,500,000	6,157,403 - - - - - - -	<i>Exercise price</i> \$0.92 \$1.96 \$0.40 \$0.25 \$0.40 \$1.41 \$0.80 \$0.25	<i>Expiry date</i> 5 December 2011 2 July 2011 31 July 2012 31 August 2012 19 September 2012 22 October 2012 19 December 2012 23 November 2016
7.8	Issued during quarter	3,686,109 4,500,000	- -	\$0.25 \$0.25	31 August 2012 23 November 2016
7.9	Exercised during quarter				
7.10	Expired during quarter				
7.11	Debentures <i>(totals only)</i>				

+ See chapter 19 for defined terms.

7.12	Unsecured notes (totals only)				
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Compliance statement

- 1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 4).
- 2 This statement does give a true and fair view of the matters disclosed.



Sign here:

(Director)

Date: 27 January 2011

Print name: Geoff Brayshaw

Notes

- 1 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- 2 The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **Issued and quoted securities** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- 4 The definitions in, and provisions of, *AASB 1022: Accounting for Extractive Industries* and *AASB 1026: Statement of Cash Flows* apply to this report.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Accounting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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