

30<sup>th</sup> May 2011

Company Announcements Officer  
ASX Limited  
Exchange Centre  
Level 4, 20 Bridge Street  
SYDNEY NSW 2000

Dear Sir

**Re: CERBERUS RESOURCE UPGRADE**

We enclose herewith a copy of an announcement in relation to the above.

Yours faithfully



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

Enc

**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

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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

ASX Announcement

30<sup>th</sup> May 2011

### Cerberus Resource Upgrade

- **Mineral Resource at the Cerberus discovery has increased by 50% to 38,000 tonnes of contained nickel**
- **40% of the Mineral Resource now to an Indicated category**
- **Cerberus drilling is now underway with 20,000 metres planned**

Poseidon Nickel Limited (Poseidon) is pleased to announce a 50% upgrade of the Cerberus Resource which now stands at **1.85Mt at 2.05% nickel for 38,000t** of contained nickel metal above a 1.25 %Ni cut-off grade (Table 1). The upgrade follows further drilling at the resource completed in late 2010 and completion of an independent resource calculation undertaken by Optiro Pty Ltd.

As a result the total nickel sulphide content at the Windarra Nickel Project now stands at 110,500t of contained nickel metal (Table 2).

Poseidon is now undertaking approximately 20,000 metres of reverse circulation (RC) and diamond drilling over the next six months at Cerberus. The drilling is targeted at further extending the size of the resource prior to undertaking conceptual mine planning later this year. David Singleton, CEO & MD said “Cerberus is the priority focus of our drilling programme over the next few months. Conceptually, we regard Cerberus as the second phase of the project after the restart of the Mt Windarra mine, the refurbishment of which is now in full swing.”

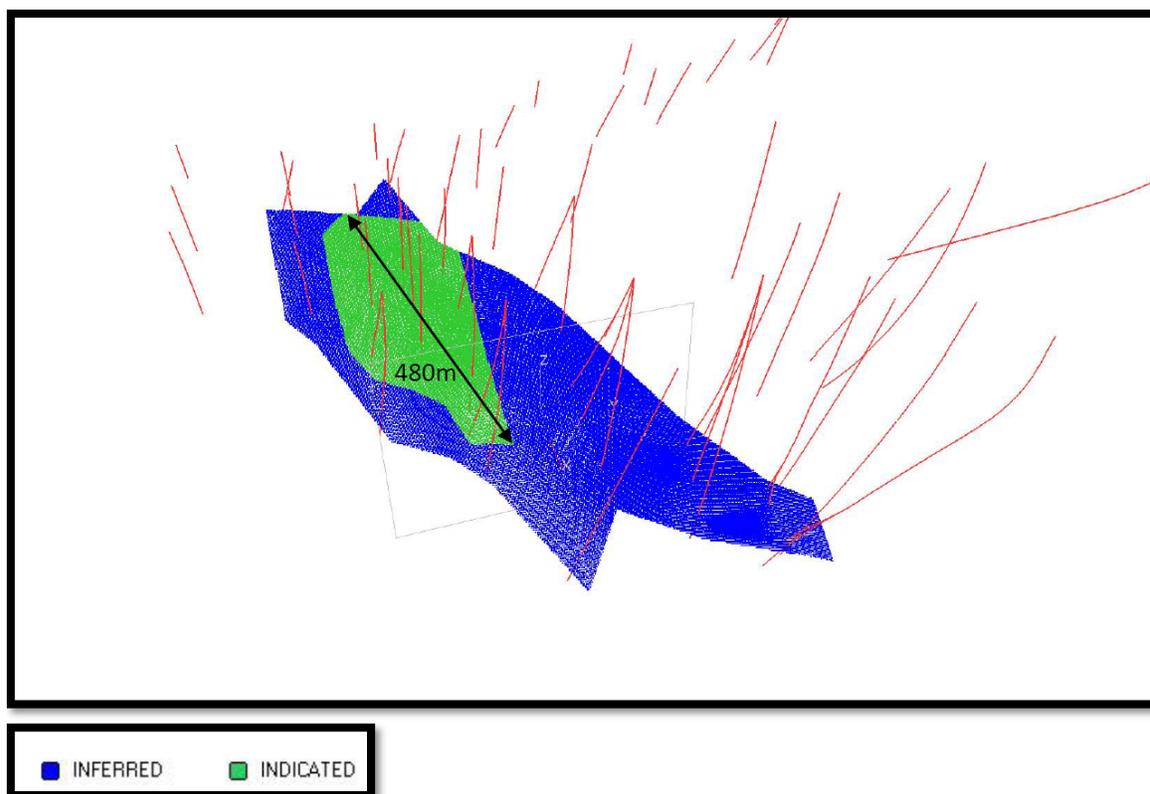
As a result of the additional drilling, the current estimate now includes an Indicated Mineral Resource which represents 40% of the defined deposit. This Indicated resource is based on the improved geological continuity and confidence, the data density and drill spacing as well as the estimation confidence and kriging efficiency within the core zone. The subdivision of Indicated and Inferred categories, together with the drill hole traces are shown below in Figure 1.

**Table 1: Cerberus Resource Statement above cut-off grades of 1.25%**

Cerberus Deposit	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
Optimum cut-off grade used	1.25%	756,360	1.62	12,264	1,092,500	2.35	25,707	1,848,816	2.05	37,970

The Cerberus Mineral Resource has been reported at an optimum cut-off grade of above 1.25% Ni as shown in Table 1.

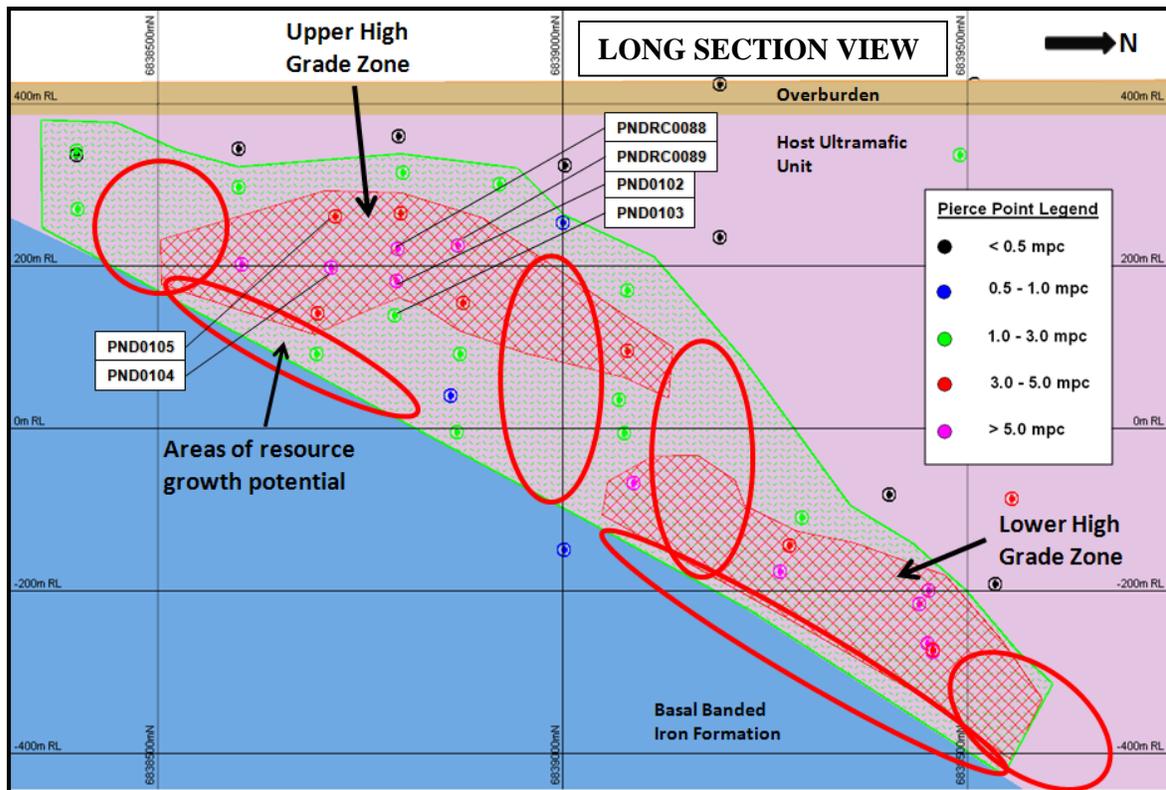
\*Note: Minor errors in totals exist due to rounding.



**Figure 1:** Resource classification at Cerberus for the main footwall lens (3D view looking from above towards the North-West).

The Cerberus deposit comprises two lenses of relatively flat lying and north-easterly plunging mineralisation. The upper unit consists of disseminated nickel sulphide whilst the lower unit typically consists of stringer to massive nickel sulphide mineralisation. Both are hosted within the Windarra Ultramafic unit. The mineralisation occurs close to but above the basal contact with the underlying Corridor Ultramafic unit.

Currently higher grade mineralisation has been intersected at a vertical depth of 160 m below surface and potential exists in the southern up-dip position to bring mineralisation to within 100 m to 120 m of the surface, which would greatly assist 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 much higher grade lower zones to form a continuous zone as there is no drilling along sections through 6839000mN or 6839200mN (Figure 2).



**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 where the deposit could come to within 100 m 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.

Poseidon has commenced further infill drilling on an 80 m by 80 m drill spacing at Cerberus, with the aim of converting much of the upper zone of Cerberus (to 450 m below surface) to an Indicated JORC category and to define the upper and edge limits of the mineralisation as described above. RC pre-collars will be drilled through the overburden and hanging wall rocks, and diamond drill tails will be completed through the Windarra Ultramafic and mineralised contact zones. This work is being completed by Apex Drilling under a two year drilling contract that the companies have entered into.

Poseidon's earlier model used an Inverse Distance<sup>2</sup> processing method to estimate the resource as well as using a 1.0% Ni geological wireframe which resulted in an optimum cut-off grade of above 1.5% Ni being reported. This gave a resource size of 25,269 at 2.41%. Due to the increase in drilling information and improved geological continuity Optiro used Ordinary Kriging to process the data. Poseidon supplied the geological wireframes using a 0.5% Ni cut-off to capture all of the relevant mineralisation within the upper and lower lenses. The Optiro model showed that the optimum grade/tonnage reporting for the Cerberus deposit is above a 1.25% Ni cut-off grade (Table 1) and a cut-off grade above 1.50% Ni has also been included for comparison.

The result of using the lower cut-off grade is a higher tonnage resource for a slightly lower grade due to the lower cut-off limits used, however the total contained nickel content has increased by 50% (or 17% at a 1.50% Ni cut-off). The grade distribution at Cerberus is consistent with the grades at Mt Windarra where the bigger tonnes at lower grades occur at

the start of the lava channels. Mt Windarra and Cerberus both become higher grade and narrower at depth as the lava channel flows further from the source, where grades of >5% Ni are not uncommon. Much of the current Inferred resource at Cerberus now exists within this deeper higher-grade zone which will be drilled out once the upper zone drilling is completed and a conceptual mine planning study of the deposit has been undertaken.

The Windarra Nickel Project is located near Laverton in the north eastern Goldfields of Western Australia and is Australia's largest high grade nickel sulphide resource owned by an explorer. The project consists of 24 kms of ultramafic host rock containing an open pit and an underground mine. Poseidon Nickel is currently refurbishing the underground mine in preparation for mining. In April 2011, Poseidon announced a non-binding MOU with a constructor to build a nickel concentrator on the site. In 2008, Poseidon discovered the Cerberus deposit on the tenements during its first regional exploration programme and has continued drilling and expanding the resource. Poseidon is aiming for initial production from Mt Windarra in late 2012 and for Cerberus to subsequently expand production.

**Table 2: 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
<b>Mt Windarra</b>	0.75%	910,000	1.24	11,300	2,955,000	1.72	50,900	3,865,000	1.61	62,200
<b>South Windarra</b>	0.90%	820,326	1.15	9,434	82,404	1.05	864	902,730	1.14	10,300
<b>Cerberus</b>	1.25%	756,360	1.62	12,264	1,092,500	2.35	25,707	1,848,816	2.05	37,970
<b>Total Sulphide</b>		<b>2,486,686</b>	<b>1.33</b>	<b>32,998</b>	<b>4,129,904</b>	<b>1.88</b>	<b>77,471</b>	<b>6,616,546</b>	<b>1.67</b>	<b>110,470</b>

*\*Note: Minor errors in totals exist due to rounding.*

*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 and Mr I Glacken who is a Fellow of the Australasian Institute of Mining and Metallurgy as well as a full time employee of Optiro Pty Ltd. Mr Hutchison and Mr Glacken both 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 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.' Mr Hutchison and Mr Glacken 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 received and does not accept responsibility for the accuracy or adequacy of this release.*