

7th September 2009

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

Dear Sir

**Re: POSEIDON'S SULPHIDE RESOURCE BASE APPROACHES 100,000T OF
CONTAINED NICKEL**

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

<p><u>CORPORATE DIRECTORY</u></p> <p>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</p> <p>Corporate Enquiries Mr David Singleton – MD & CEO P: 61 8 9382 8799 F: 61 8 9382 4760</p> <p>E: admin@poseidon-nickel.com.au</p> <p>Shareholder Enquiries Enquiries concerning shareholdings should be addressed to:</p> <p>Computershare Investor Securities GPO Box D182, Perth WA 6840 P: 61 8 9323 2000</p>	<p>Principal Office Unit 8, Churchill Court 331-335 Hay Street SUBIACO WA 6008 P: 61 8 9382 8799 F: 61 8 9382 4760</p> <p>Registered Office Level 2, Spectrum 100 Railway Road SUBIACO WA 6008 P: 61 8 9367 8133 F: 61 8 9367 8812</p> <p>Media Enquiries Mr Paul Downie FD Third Person P: 61 8 9386 1233 M: 0414 947 129 E: paul.downie@fdthirdperson.com.au</p> <p>Home Exchange The Company's shares are listed on the Australian Stock Exchange and the home exchange is Perth ASX code: POS</p>
--	---

ASX Announcement

7th September 2009

Poseidon's Sulphide Resource Base approaches 100,000t of Contained Nickel

Poseidon Nickel Limited (ASX:POS) is pleased to announce an increase in the Company's resource base to 98,667 tonnes of contained nickel from its wholly owned Windarra tenements. This is an increase of almost 12% in the Resource base since the last update, further underpinning the importance of the Windarra Nickel Project (WNP) as the cornerstone of the company's assets. This resource increase includes 25,269t of contained nickel from the discovery of the higher grade Cerberus Deposit, announced in January 2009, which is the first in the Windarra belt since the discovery of the South Windarra Deposit in 1971.

Poseidon Nickel commenced an extensive drilling programme in 2007, which delineated the un-mined ore at Mt Windarra, as well as supplying additional data which has allowed Poseidon to progressively re evaluate the resource base. The drilling and reinterpretation programme has increased the overall JORC compliant resource base by 121%, from the initial 44,619t of Ni at an average grade of 1.10% Ni in January 2008, to 98,667t of Ni at an average grade of 1.67% Ni.

This resource increase is associated with the known mineralisation at South Windarra, which was not included in the earlier resource calculations and has only recently undergone geological and resource modelling. Both **Indicated and Inferred Resources** have been calculated for the Windarra Nickel Project with the total resource base now standing at:

5,924,063t @ 1.67% Ni for 98,667 tonnes of nickel metal as detailed below;

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	1.0%	1,159,509	1.15	13,389	2,828,496	1.76	49,711	3,988,005	1.58	63,100
South Windarra	0.9%	820,326	1.15	9,434	82,404	1.05	864	902,730	1.14	10,298
Cerberus	1.5%				1,033,328	2.45	25,269	1,033,328	2.45	25,269
Total Sulphide		1,979,835	1.15	22,823	3,944,228	1.92	75,844	5,924,063	1.67	98,667

The upgrade comes from the South Windarra Mine area where Poseidon has calculated the first JORC compliant resource estimation for the remaining mineralisation. Both **Indicated and Inferred Resources** have been calculated for the South Windarra Mine area as detailed over:

SOUTH WINDARRA RESOURCE STATEMENT

902,730t @ 1.14% Ni for 10,298 tonnes of nickel metal at a 0.9% Ni cut-off grade (COG) or

South Windarra Nickel 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
East Extension	0.9%	443,169	1.16	5,159				443,169	1.16	5,159
Below Workings	0.9%	377,157	1.13	4,275	82,404	1.05	864	459,561	1.12	5,139
Total Sulphide	0.9%	820,326	1.15	9,434	82,404	1.05	864	902,730	1.14	10,298

The following parameters were used in the Inferred Sulphide Resource calculations:

Cut-off grade of 0.9% Ni using IDW² block modelling (A grade tonnes curve concluded that a 0.9% nickel cut-off based on a 0.5% wireframe was the optimal reporting cut-off point).

The South Windarra Deposit is located 13.5km south of the Mt Windarra Deposit and lies at the south-western end of the Windarra Ultramafic belt (Figure 1). Mineralisation occurs within a thermally eroded lava channel at the base of the thick Windarra Ultramafic unit, which comprises a sequence of thinner komatiite lava flows. South Windarra was mined intermittently by WMC between 1974 and 1992 using a combination of open-cut and underground mining techniques. Records show that 3.17Mt of ore at 1.35% Ni was mined from the South Windarra Deposit, producing a total of 42,646t of nickel.

The above South Windarra Resource is an estimation of the mineralisation left behind by WMC that is both potentially accessible and may be economically viable in the future. The crown pillar between the base of the open-cut pit and the top of the underground workings has not been included in this calculation as its size has not been verified and is deemed unrecoverable at this stage (Figure 2). Both the Mt Windarra and South Windarra databases have now been completely reconstructed using original drill logs and assay results which were archived on microfilm by WMC in the 1990's. Earlier data entry errors in the existing database have all been corrected and validated in order to complete the resource calculations to JORC compliant standards.

Poseidon's geologists have used modern 3D computer modelling work and utilised their understanding of these ancient nickel forming lava channel systems during the search for nickel sulphides within the WNP. This led the company to the discovery of the Cerberus deposit, the first in the belt since 1971, as well as identifying and understanding the nature of the lava channel which hosts the South Windarra mineralisation. WMC interpreted the mineralisation to be south plunging, and consequently the mineralisation was thought to have terminated at depth below the South Windarra workings. Poseidon's 3D modelling and re-interpretation indicates that the lava channel and mineralisation plunge shallowly to the east, and is open along strike and down plunge (Figures 1, 2 & 3). RC drilling is currently being planned to test for down plunge mineralisation within the interpreted lava channel extension. This has the potential to unlock a previously unrealised shallow resource base extending from and to the east of South Windarra.

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 Stock Exchange has not received and does not accept responsibility for the accuracy or adequacy of this release.

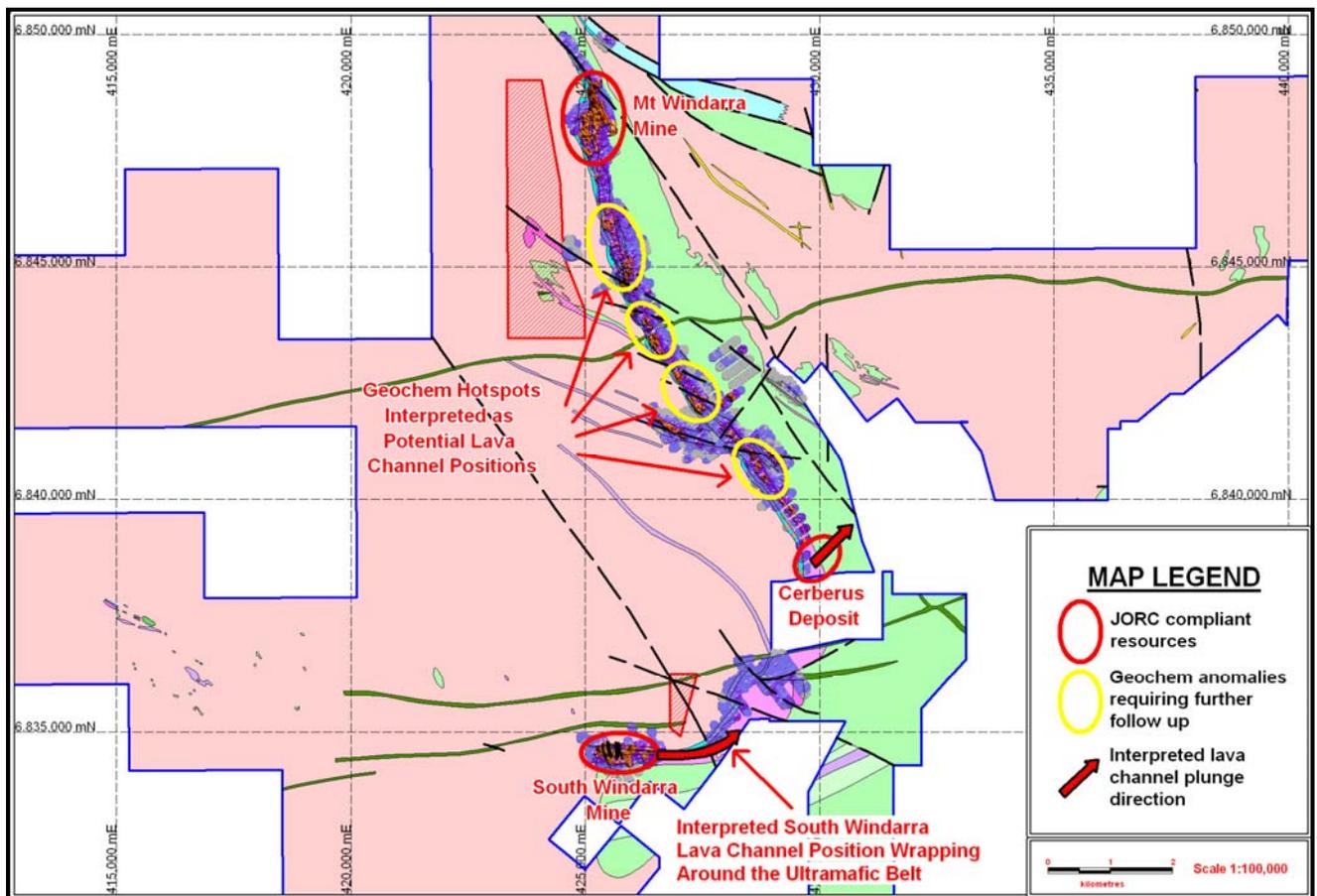


Figure 1: Geology and tenure of the Windarra Nickel Project showing the locations of the Mt Windarra, Cerberus and South Windarra Nickel Deposits. Geochemical sampling shows anomalous "Hotspots" which are interpreted as potential lava channel positions and warrant follow-up exploration. The red arrow extending eastwards from South Windarra defines the interpreted plunge direction of the lava channel and will be the focus of impending exploration activities.

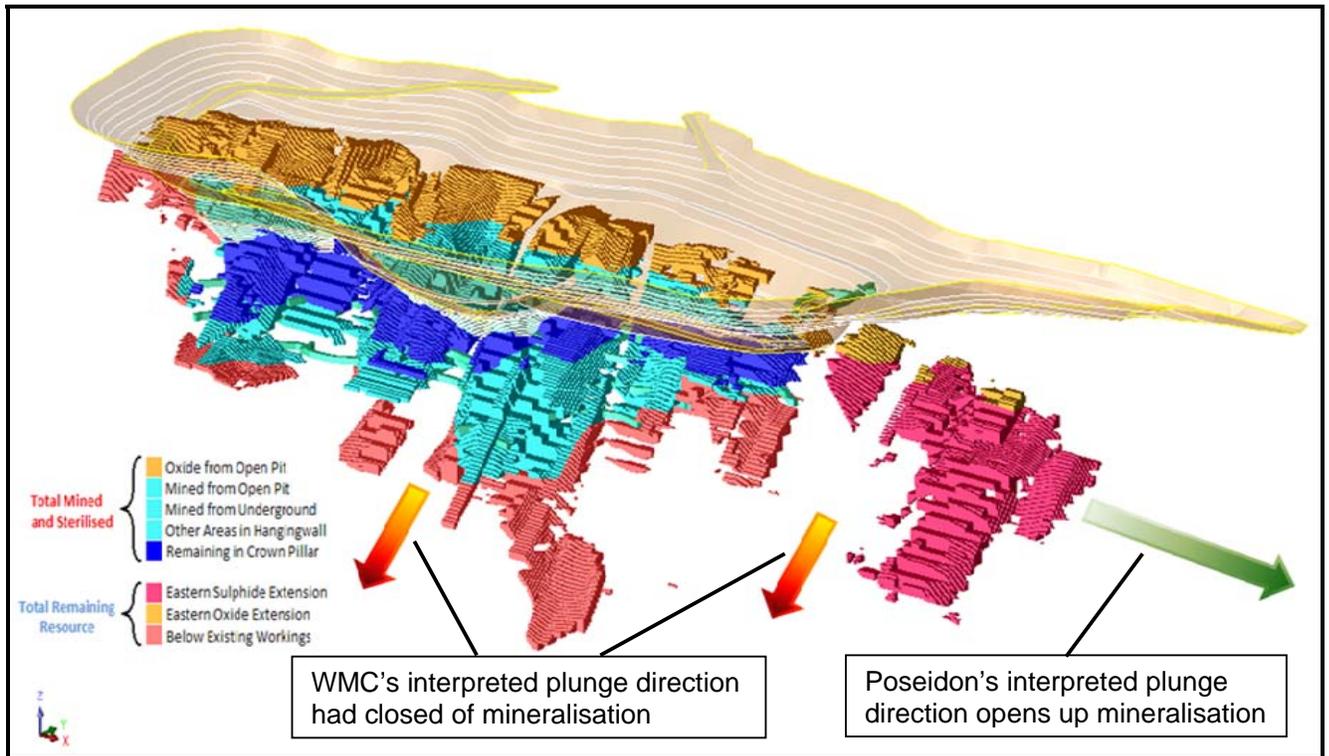


Figure 2: 3D view of the South Windarra Mine (looking NNW) showing the mined and remaining ore resources, and the open mineralisation trend along the interpreted plunge direction of the lava channel.

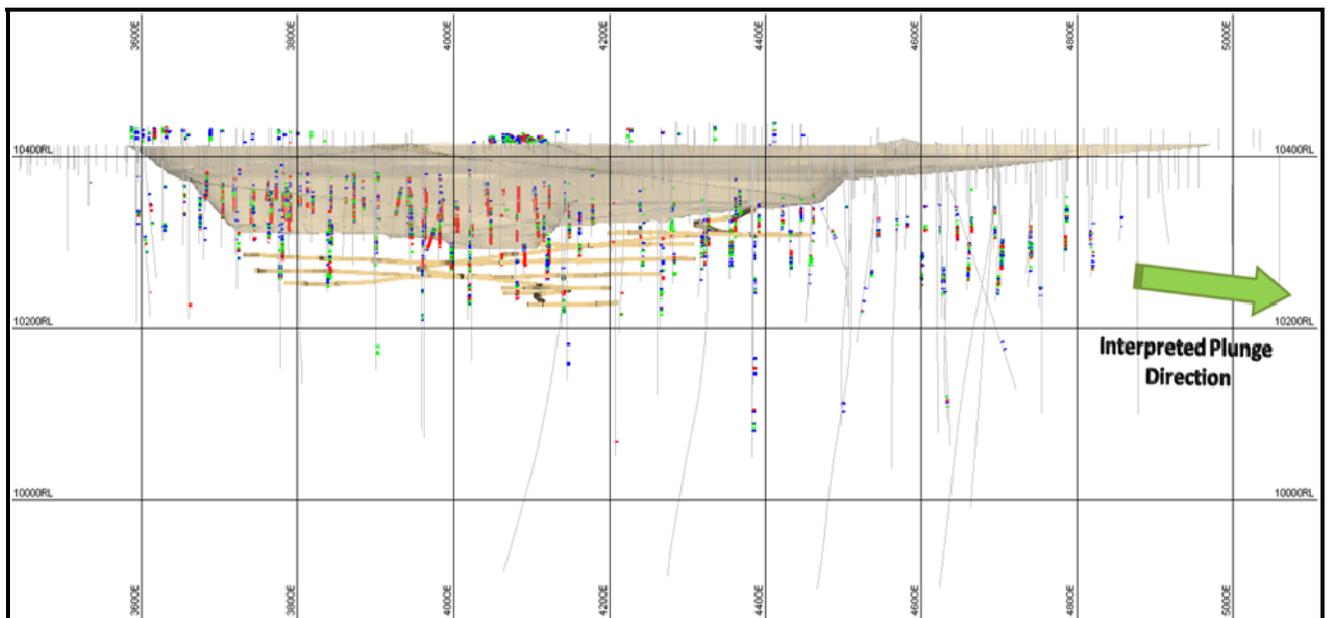


Figure 3: Long section of South Windarra Mine (looking north) with drill hole intersections defining the lava channel and the open mineralisation which is interpreted to plunge in an easterly direction.