# POSEIDONNICKEL

20 January 2009

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

Dear Sir

# **Re: POSEIDON ANNOUNCES THE NEW CERBERUS NICKEL SULPHIDE DEPOSIT**

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

Yours faithfully

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

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## CORPORATE DIRECTORY

**Director / Senior Management** 

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Home Exchange

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

20 January 2009

## Poseidon announces the new Cerberus Nickel Sulphide Deposit

Poseidon Nickel Limited (ASX:POS) is pleased to announce the results of its newly discovered nickel sulphide resource called the Cerberus deposit. The deposit increases the Company's resource base on the wholly owned Windarra tenements by 40% and importantly at an average grade of 2.45%. Poseidon's total Indicated and Inferred resource at Windarra is now 88,369 tonnes of contained nickel metal. Cerberus is closely located to Poseidon's existing operations approximately 12 km south of the Mount Windarra nickel mine. The discovery is the first major JORC compliant resource identified on the historic Poseidon tenements since the 1970's and follows an intensive drilling programme conducted during 2008.

An Inferred Resource has been calculated for Cerberus and is detailed below:

1,033,328t @ 2.45% Ni for 25,269 tonnes of nickel metal (TNM) at a 1.5% Ni cutoff grade (COG) or

Cerberus Deposit	Cut Off Grade	Tonnes	Ni% Grade	Ni Metal t	<b>Resource Category</b>
Main Zone	1.50%	1,023,615	2.45	25,064	Inferred
Hangingwall Zone	1.50%	9,714	2.08	202	Inferred
Total Inferred	at 1.5% COG	1,033,328	2.45	25,269	Inferred

The following parameters were used in the Inferred Sulphide Resource calculations: Cut-off grade of 1.5% Ni using IDW<sup>2</sup> block modelling.

This initial resource announcement is the result of Poseidon completing a campaign of Reverse Circulation (RC) and Diamond Drilling (DD) at Denny Bore during the 4<sup>th</sup> quarter of 2008, which included 7 diamond drill holes (including 2 tails) for 2211.8m, and 15 RC holes for 2783m, for a total of 4994.8m. Drilling was completed on an average 200m x 200m grid spacing, and delineated continuous mineralisation over an area of >1km along strike, >500m in width, and between 1m (diluted) to 4.6m in thickness.

The nickel sulphide mineralisation at Cerberus is interpreted to still be open down dip (to the east) and down plunge (to the northeast) and requires infill drilling around the higher grade zones to better define the mineralisation. Poseidon is confident of further resource increases as drilling continues to test the extent of the Cerberus mineralisation down dip and down plunge.

The Cerberus Deposit consists of 3 types of nickel sulphide mineralisation.

- **The Main Zone**: Generally consists of massive to stringer nickel and some disseminated sulphides which occurs towards the base of the komatiite lava channel within the Windarra Ultramafic unit. The sulphides characteristically have an element of sulphide remobilisation and high grading due to structural overprinting.
- **The Hangingwall Zone**: Occurs as disseminated sulphides and sits around 2-6m above the Main Zone within the lava channel. It is poddier and lower grade than the Main Zone.
- **Remobilised Footwall**: Consists of structurally remobilised and high graded nickel sulphides which have squirted off into the footwall. These have not been modelled as they are erratic and cannot be tied together in the current wide spaced drilling. These may provide additional localised high grade nickel sulphide pods as drill density is increased. Typically drill intersect grades in this zone are between 3.5% and 7% nickel.

Nickel grades and widths are greatest towards the centre of the channel and form two higher grade zones towards the top and bottom of the mineralised channel. The nickel sulphide intersections typically become thinner and lower grade towards the edges of the channel. This is consistent with

Kambalda-style komatiite-hosted nickel ore bodies which helps the Poseidon geologists interpret and target the prospective mineralised channel.

The mineralisation at Denny Bore is blind at the surface and is covered by transported material. The original Denny Bore discovery hole (WED4) intersected the mineralisation at a depth of 700m vertically below surface. In contrast to typical exploration discoveries, Poseidon has drilled the mineralised lava channel from the bottom up, and has now defined the mineralisation to within 120m vertically below the surface and over a strike length of >1000m.

The nickel mineralisation at Denny Bore is shaping up as an extremely exciting discovery for the Company and Poseidon looks forward to being able to upgrade the Cerberus Inferred Resource to an Indicated Resource. Poseidon has previously announced JORC-compliant Indicated and Inferred resources of 63,100 tonnes contained nickel at Mt Windarra alone.

Windarra Nickel Project Sulphides	Cut Off Grade	Tonnes	Ni% Grade	Ni Metal t	Resource Category
Mt Windarra	1%	1,159,509	1.15	13,389	Indicated
Mt Windarra Deeps	1%	2,828,496	1.76	49,711	Inferred
Cerberus	1.5%	1,033,328	2.45	25,269	Inferred
Total Sulphide		5,021,333	1.76	88,369	All Categories

# WINDARRA NICKEL PROJECT RESOURCE STATEMENT

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.

POSEIDONNICKEL

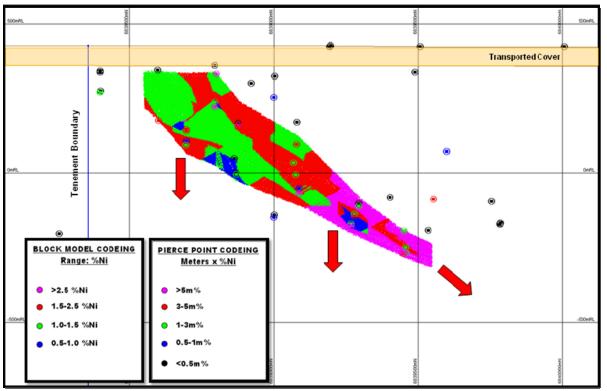


Figure 1: Long Section showing the Cerberus Deposit block model and the drill hole pierce points. The mineralisation is open down dip and down plunge, and requires additional drilling.

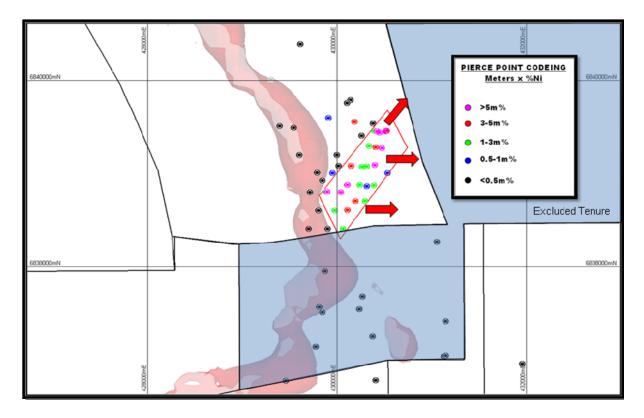


Figure 2: Plan view showing the interpretation of the nickeliferous lava channel at Cerberus.

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Hole Id		m From	m To	Length	%Ni	Comment
PND0040		506.85	511.46	4.61	1.52	
PND0041		482	483.5	1.5	1.95	
PND0042A		474.5	475.5	1	1.66	
PND0044		368.45	369.45	1	1.44	Diluted Grade
	incl	368.9	369.45	0.55	2.19	
PND0045		377.85	381	3.15	1.02	
		384	385.1	1.1	2.79	
PND0046		453	454.11	1.11	1.33	
PND0047		334.52	336.45	1.93	1.13	
		344.1	345	0.9	1.12	
PND0048		336.95	339	2.05	1.37	
		334	336.87	2.87	2.13	
PND0050		343.54	344.54	1	3.29	Diluted Grade
	incl	343.89	344.1	0.21	12	
PNRC0079		125	126	1	1.21	
		214	216	2	1.13	
PNRC0082	incl	215	216	1	1.43	
		228	234	6	1.23	
	incl	232	234	2	2.18	
PNRC0085		144	145	1	1.03	
PNRCD0075		248.2	249.2	1	1	
		284	284.95	0.95	1.39	Diluted Grade
	incl	284.8	284.95	0.15	7.01	

Table 1: Drill hole intersections from latest round of drilling with actual intersections and diluted intersection calculated to 1m width.

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