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Company Announcements Platform
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SYDNEY NSW 2000

Byro Nickel – Copper – PGE Project

- Persistent elevated nickel sulphides in multi sulphide assemblage
- Native copper found as a co constituent in pentlandite - copper aggregate

Best Nickel

22.7m @ 0.301% Ni from 232.3m
Including **0.5m @ 0.64% Ni** from 254.5m

Best Chrome

10.5m @ 0.61% Cr from 354m
Including 0.5m @ **1.03% Cr** from 360.5m

Best Copper

10m @ 561ppm Cu from 346.5m
Including 0.5m @ **0.33% Cu** from 353.5m

Best Sulphur

0.5m @ 0.31% S from 254.5m



Details

Historic drilling within the Byro East intrusion is limited to RC drilling and previously included only 3 drill holes that tested the geochemistry and mineralisation below 100 meters depth. There had been no diamond drilling. The majority of previous work focused on lateritic accumulation of nickel and testing copper/nickel gossans at the south eastern contact of the intrusion.

Complex Exploration Pty Ltd became a recipient of the Royalties for Regions and as part of the September 2010 exploration program. AHDH0001 was drilled in three stages; RC pre collar (AHRC0027) to 150m then diamond tail to 212.4m where water return failed and the hole was temporarily abandoned. The hole was continued from 212.4m to current end of hole at 500m in May 2011.

Drilling and assay

Three RC drill holes were included in Athena's September 2010 program including the co-funded NQ diamond tail added to RC drill hole AHRC0027 reported to ASX in 2011. Figure 1 shows the location of these holes and the interpreted outline of the Byro East Intrusion, as defined by the aeromagnetic data.

Table 1: Byro East Diamond Collar Location (MGA50).

Hole ID	East	North	RL	Dip	Azi	Depth
AHRC0027	438121	7120662	385	-90	0	149.7
AHDH0001	438121	7120662	385	-90	0	500

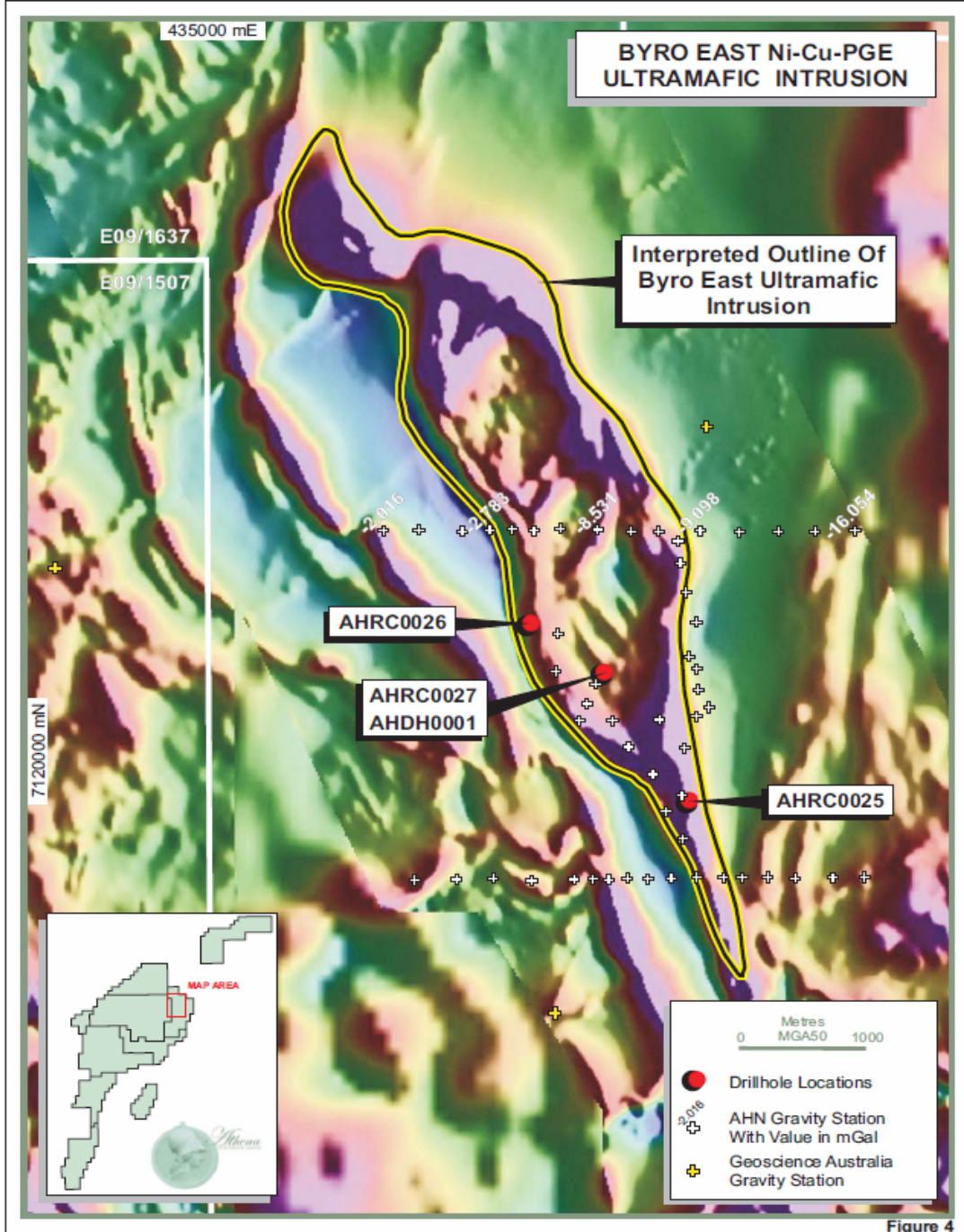
All diamond core to date has been logged, cut and assayed. Initial inspection of the Byro East intrusion assays showed variable geochemistry within the intrusion, delineated by sharp boundaries, indicating some form of differentiation. The zones were identified by relative variations of sulphur, chrome, nickel, copper and PGE's and MgO.

Sharp zonation identified can be attributed to structural controls, fractional crystallisation and or a pulsed series of magma flows from sub chambers. Geochemical assessment is ongoing.

Thin section petrology was commissioned to investigate the relationship of multi element sulphides and native copper observed in core logging. Visible native copper (Cu) was observed at 151.7m in diamond core and was evidenced with elevated Cu in assay from 151.4 to 152.8. Petrographic/ mineralogical identification from a polished thin section from 151.7m confirmed the native copper, and now from 212.4m to 500m native copper is also present, (Plates 2, 3, 4, 5 and 6).

Other sulphides present are pentlandite, millerite, chalcopyrite and traces of chrome spinel. Millerite, (SEM composition 66%Ni previously reported) replacing pentlandite was present at 157m and now appears commonly with the pentlandites further down hole. An SEM composition of 76%Ni was taken from an inclusion within a pentlandite sample at 406m and 411m down hole, (Plates 1 and 2). This appears to be a secondary metamorphic occurrence and most likely occurred during serpentinisation of the Byro East Intrusion. The presence of millerite has significant potential for upgrading the nickel equivalent percentage of nickel in the disseminated accumulations.

Figure 1 Byro East Intrusive Aeromagnetic with Drill Hole Locations



Drilling Results from 0 to 212.4m and from 212.4m to 500m

Assay results demonstrate geochemistry varies significantly through 0 to 212.4m and from 212.4 to 500m at end of hole. Zones can be identified by variable elevated levels of Ni, Cr, Cu, S and MgO. Ni sulphides tend to be elevated throughout the pile. Results listed in Table 2 below have been selected at a cut-off grade of 0.3% Ni and above.

Table 2 (0 to 212.4m)

Hole ID	From-To	Pt (ppb)	Ni %	Mg %	Cr %	Cu %	S %	Zone
AHRC0027	0 - 24	6.7	0.2156	0.4	0.1125	0.0020	0.0166	Laterite
AHRC0027	24 - 40	5.0	0.1887	19.8	0.0712	0.0008	0.0075	UM Saprock Zone
AHRC0027	40 - 44	27.5	0.2590	25.2	0.2860	0.0012	0.0400	Elevated PGE's (Pd 37.5 ppb) shear at top of Serpentinised UM Zone
AHRC0027	44 - 88	13.3	0.2658	26.2	0.1760	0.0043	0.1950	Serpentinised UM zone with elevated anomalous PGE's and elevated chrome and sulphur
AHRC0027	88 - 149.7	5.0	0.2809	26.2	0.0820	0.0013	0.0791	Serpentinised UM Zone
AHDH0001	149.7 - 152.2	5.0	0.3136	24.2	0.0972	0.0373	0.1630	Serpentinised UM Zone, high chrome and sulphur including 0.8m @ 0.33% Ni from 151.4m and 1.73m @ 0.31%Ni form 157.4m
AHDH0001	152.2 - 208.4	5.0	0.2872	26.3	0.0821	0.0020	0.0543	Serpentinised UM Zone
AHDH0001	208.4 - 212.4		0.3043	26.3	0.0940	0.0024	0.1025	Serpentinised UM Zone with high chrome and sulphur including 4m @ 0.3043% Ni form 208.4

Results of geochemical analysis displayed in Figures 2, 3, 4 and 5 demonstrate the fertility of the Olivene peridotite /dunite.

Figure 2

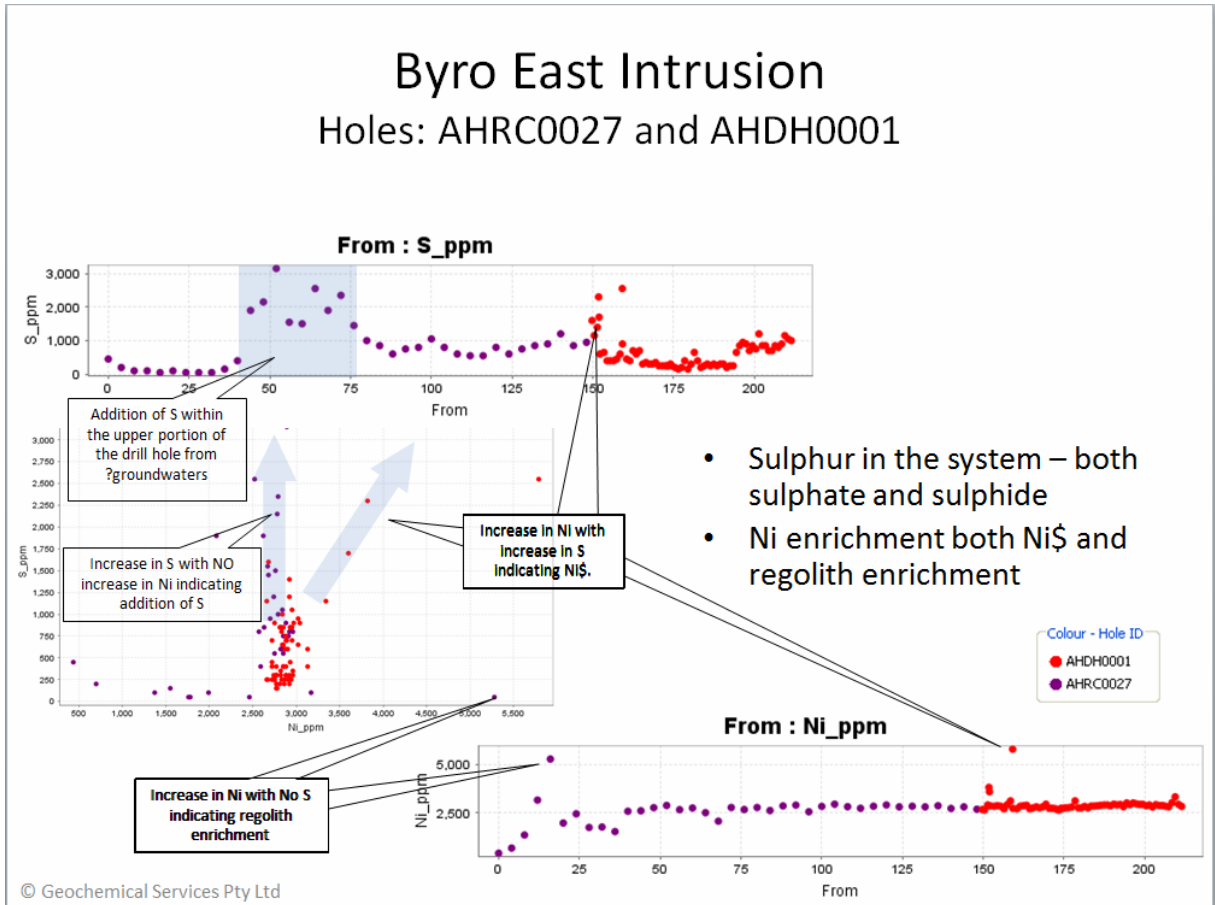
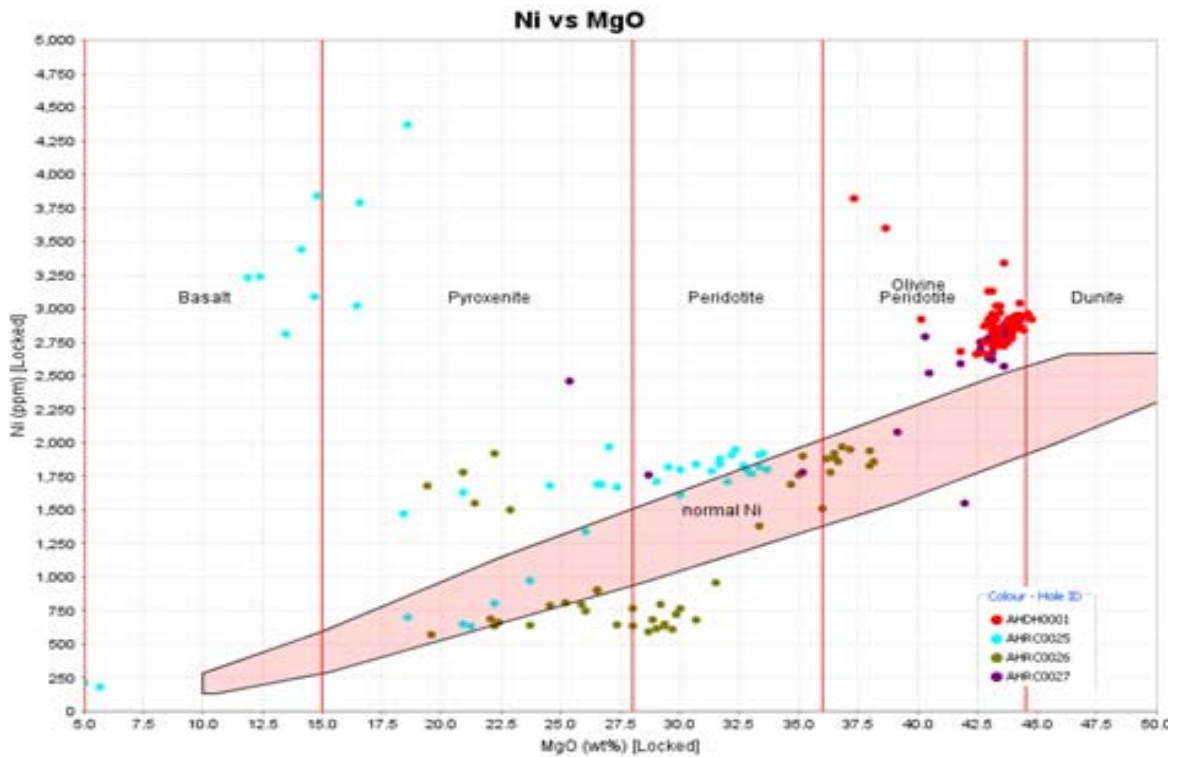


Figure 3



The pink area, (Figure 3), represents the global normative for potential to produce nickel sulfide given MgO content. The mineralized olivine peridotite in AHDH0001 is above the global normative.

Figure 4

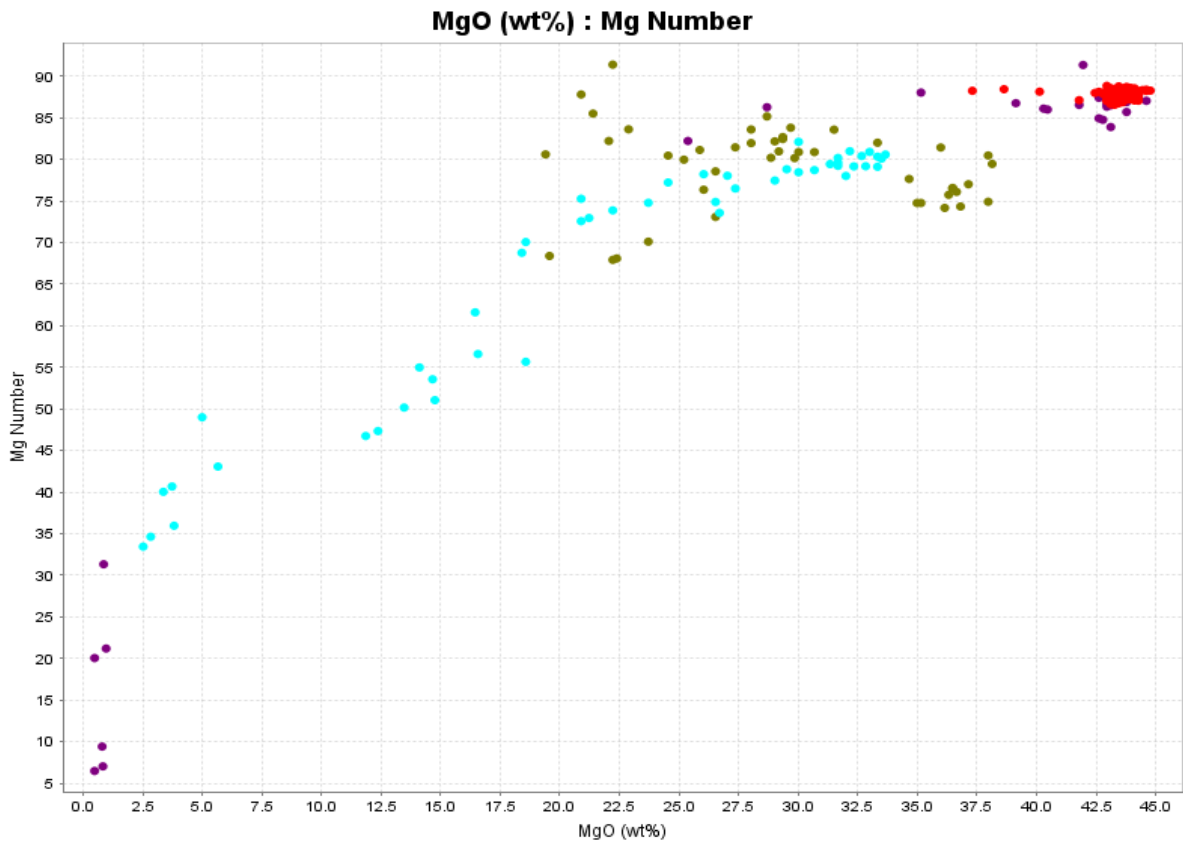
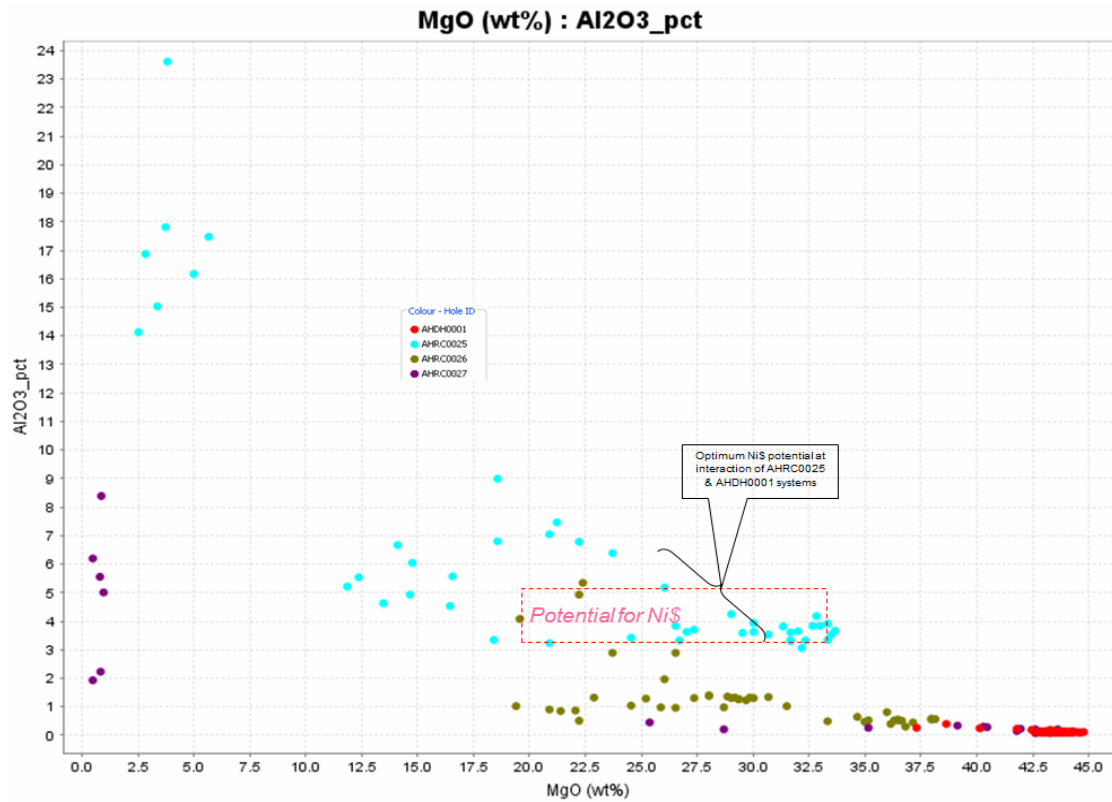


Figure 5



The Mg number of >80 (Figure 4) is further evidence of Nickel sulphide potential. A targeting vector toward optimum Nickel sulphide potential is identified at the interaction of geochemistry between holes AHRC0025 and AHDH0001 (Figure 5)

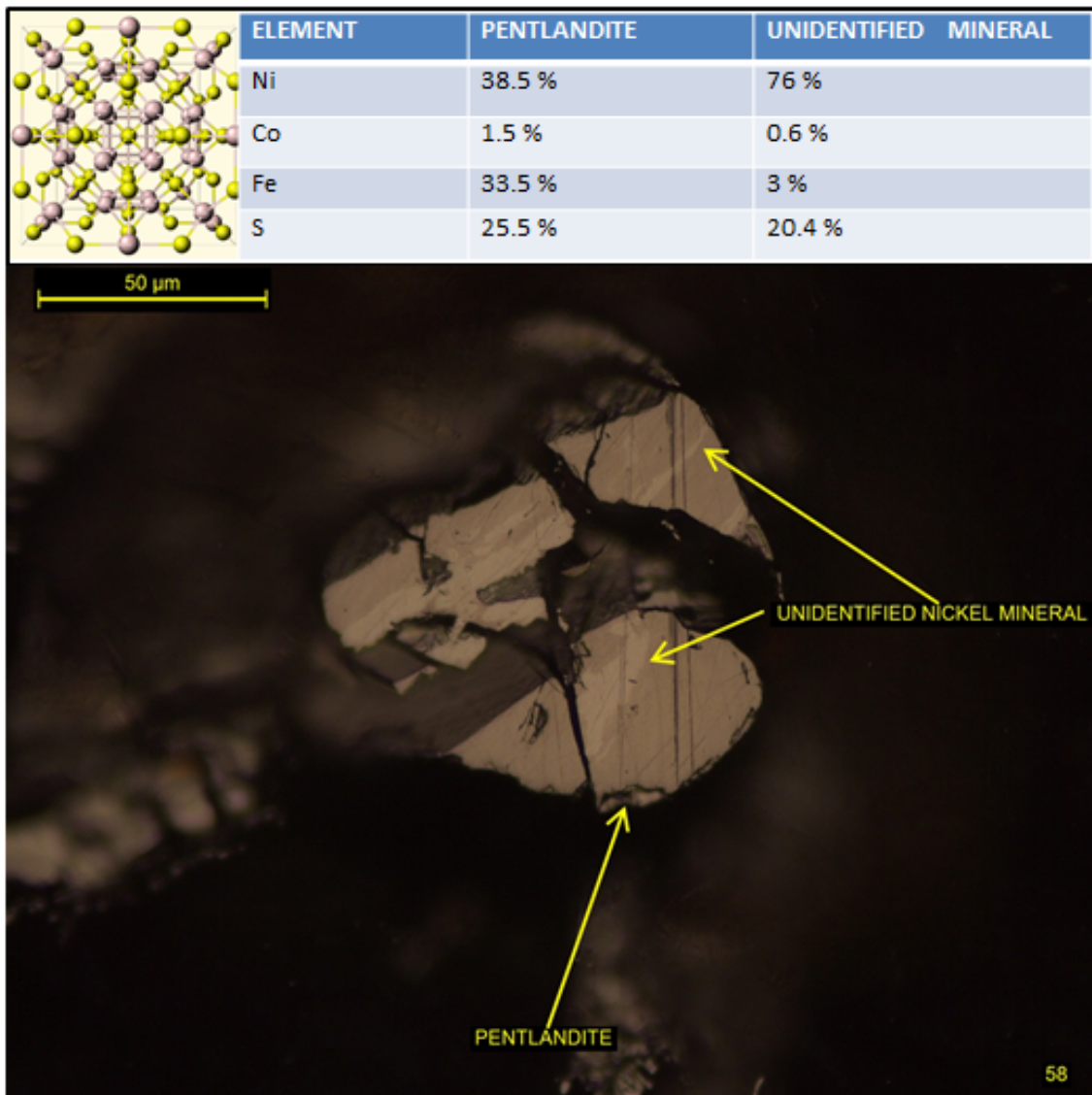
From 212.4 meters to 500m the occurrence of grades greater than 0.3%Ni is greater than the first half of the hole. Grades include an interval of 22.7 meters at 0.301%Ni from 232.3m, as well as 0.5m @ 0.34%Ni from 370m and 7.5m @ 0.304%Ni from 424m

Table 3 (212.4m to 500m)

Results from 212.4m to 500m (2011)					
Interval	Ni Grade	From	Interval	Grade	From
0.5m @	0.301%	214.4m			
1m @	0.301%	217.5m			
0.5m @	0.315%	227m			
1m @	0.302%	231m	Including	0.3m @ 0.330%	231m
22.7m @	0.301%	232.3m	Including	0.5m @ 0.640%	254.5m
0.72m @	0.302%	259.8m			
6m @	0.300%	271m	Including	0.2m @ 0.460%	276.5
1.5m @	0.306%	320m	Including	0.5m @ 0.350%	321.5
2.5m @	0.314%	328.5m	Including	0.5m @ 0.380%	328.5
1m @	0.305%	335m			
2.5m @	0.302%	343m			
1m @	0.302%	351.5m			
0.5m @	0.308%	355.5m			
0.5m @	0.340%	370m			
0.5m @	0.303%	372m			
1m @	0.303%	381.5m			
7.5m @	0.304%	424m			
1m @	0.314%	467m			

Plate 1 POLISHED THINSECTION FROM 411M

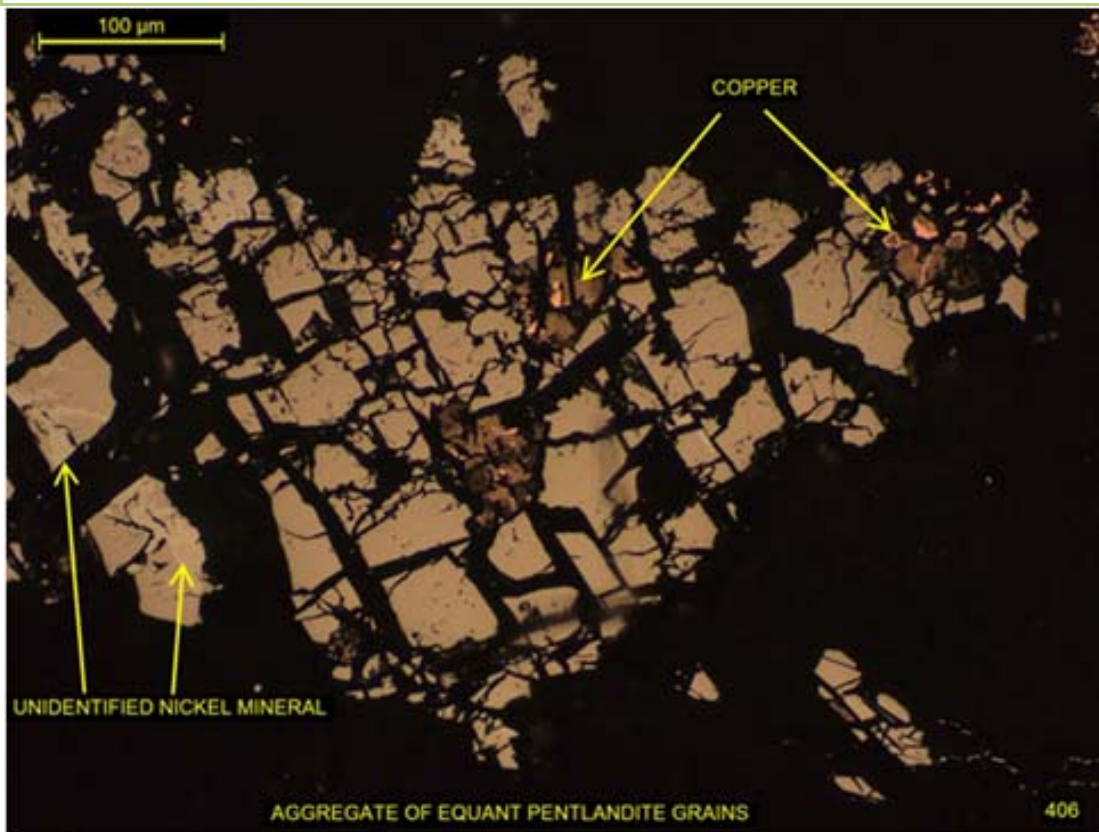
Nickel sulphide SEM Analyses



Thin section Petrology from AHDH0001 at 411 meters down hole, shows high tenor 76% Ni sulphide from SEM analyses.

Plate 2 POLISHED THIN SECTION FROM 406m

NON-OPAQUES	DOMINANT
SERPENTINE	DOMINANT
OLIVINE	ACCESSORY
CALCITE	ACCESSORY
ORES	ACCESSORY
PENTLANDITE	DOMINANT
CHROMITE	MAJOR
NATIVE COPPER	ACCESSORY
UNIDENTIFIED NICKEL SULPHIDE	TRACE POSSIBLY MILLERITE

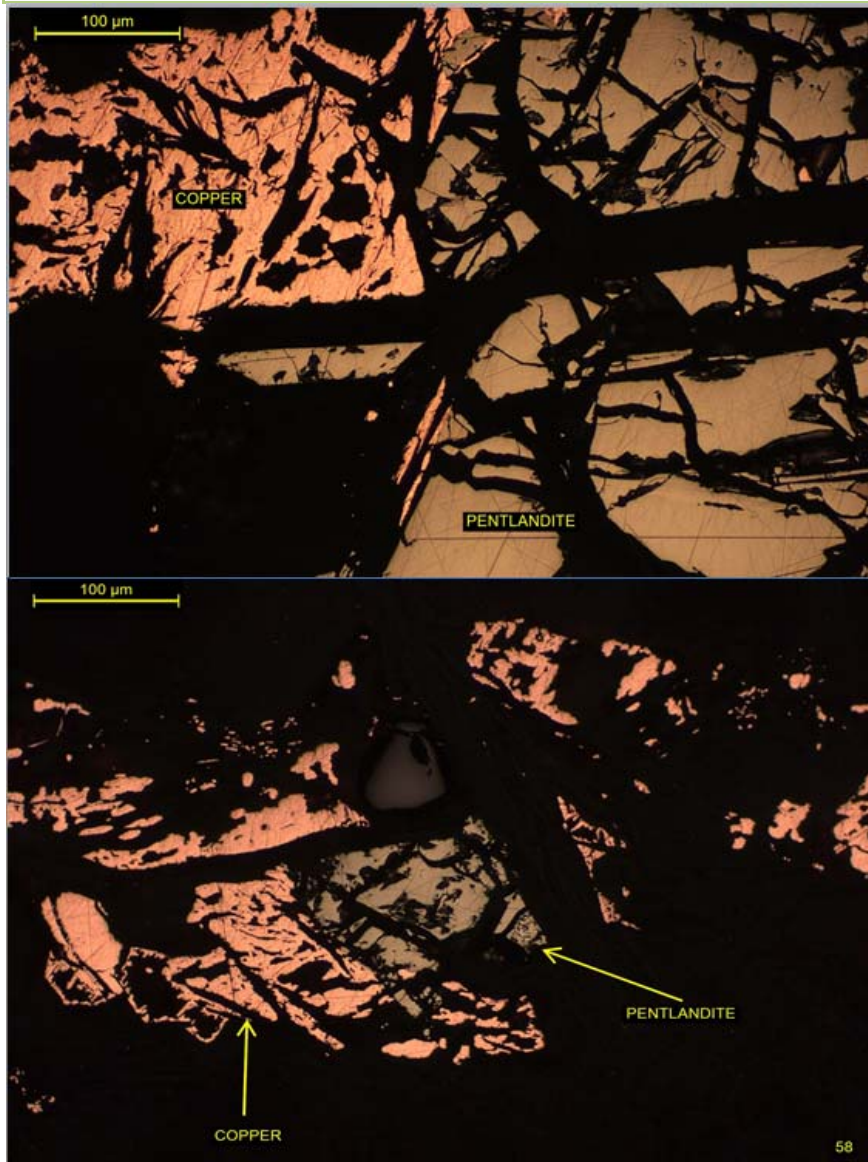


CLASSIFICATION: PENTLANDITE, COPPER AND POSSIBLY MILLERITE IN SERPENTINITE (ALTERED DUNITE)

The nickel mineral in this sample from 406m (Plate 2) is pentlandite with native copper. Pentlandites mainly occur here in aggregates of fractured (broken up) angular, anhedral, equant and elongate grains. The high grade Ni sulphate is also present. The assemblage and relationship of the copper and nickel (Plate 2) as aggregates is of interest and can be seen more clearly in Plate 3 below, where the aggregate copper/pentlandite appear to have nucleated at the same time suggesting a low oxygen fugacity environment.

Plate 3 & 4 POLISHED THIN SECTION FROM 411m

NON OPAQUES	DOMINANT
SERPENTINE	DOMINANT
OLIVINE	ACCESSORY
CALCITE	ACCESSORY
ORES	ACCESSORY
NATIVE COPPER	DOMINANT
PENTLANDITE	MINOR
CHROMITE	ACCESSORY
CHALCOPYRITE?	TRACE
UNIDENTIFIED NICKEL SULPHIDE	TRACE



Figures 5 & 6 below show the presence of chalcophile elements in the Byro East nickel system. This is of fundamental importance in a fertile system along with the compelling assemblage of multi sulphide elements, Nickel, Native copper, Chromite, Magnetite and Chalcopyrite.

Plate 5

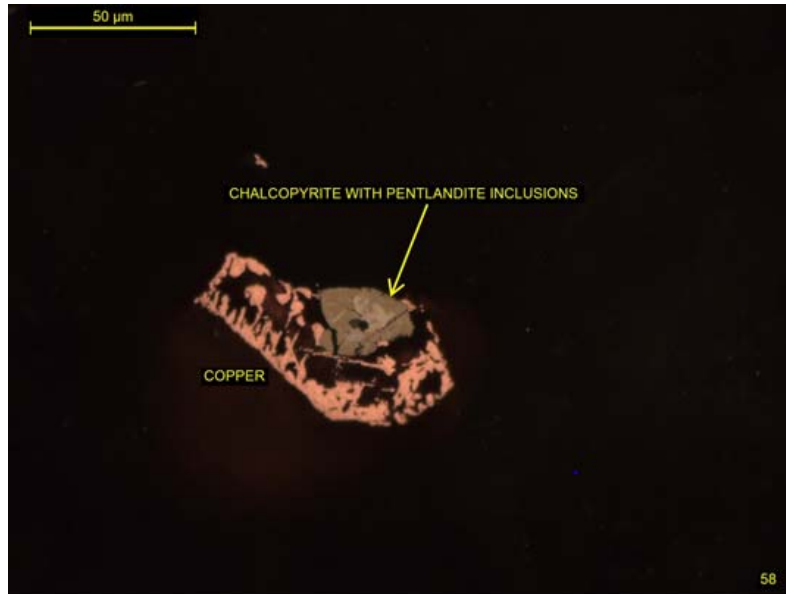


Plate 6

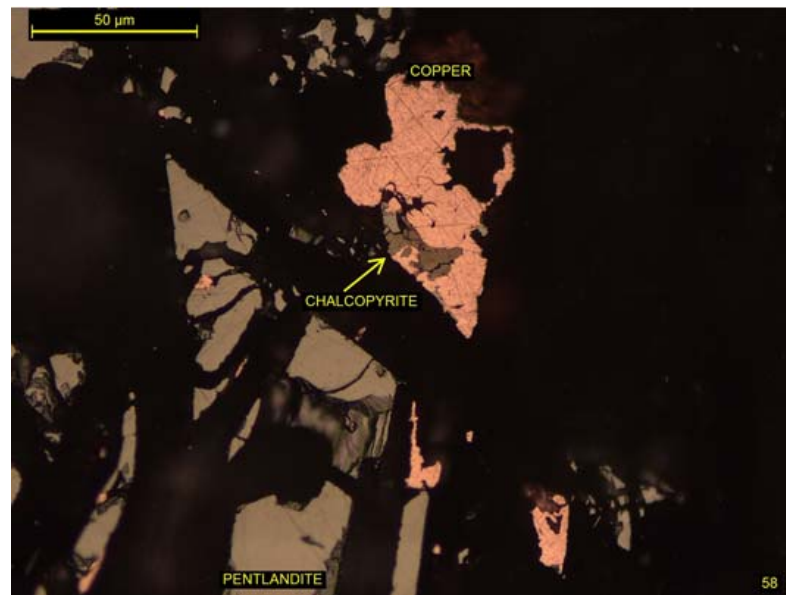


Plate 7 POLISHED THIN SECTION 411.5m

NON-OPAQUES	DOMINANT
SERPENTINE	DOMINANT
CALCITE	ACCESSORY
PYROAURITE?	ACCESSORY
ORES	ACCESSORY
PENTLANDITE	DOMINANT
CHROMITE	ACCESSORY
NATIVE COPPER	ACCESSORY
UNIDENTIFIED NICKEL SULPHIDE	TRACE



CLASSIFICATION: SERPENTINITE (ALTERED DUNITE)

Plate 7 displays a fine pentlandite vein. The pentlandite appears to have the characteristic of remobilized sulphide concentrated into the vein. The potential for a fertile sulphide bearing ultramafic which displays signs of sulphide remobilization is very promising.

Significance of These Results

The Byro East Intrusives is in a tectonic setting of large scale crustal sutures and extensional rifting, broadly comparable to the major Jinchuan, Voisey's Bay and Raglan deposits. Athena has confirmed the coincidence of undifferentiated mafics, mineralised pyroxenite, gabbros and dunite ultramafic rocks intruding through deeply buried high grade metamorphic country rocks in the Byro Tenements. This derivation is indicative of a pyroxenitic intrusive parentage in an extensional environment through deep feeder conduits incorporating potential assimilation of country rock. Ni-Cu and PGE development in conjunction with high MgO of 40% to 45% and an Mg number between 80 and 90 determined by assays demonstrate a fertile system.

Athena's exploration of this intrusive body has been focused on identifying the primary and possible subsequent styles of mineralisation and triggers for their concentration. Athena has also explored for and found variation in geochemistry at depth and identified possible flow pulses. The thin section petrology from diamond core at 151.75m down hole indicated the high Ni bearing sulphide as probable millerite from SEM composition of 66% Ni and 1% Co most likely related to serpentinisation processes upgrading the Ni grade. High tenor Ni sulphate has now been confirmed at depth at Byro East and could form an important ore constituent similar to that of the Silver Swan, Wannaway, Cliffs, Honeymoon Well, Yakabindie and Mt Keith (MKD5) ore bodies.

Athena has demonstrated the presence of elevated multi sulphide elements in a finely disseminated fertile ultramafic which demonstrates signs of sulphide concentration and remobilisation. The potential for economic concentrations of nickel and copper are very encouraging. Further drilling and geochemistry is warranted and required to understand the potential of this under explored body.

E W Edwards
Managing Director

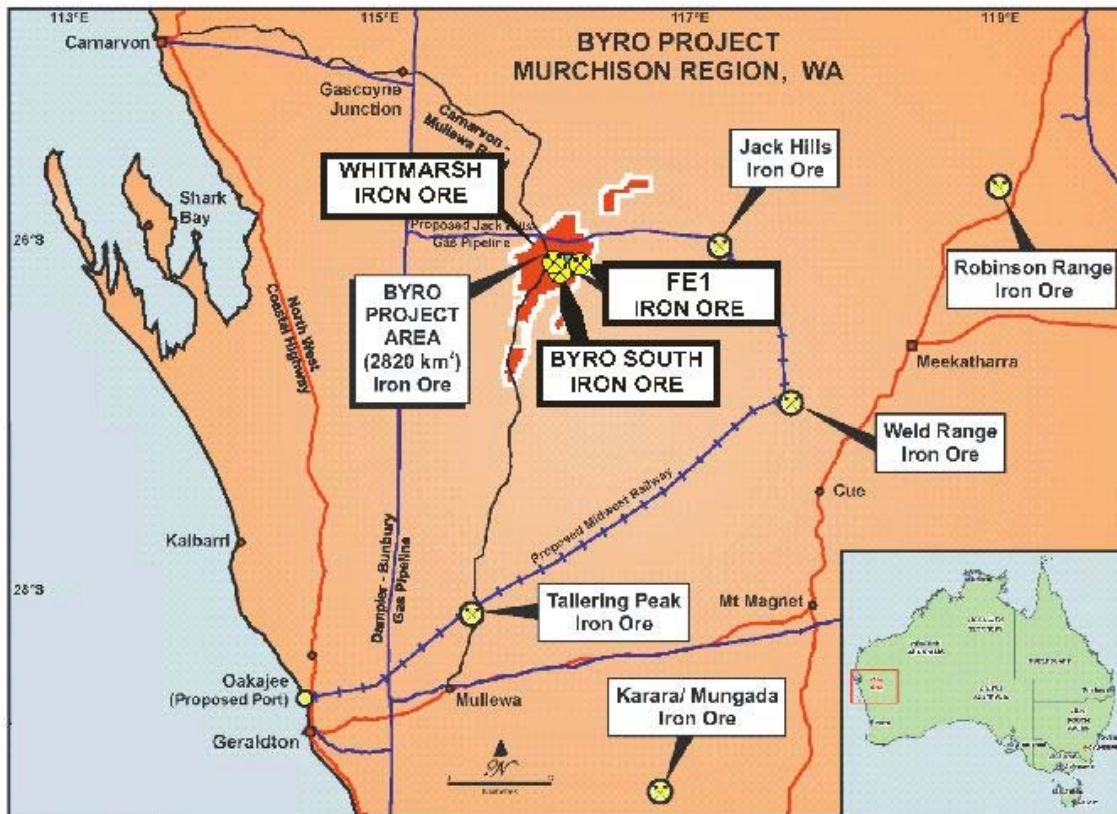
Competent Persons Statement

The technical information relating to Athena’s exploration projects was compiled by Mr Liam Kelly, an employee of Athena Resources Limited. Mr Kelly is a Member of the Australasian Institute of Mining and Metallurgy, and has sufficient relevant experience in the styles of mineralisation and deposit styles under consideration to qualify as a Competent Person as defined in “The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2004 edition)”. Mr Kelly consents to this inclusion of the information in this report in the context and format in which it appears

Athena Resources Limited (ASX:AHN), which is based in Perth, was listed on the ASX in 2007 and currently has 107 million shares on issue. Athena’s major asset is its 100% interest in the Byro Project where it is exploring for copper, nickel, PGE’s in addition to iron ore. The company also has significant gold, lead and silver targets in the Ashburton.

The Byro Iron Ore Project is strategically located some 100km west of the proposed Midwest Iron Ore Railway which is planned to link existing and future iron ore projects in the Mid-West Region to the proposed Oakajee deep water bulk shipping port north of Geraldton.

Figure 5 Byro Location Map





Appendix

SAMPLING DETAILS

- Assays performed by Amdel-Ultratrace Laboratories of the Bureau Veritas Group.
- Compositing assay intercepts $\geq 4\text{m}$ at composite cut-off of 25% Fe.
- Assays are head assays from X-Ray Fluorescence Spectrometry, (XRF) and ICP.
- All intersections reported are based on down hole width.

