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Byro Nickel – Copper – PGE Project Results

Moonborough

- Athena increases the extent of the previously unrecognised large, fertile ultramafic/mafic igneous complex at Moonborough to more than 12 km long and 1.5 km wide.
- Maximum down hole assays include 80ppb palladium, 31ppb platinum, 200ppb gold, 2700ppm Copper and 1350ppm nickel.

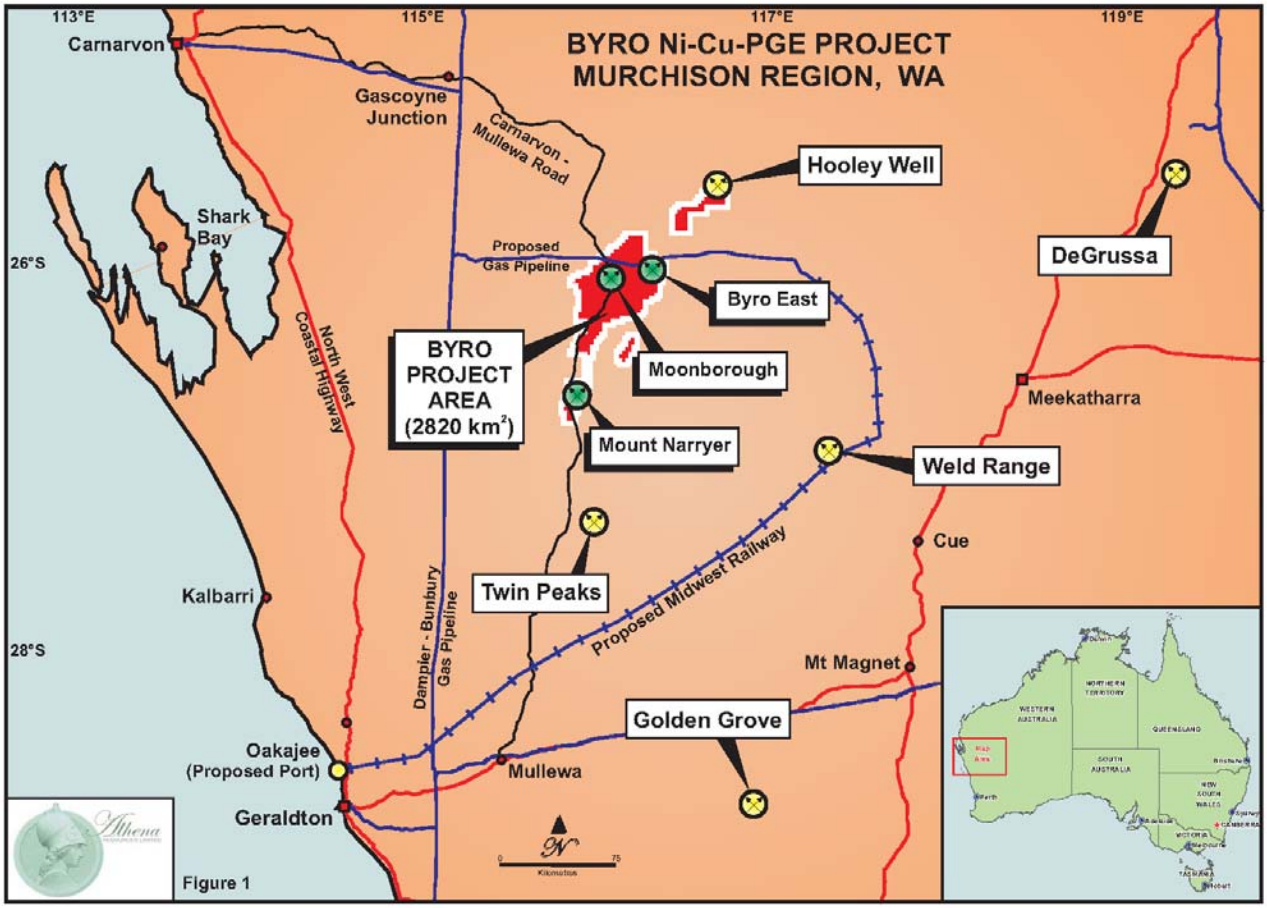
Byro East

- **AHRC0027; 129.7m @ 0.26% Ni from 20m**
- **AHDH0001; 62.7m @ 0.29 % Ni from 149.7m**

  Including
  0.80m @ 0.33% Ni from 151.4m
  1.73m @ 0.31% Ni from 157.4m
  4.00m @ 0.31% Ni from 208.4m

- Consistent primary Ni sulphide (averaging 2736 ppm).
- Anomalous zones of increased sulphur, chrome, nickel, copper and PGE's.
- Visible native copper in diamond core.
- Upgrade of pentlandite to millerite during serpentinisation.
- Fertile altered Serpentine Antigorite, (MgO up to 44%)

Athena Resources Limited (ASX: AHN) is pleased to announce that following the 1800 metre, 17 drillhole Reverse Circulation (RC) program testing magnetic iron targets on E09/1507, the company completed a second phase of drilling within the Byro region. This second phase included a 1286 metre, 9 drillhole Reverse Circulation (RC) program, including 1 NQ diamond drill hole as a tail off an RC drillhole. The program was designed to test Ni-Cu-PGE targets on E09/1507 and E09/1637 as a first pass drill testing of the new discovery of mineralisation at Moonborough and the fertile intrusive system at Byro East which form part of the highly prospective Byro Base Metals Project (Figure 1).



Historic drilling within the Byro East intrusion previously included only 3 drill holes testing the geochemistry and mineralisation below 100 metres depth and no diamond drilling.

The Byro East intrusive drilling was co-funded by the Western Australian Government – Industry Drilling Program which enabled a diamond drill hole at Byro East to be included in Athena's RC drilling program.

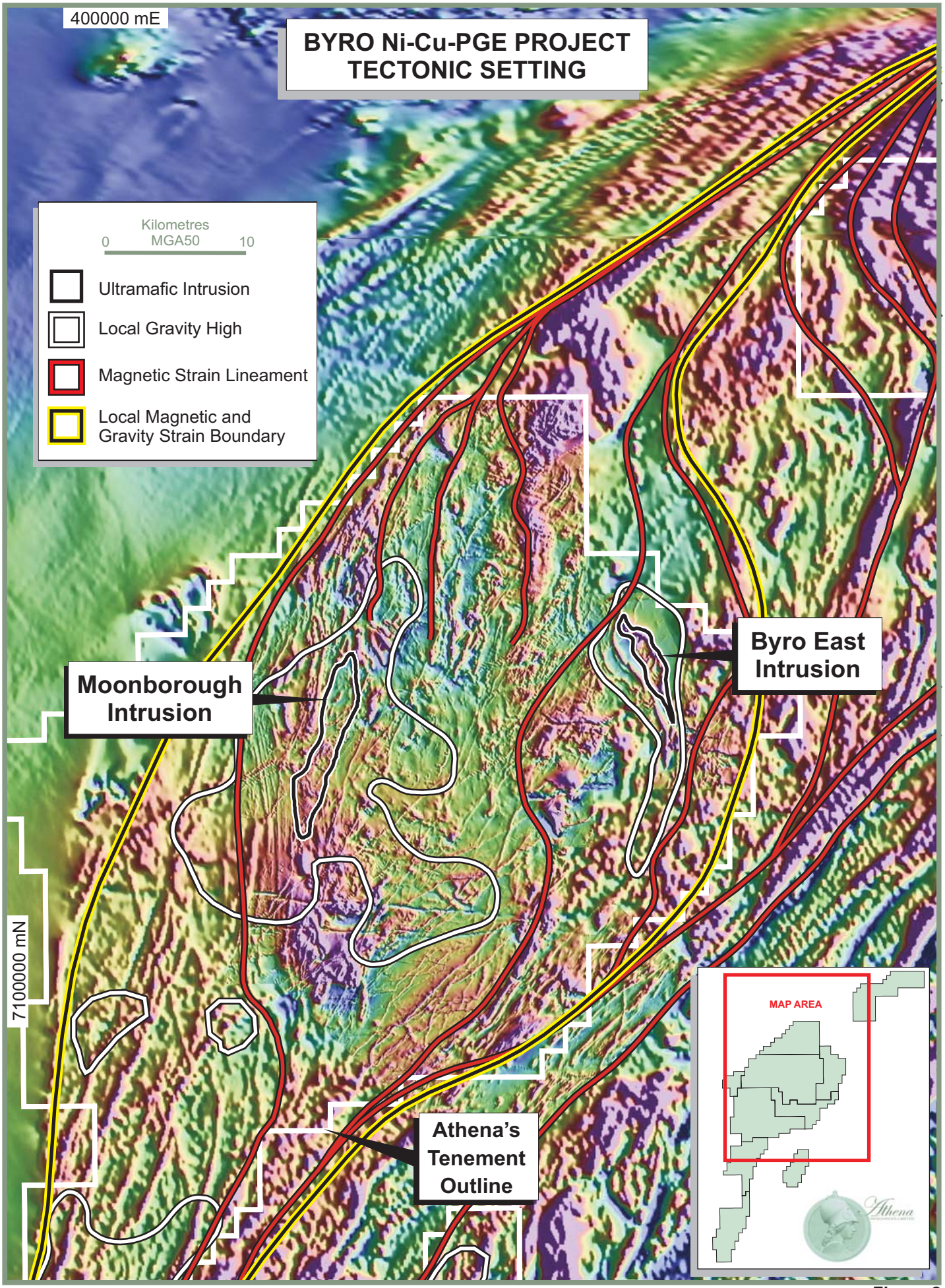


Figure 2

D1011ASXplanBaseMetals-Tectonic

The drilling program within the Moonborough intrusive has confirmed a southern continuation of approximately 3.8 kilometres south from the previously identified Moonborough outcrop. The outline of the Moonborough intrusive has been identified using soil sample and rock chip geochemistry in conjunction with geophysical gravity and aeromagnetic surveys, and now RC drilling. The total strike length of the Moonborough intrusive system is interpreted to be more than 12km long and 1.5km wide, with anomalous copper and nickel as well as highly elevated chalcophile elements having a strong affinity with sulphur and hence sulphide mineralisation.

Moonborough

The Moonborough Intrusive body of is one of a cluster of mafic/ultramafic bodies in the Byro Project area that align along major regional faults at the margin of the Yilgarn Craton within the Narryer Gneiss Complex (Figure 2). The Narryer Gneiss is inferred to be uplifted, consisting of older and higher grade metamorphic rocks than those found in the interior of the Yilgarn Craton. This implies a deep crustal emplacement of yet to be determined timing, possibly Early Proterozoic.

Drilling and assay results have confirmed the presence of a large mafic/ultramafic body containing anomalous copper, nickel and PGE's (see Appendix 1). The PGE's (up to a max of 145ppb Pd and 31ppb Pt), occur at several locations within the interpreted Moonborough intrusive. These essential indicators preference bonding with sulphur and are key indicators of sulphide mineralisation. Figure 3 shows the location of the recently completed RC drillholes, previously reported soil geochemistry results, extent of the high resolution gravity survey, and the interpreted outline of the Moonborough Intrusive body overlying the recently acquired high resolution aeromagnetic data. These exciting exploration results confirm that Athena has identified a new large, fertile ultramafic/mafic igneous complex at Moonborough.

Moonborough Drilling Results

AHRC0019: maximum down hole assays include **15ppb** platinum, **15ppb** palladium, **10ppb** gold, **96ppm** copper and **1010ppm** nickel.

AHRC0021 maximum down hole assays include **10ppb** platinum, **80ppb** palladium, **17ppb** gold, **620ppm** copper and **114ppm** nickel.

AHRC0022 maximum down hole assays include **31ppb** platinum, **72.86ppb** palladium, **200ppb** gold, **2700ppm** copper and **114ppm** nickel.

Water Bore Hole maximum down hole assays include **18ppb** platinum, **16ppb** palladium, **3ppb** gold, **140ppm** copper and **1350ppm** nickel.

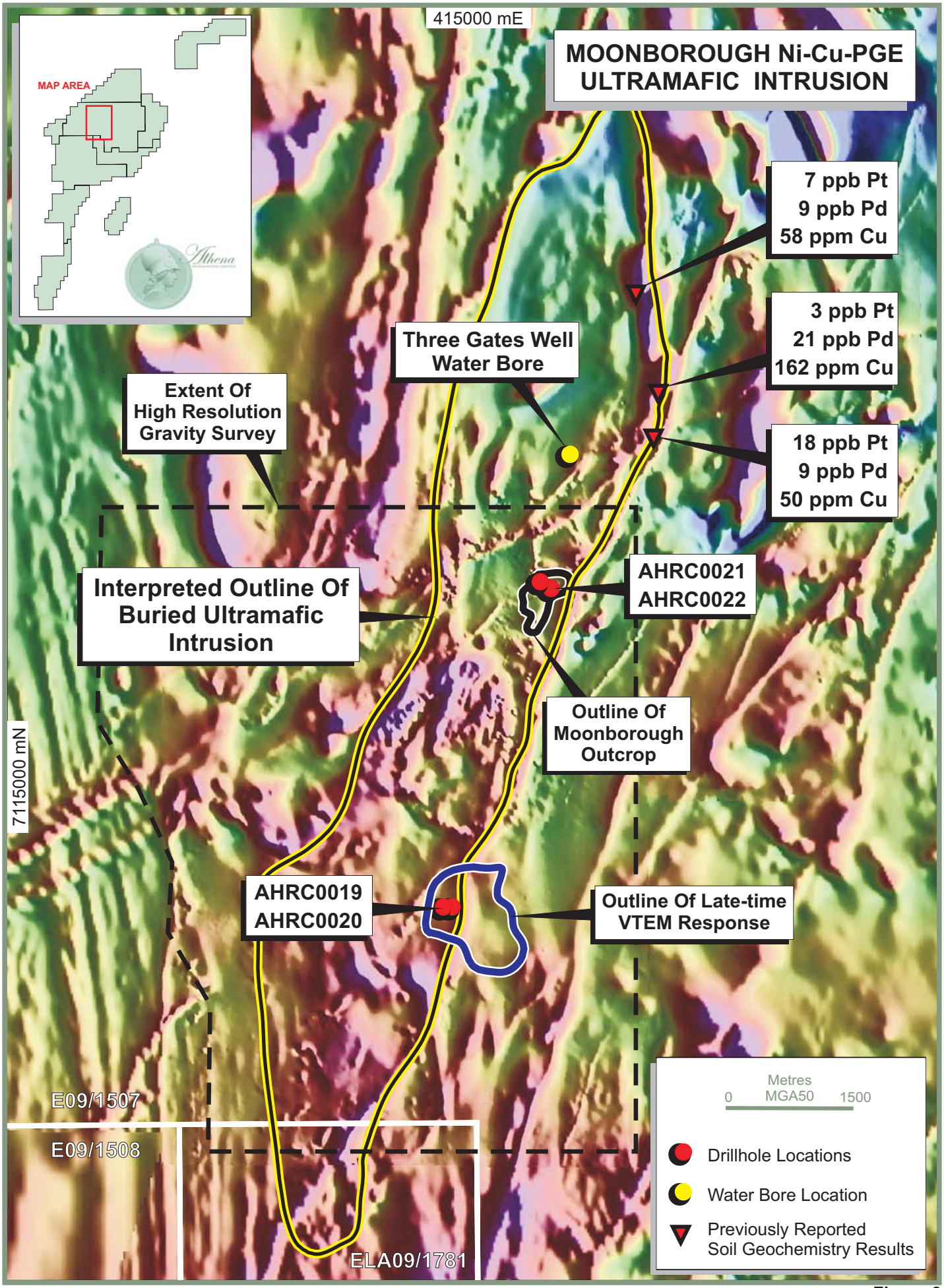


Figure 3

D1011ASXplanBaseMetals-Moonborough

Byro East

Initial inspection of the Byro East intrusion assays show variable geochemistry within the intrusion, delineated by sharp boundaries, indicating some form of differentiation, (Appendix 2). The zones are identified by relative variations of sulphur, chrome, nickel, copper and PGE's. Sharp zonation can be caused by structural controls, fractional crystallisation or a pulsed series of magma flows from sub chambers. Further geochemical assessment is underway.

The location of the three RC drillholes and one NQ diamond tail added to AHRC0027 are shown in Figure 4, along with the historical interpreted outline of the Byro East Intrusion, as defined by the aeromagnetic data.

During the acquisition of the high resolution gravity survey at Moonborough (Figure 3) Athena completed several gravity traverses over the Byro East Intrusion to test the applicability of gravity surveying as an exploration method. The results show an increasing gravity response towards the west (Figure 4), outside of the known surface expression of the intrusion. This suggests a root to the intrusive system, and hence a possible feeder zone under the mapped sediments on the western side of the Byro East Intrusion.

Byro East Drilling Results

AHRC0025; 36m @ 0.34% Ni from 0m, (In laterite).

AHRC0027; 4m @ 0.53% Ni from 16m (in Laterite)

AHRC0027; 129.7m @ 0.26% Ni from 20m

AHDH0001; 62.7m @ 0.29 % Ni from 149.7m (in Serpentinite)
Including
0.80m @ 0.33% Ni from 151.4m
1.73m @ 0.31% Ni from 157.4m
4.00m @ 0.31% Ni from 208.4m

Thin section analysis conducted by Roger Townend and Associates from the diamond core at 151.7m has identified several types of serpentine, including lizardite and antigorite as well as millerite alteration in pentlandite (SEM 66% Ni, see Plate 1 in Appendix 3). The process of Serpentinisation appears to have occurred throughout the Byro East intrusive body which has now been linked to an upgrade of accumulations of pentlandite to millerite.

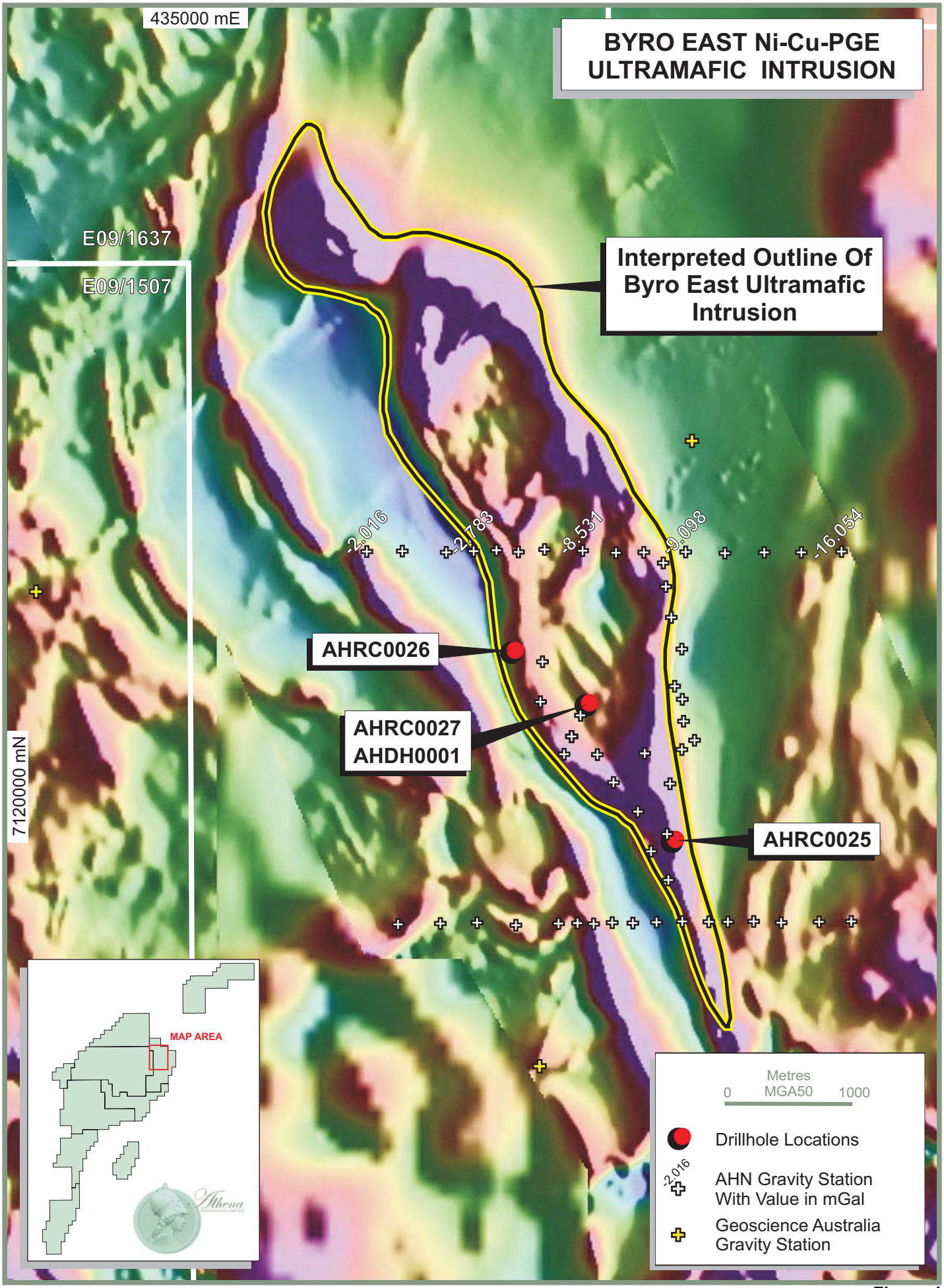


Figure 4

D1011ASXplanBaseMetals-ByroEast

This can now be added to the prospectivity attributes of the Byro East Intrusive, which include,

- Fertile altered Serpentine Antigorite c/w abundant olivine adcumulate of consistently high MgO (37.3 %< 44.8%).
- Consistent primary Ni sulphide averaging 2736 ppm.
- Anomalous zones of increased sulphur, chrome, nickel, copper and PGE's.
- Upgrade of pentlandite to millerite during serpentinisation.

Athena's exploration of this intrusive body will now advance to indentifying the variation in geochemistry and define possible pulses while exploring for concentrations of sulphides, feeder pipes and potential trap sites through which fertile magma has flowed.

Significance of These Results

The Byro intrusives are in a tectonic setting (see Figure 2) of large scale crustal sutures and 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 ultramafic rocks intruding through deeply buried high grade metamorphic country rocks. This derivation is indicative of a mafic intrusive parentage in an extensional environment through feeder conduits incorporating potential assimilation of country rock. Levels of Ni-Cu and PGE development as determined by assays indicate a fertile system. Figure 2 shows the Byro tenements on the northwestern edge of the Yilgarn Craton, bordering the Carnarvon Basin to the west.

E W Edwards
Managing Director

Athena Resources Limited (ASX: AHN), a Perth, Western Australia, based explorer, listed on the ASX in 2007 and currently has 65.6 million shares on issue. Athena's major asset is its 80% interest in the Byro Project where it is exploring for copper, nickel, and PGE's. Athena also recently discovered high grade iron ore at Byro (see the ASX announcement released 10th October 2010). The company also has significant gold, lead and silver targets in the Ashburton region of WA, (ref 2010 Annual Report).

The technical information relating to Athena's exploration projects was compiled by Mr Donald Thomson, an employee of Indigo Exploration Services Pty Ltd. Mr Thomson 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 Thomson consents to this inclusion of the information in this report in the context and format in which it appears.

APPENDIX 1

MOONBOROUGH DRILLING RESULTS

AHRC0019 (Moonborough South)

Intersected a strongly sheared talc chlorite part-serpentinised ultramafic of moderate Magnesium Oxide (MgO) from fresh rock at 160m to End of Hole (EOH) at 197m. Original fabrics have been obliterated by shearing and amphibolite grade metamorphism. This drillhole was sampled at 1m intervals.

Assays Include

- 38m of talc chlorite ultramafic from 160m in fresh rock, (average MgO = 22%).

	Pt (ppb)	Pd (ppb)	Au (ppb)	Cu (ppm)	Ni (ppm)
Average	10.3	7.4	3.2	52	880
Max	15	15	10	96	1010

AHRC0020 (Moonborough South)

This hole was abandoned due to excessive water discharge and collapse of clays in the channel sediments.

AHRC0021 (Moonborough)

Intersected an undifferentiated mafic followed by gabbro then pyroxenite intercalated with gabbro.

Assays Including

- From 0m to 28m; Strong, grading to weakly weathered undifferentiated mafic saprock

	Pt (ppb)	Pd (ppb)	Au (ppb)	Cu (ppm)	Ni (ppm)
Average	5.8	43.6	8.6	419	74.8
Max	10	80	17	620	88

- From 28m to 52m; weakly weathered, moderately sheared pyroxenite grading to fresh rock.

	Pt (ppb)	Pd (ppb)	Au (ppb)	Cu (ppm)	Ni (ppm)
Average	6.2	23.3	3.6	219	107
Max	10	30	5	266	114

- From 52m to 76m; meta-gabbro (fresh rock)

	Pt (ppb)	Pd (ppb)	Au (ppb)	Cu (ppm)	Ni (ppm)
Average	<5	<5	<1	44	45.6
Max	5	5	1	82	66

- From 76m to 123m (EOH); pyroxenite intercalated with gabbro

	Pt (ppb)	Pd (ppb)	Au (ppb)	Cu (ppm)	Ni (ppm)
Average	5.5	6	4	71	56.3
Max	10	10	6	230	80

AHRC0022 (Moonborough)

This RC drillhole started in ultramafic saprolitic clay grading to ultramafic saprock overlying a pyroxenite fresh rock unit. The last 8m of the hole intersected a weakly-mineralised gabbro.

- From 0m to 28m; strong to weekly weathered ultramafic saprolitic clay grading to saprock

	Pt (ppb)	Pd (ppb)	Au (ppb)	Cu (ppm)	Ni (ppm)
Average	13.3	72.9	33.1	1546	50.8
Max	30	145	200	2700	84

- From 28m to 84m weakly weathered pyroxenite grading to fresh rock

	Pt (ppb)	Pd (ppb)	Au (ppb)	Cu (ppm)	Ni (ppm)
Average	6.2	32.5	9.42	340.1	96.1
Max	31	10	31	674	114

- From 84m to 92 (EOH), meta-gabbro

	Pt (ppb)	Pd (ppb)	Au (ppb)	Cu (ppm)	Ni (ppm)
Average	5	<5	<1	73	76
Max	5	5	1	92	84

Byro_BW

A water bore hole was drilled within the interpreted Moonborough intrusive margin to refurbish the Three Gates Water Bore on the Byro Station, (nominated as Byro_BW). Saprolitic clay of probable talc chlorite ultramafic origins was intersected. Samples were collected from the surface to 24m down hole and 4m composites were assayed;

- From 0 to 24m; ultramafic saprolitic clay

	Pt (ppb)	Pd (ppb)	Au (ppb)	CuO ppm	NiO ppm
Average	17.08	13.16	1.5	111.6	1290
Max	18	16	3	140	1350

Table 1: Moonborough Drillhole Collar Locations (MGA50).

Hole ID	East	North	RL	Dip	Azi	Depth
AHRC0019	414703	7113530	314	-60.1	270	197
AHRC0020	414617	7113527	319	-59.8	270	141
AHRC0021	415835	7117089	338	-60.1	125	123
AHRC0022	415737	7117144	330	-60.9	125	92
Byro_BW	416067	7118607	320	-90	0	24

All drillholes have been cased with PVC for follow up with Down Hole ElectroMagnetic (DHEM) surveying.

APPENDIX 2

BYRO EAST DRILLING RESULTS

In the tables below the colours reference the following:

Mineralised Regolith
Mineralised Serpentinite (poor)
Mineralised Serpentinite (moderate)
Fertile Serpentinite
Sediment

AHRC0025 (Byro East, eastern contact)

36m @ 0.34% Ni from 0m, (In laterite).

AHRC0025 intersected an enriched laterite overlying a saprolitic zone before entering fresh rock at 50m consisting of a completely altered meso to adcumulate ultramafic, (Serpentinite). This was followed by a 24m section of highly sheared part-carbonate altered Serpentinite before entering a highly sheared intercalated pelitic sediment and ultramafic with granite. There was no significant intercept at the intrusive contact.

Assays Including

Hole ID	From-To	Pt (ppb)	Ni %	Mg %	Cr %	Cu %	S %	Zone
AHRC0025	0 - 36	9.3	**0.3426**	8.9	0.3500	0.0045	0.0338	Laterite
AHRC0025	36 - 68	5.0	0.1821	18.1	0.2174	0.0092	0.0191	Part Weathered UM. Fresh Rock at 50m
AHRC0025	68 - 92	33.3	0.0849	13.3	0.1358	0.0010	0.0045	**Elevated PGE's** Throughout Sheared UM
AHRC0025	92 - 120	5.0	0.0154	2.3	0.0218	0.0012	0.0045	Sheared sed/Granite

AHRC0026 (Byro East, western contact)

AHRC0026 intersected a 15m highly silicified zone before entering strongly weathered, foliated ultramafic saprock grading to fresh rock at 78m. Fresh rock samples consist of meso to adcumulate, almost completely serpentinised ultramafic, including lizardite and antigorite with trace nickel sulphides. From 92m a shear hosting anomalously high PGE's was followed by a 63m zone which includes relatively elevated S, Ni, Cr and increased MgO to 156m. This was followed by a very strongly sheared serpentinite and minor intercalation with fine grain pelitic sediment. No significant intercept at the intrusive contact. The end of hole was at 180m.

Assays Including

Hole ID	From-To	Pt (ppb)	Ni %	Mg %	Cr %	Cu %	S %	Zone
AHRC0026	0 - 15	5.0	0.1686	13.2	0.1200	0.0009	0.0120	Silicified zone
AHRC0026	15 - 92	5.7	0.0709	16.8	0.2695	0.0006	0.0045	Fresh Rock. Serpentinite
AHRC0026	92 - 156	5.0	0.1808	21.8	0.3921	0.0005	0.0340	Serpentinite with higher S, Ni, Cr, MgO and Elevated PGE's (45 ppb Pt - 97 ppb Pd) in shear at top of Zone
AHRC0026	156 - 180	5.0	0.0691	14.1	0.2050	0.0014	0.0125	Sheared intercalated serpentinite with minor pelitic sediment

AHRC0027 and AHDH0001 (Byro East, central: RC pre collar to 149.7m, followed by NQ diamond tail to 212.4m)

4m @ 0.53% Ni from 16m in Laterite
172.4m @ 0.28%Ni from 40m in Serpentinite

AHRC0027 and AHDH0001 intersected a 20m laterite zone including **4m @ 0.53% Ni from 16m** before entering a strongly weathered ultramafic saprock with minor intervals of leached saprolitic clay grading to fresh rock which commenced at 40m.

Assays Including

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	**Eleveted 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 sulpher
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 sulpher 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 sulpher including 4m @ 0.3043% Ni form 208.4

A shear hosting anomalously high PGE's from 40 to 44m defined the start of **172.4m @ 0.28%Ni, from 40m,** of serpentinised meso to adcumulate ultramafic to end of hole at 212.4m This zone is strongly altered, including lizardite and antigorite with minor chlorite, pyroaurite, carbonate, chrome spinel, millerite, copper and pentlandite. Veins include magnetite and carbonate. Within this package of serpentinite are broad boundaries defined by sharp contrast in sulphur and chrome with occasional elevated nickel above 0.3%.

AHDH0001 was abandoned at 212.4m due to loss of water return in a void.

Table 2: Byro East Drillhole Collar Locations (MGA50).

Hole ID	East	North	RL	Dip	Azi	Depth
AHRC0025	438808	7119583	382	-60	075	120
AHRC0026	437533	7121079	398	-60	260	180
AHRC0027	438121	7120662	385	-90	0	149.7
AHDH0001	438121	7120662	385	-90	0	212.4

All drillholes have been cased with PVC for follow up with Down Hole ElectroMagnetic (DHEM) surveying.

APPENDIX 3

THIN SECTION ANALYSIS

Visible native copper (Cu) was observed at 151.7m in diamond core and was evident in elevated Cu in assay from 151.4 to 152.8. Petrographic/ mineralogical identification from a polished thin section from 151.7m has confirmed this, (see Plate 2). Other sulphides present are pentlandite, millerite and traces of chrome spinel. The genesis of the native copper (Plate 3) in relation to the parent peridotite and subsequent metamorphism is now being investigated.

Millerite, (SEM composition 66%Ni) replacing pentlandite is also present (Plate 3). This secondary metamorphic occurrence most likely occurred during serpentinisation of the Byro East Intrusion. The presence of millerite has significant potential for upgrading the nickel equivalent percentage of pentlandite sulfide in a disseminated accumulation.

Sulphides in Thin Section

Plate 1 from thin section

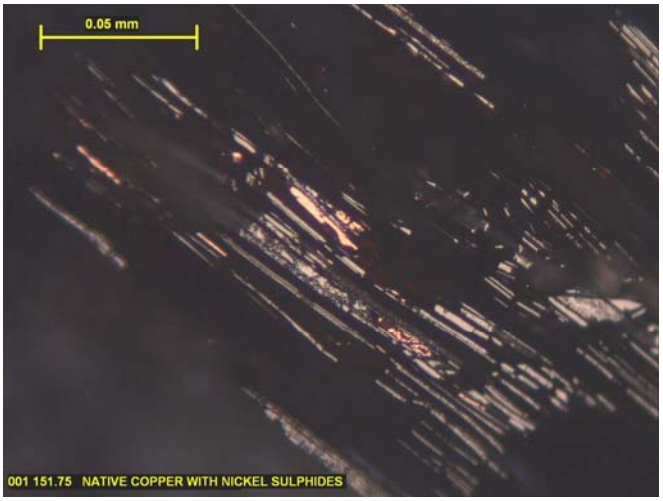
Thin Section showing Primary Pentlandite altered to Millerite. (Left)

Formed by removal of sulphur from the pentlandite during metamorphism and reconstituted into metamorphic millerite

Plate 2 from thin section

Nickel Sulphides, Millerite and Pentlandite with Native Copper. (Right)

Native copper as fine linear shaped particles in the serpentine with nickel sulphides.



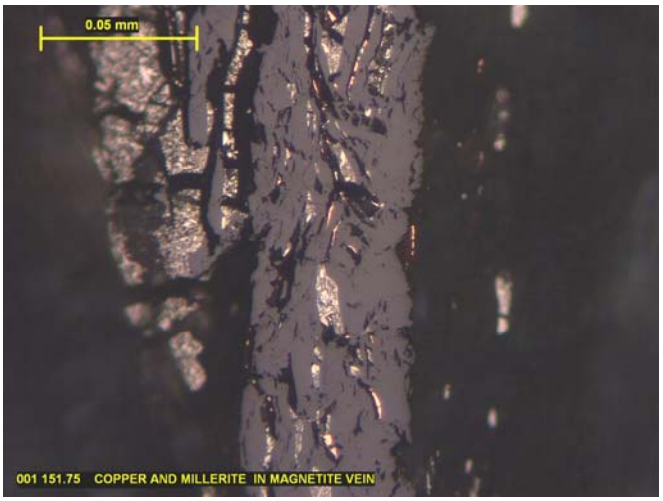


Plate 3 from thin section

Vein Hosting Magnetite-Millerite and Copper. (Left)

The assemblage association millerite - magnetite strongly indicates a secondary metamorphic occurrence most likely associated with the serpentinisation processes. It is unclear if the copper has been remobilised from within the system or related to the metamorphic event.