

## DECEMBER - 2014 QUARTERLY REPORT

### ATHENA RESOURCES LIMITED

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### CONTACTS

Mr Ed Edwards  
Managing Director

### PROJECTS

#### Byro:

Iron Ore, Nickel-Copper-PGE's

### SECURITIES

173M Shares - AHN

### SHAREHOLDERS

Mr E Edwards 18.26%  
Mr D Webster 5.95%

### BYRO BASE METALS Milly Milly Copper Nickel Project

- High resolution gravity survey identifies three significant untested and anomalous zones.
- Base metal drilling program completed at Milly Milly
- High MgO dunite package confirmed within Low MgO Pyroxenite.

### BYRO IRON ORE Mt Narryer Magnetite Project

- High grade Davis Tube Results

AHRC0067 26m @ 66.16%<sup>DTR</sup> Fe from 42.  
Including 8m @ 70.41%<sup>DTR</sup> Fe from 54m

AHRC0068 16m @ 67.14%<sup>DTR</sup> Fe from 28m  
Including 4m @ 69.68%<sup>DTR</sup> Fe from 32m

### CORPORATE

- Placements made during quarter totaling \$205,000.

## Athena Resources Limited – Second Quarter Activities

### **BYRO PROJECT (Athena Resources 100%)**

#### **BYRO BASE METALS PROJECT (Milly Milly Copper - Nickel Intrusion)**

During the December quarter Athena Resources finalised the Milly Milly Base Metal Program. Drilling for the quarter included completion of diamond drill hole **AHDH0008a** for a total of 680.9m, Table 1.

**Table 1 Drill Hole Collar Location**

Hole ID	East	North	RL	Dip	Azi	Depth
<b>AHDH0008a</b>	<b>436721</b>	<b>7123009</b>	<b>375</b>	<b>-70</b>	<b>270</b>	<b>680.9</b>

The Base Metal Program included a detailed gravity survey and drilling of two other diamond drill holes **AHDH0006** and **AHDH0007** which were completed in the September quarter, Table 2.

On completion of the diamond drilling in October, Down Hole Electro-Magnetic surveys (DHEM) were conducted for a total of 1497.7 survey meters on holes **AHDH0006**, **AHDH0007** and **AHDH0008a**.

**Table 2 Drill Hole Collar Location (Sept Quarter)**

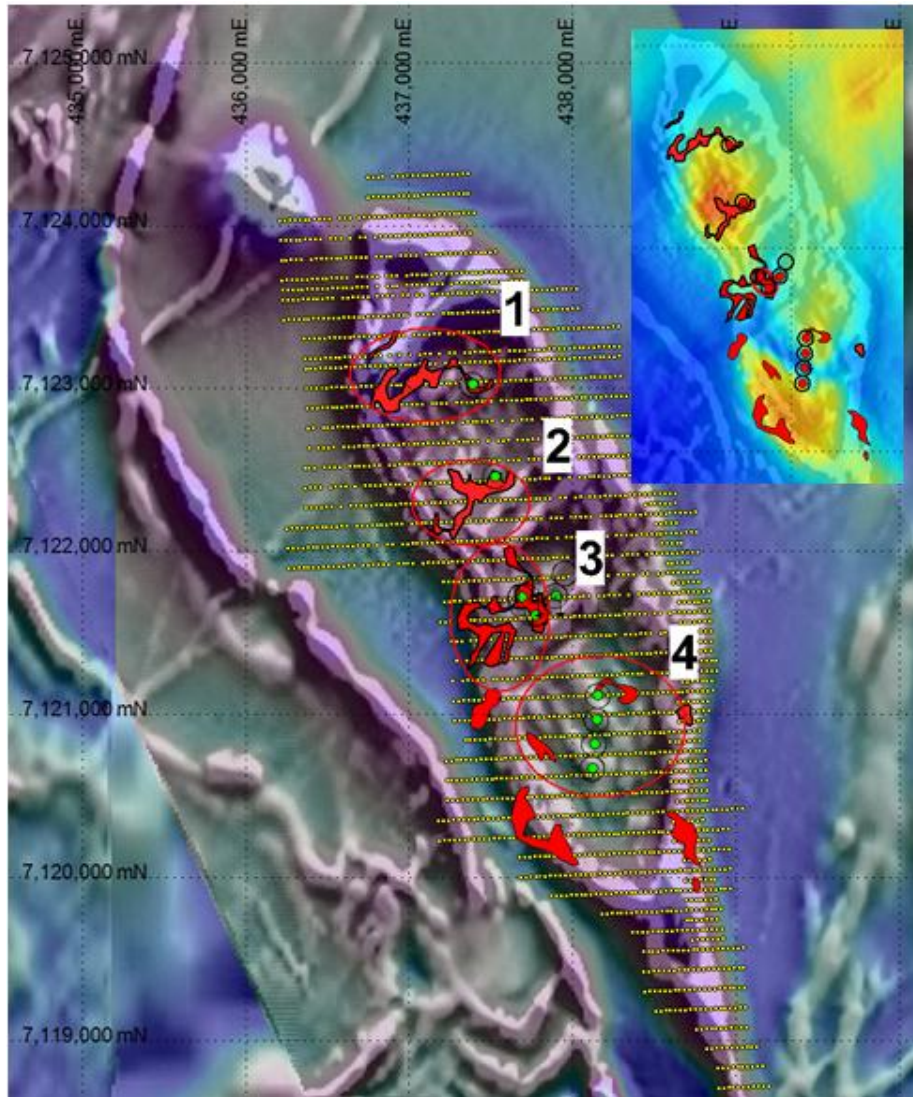
Hole ID	East	North	RL	Dip	Azi	Depth
<b>AHDH0006</b>	<b>437453</b>	<b>7122279</b>	<b>380</b>	<b>-90</b>	<b>0</b>	<b>279.7</b>
<b>AHDH0007</b>	<b>437210</b>	<b>7121877</b>	<b>375</b>	<b>-90</b>	<b>0</b>	<b>537.1</b>

The Milly Milly Base Metal Program was supported and co-funded by the WA Government and Industry Drilling Program initiative with a preliminary report and draft of the final report submitted in December 2015. The completion of site work, analysis and compilation for a preliminary and draft final report comprise the majority of base metal work completed this quarter and is summarised below.

During 2011 Exploration Athena confirmed the fertility of the primary magma within the central margin and sheer scale of contained disseminated Ni sulphide at levels approaching 0.3% in bulk mass. The exploration focus targeted potential sites where accumulations of primary Ni sulphide from nucleation and saturation could exist. A second and equally important accumulation mechanism targeted structurally controlled secondary deposition of potential massive sulphide within dilation zones and vein systems.

Targeting for this program was completed in the September quarter and included data collation from geochemistry on surface soils and total magnetic intensity which produced 4 areas of interest. Also used for targeting were rock chip and drill assay; historical geophysical IP, TEM, DHEM and VTEM data; structural analysis of regional strain and dilation zones in conjunction with analysis of topography and drainage systems. A first, high resolution gravity survey was completed over the intrusion and proximal area. Results identified a compelling high amplitude gravity anomaly. This data was incorporated in a final layer for targeting.

**Figure 1** Nickel in Surface Soil, (insert shows Ni anomalies and topography).



### **Gravity Survey Results**

The high resolution gravity survey identified three significant and untested anomalous zones prior to drill target selection. The anomalous zones rise in amplitude by up to 10 milliGals compared to amplitudes commonly associated with the intrusive body. Other localized gravity anomalies were coincident with nickel in soils and dilation structures within the body of the intrusion, Figure 2.

Gravity data was acquired over an area of 39 square kilometers and included 950 stations for a total of 65 line kilometers. The sample stations were at 50m, 100m and 200m spacing's. Seven anomalous zones were interpreted. Results shown in Figure 2 highlight three standalone, high amplitude anomalies on a large scale and Figure 3 shows four lower amplitude gravity anomalies which are coincident with existing zones of interest. The three standalone high amplitude zones are

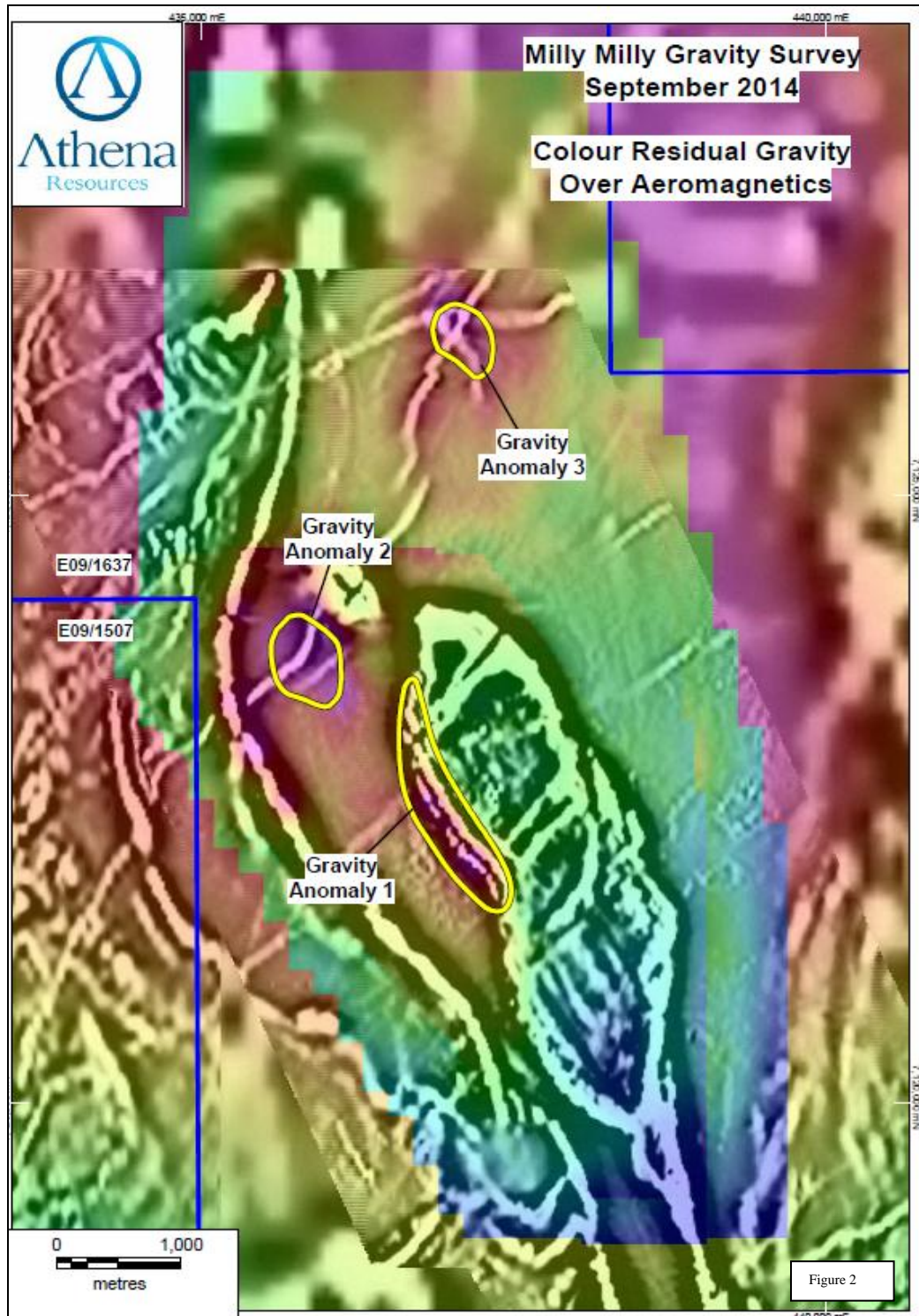
- Anomaly 1 is located at the western contact of the northern lobe and is aligned with the western magnetic anomaly for a strike length of 2.5 kilometers
- Anomaly 2 is located approximately 1 km northwest of anomaly 1 and carries amplitude of -3.2 milliGals which is a significant 10 milliGals higher than the central southern lobe

## Athena Resources Limited – Second Quarter Activities

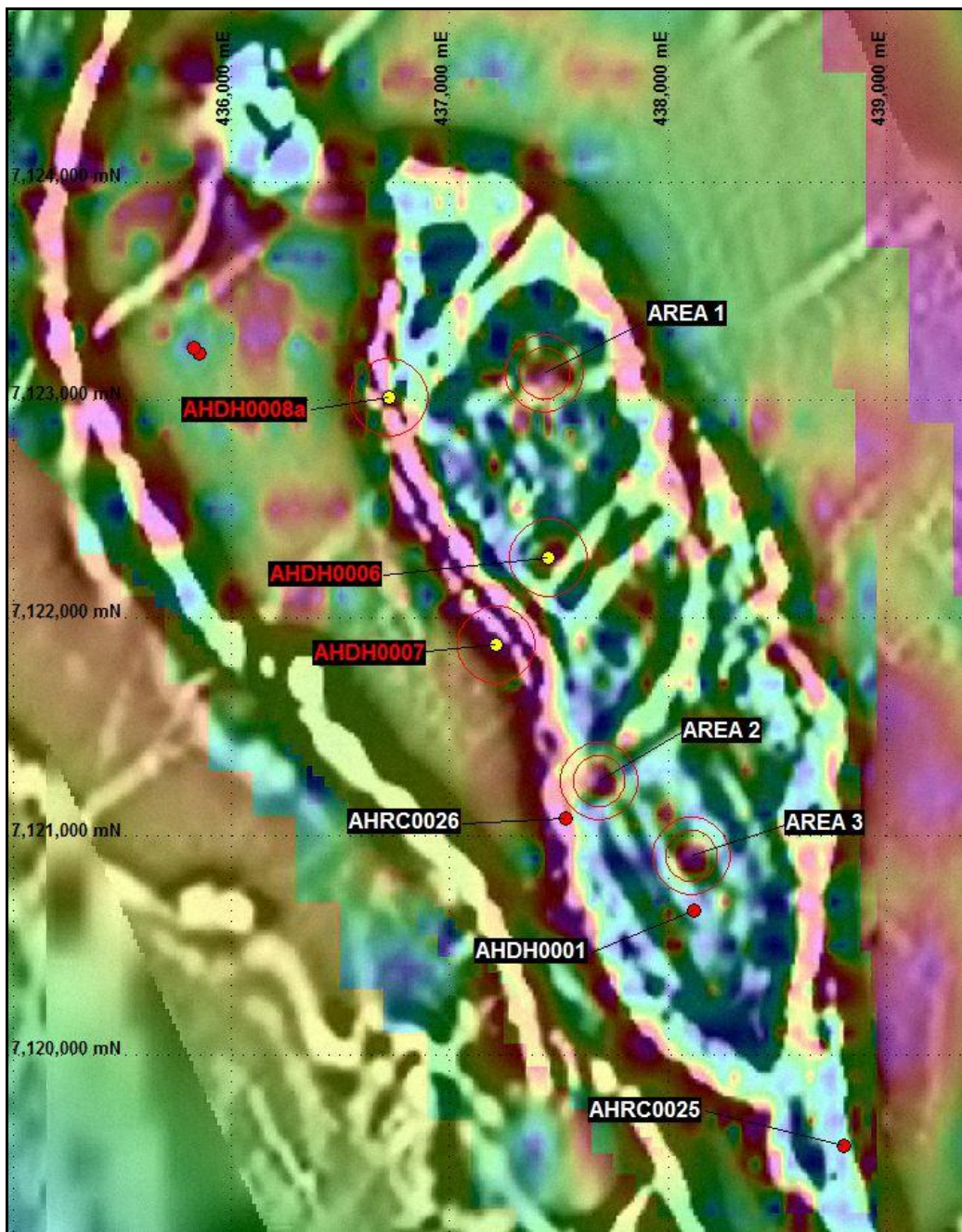
of the intrusion and significantly higher than the density of the overlying sedimentary package. This is interpreted to be at depth, approximately 1000m

- Anomaly 3 is located approximately 2.5 km north of anomaly 2 and carries amplitude of -3.6 milliGals which is a significant 9.6 milliGals higher than the central northern lobe.

**Figure 2 High Resolution Gravity**



**Figure 3 Drill Hole Locations and Gravity Interpretation**



The gravity anomalies 1 and 2, (Figure 2), have an exciting signature of high contrast and display an unmistakable proximal relationship with the western contact and the northwest of the Milly Milly Intrusion. Due to the scale of Anomaly 1, AHDH0007 and AHDH0008a targeted the west contact at locations of greatest change to test the high density signature.

AHDH0006 targeted a local gravity anomaly, coincident nickel soils anomaly and a structural zone. The above criteria used in targeting AHDH0006 exist at Areas 1, 2 and 3, (Figure 3), within the intrusion and due to budget constraints remain, with merit, as targets for drill testing at the earliest opportunity.

## Athena Resources Limited – Second Quarter Activities

### DRILLING RESULTS

Inspection of core and geological logging from this program define large scale variable zones of siliceous, hydrous and carbonate altered uninterrupted ultramafic. Zones largely controlled by structures display variable mineralisation with depletion of magnesium oxide towards the contact. The western contact has been tested at three locations and has been found to be barren determined by geological logging, assay and to the extents of DHEM coverage on AHDH0007, AHDH0008a with no conductors and AHRC0026 from assay.

On the western boundary and in contact with the ultramafic is a 6m wide crush zone followed by strongly foliated amphibolite facies graphitic pelitic sediment with common cordierite. Iron sulphide development is common in most structures on both sides of the faulted contact.

### AHDH0006

AHDH0006 was drilled within the west side of the northern lobe at the Milly Milly Intrusion targeting a local gravity anomaly, coincident nickel soils anomaly and a structural zone. End of hole was at 279.7m. Figures 4 and 5 show disseminated and stringer metal sulphides in core from two zones of mineralisation. Initial assay analysis showed total metal sulphide from 225m to 230m is approaching 8.3% of the rock mass. In this location the nickel tenor is low with the majority being iron, in magnetite, and in sulphide as Pyrite and Pyrrhotite. The iron component accounts for 7.5% of whole rock total metal. Nickel in this zone was 0.25%, chrome 0.25%, with minor zinc 0.01% ,cobalt 0.012% and trace copper ranging from 18ppm to 114ppm. Background sulphur ranges from 150ppm to 400ppm and jumps to up to 1% in some structures.

**Figure 4** Pentlandite + Pyrrhotite in veins and disseminated sulphides in core from AHDH0006 at 70.4m down hole



Metal sulphide assemblage of Pyrrhotite (Pyo) > Pentlandite (Pnt) > Copper (Cu) + Magnetite Mnt

**Figures (5a)** Disseminated sulphides **(5b)** Sulphide filled veins in core from AHDH0006 at 225m down hole.

**Figure 5a**



**Figure 5b**



## Athena Resources Limited – Second Quarter Activities

Table 3

Dataset	Hole ID	mFrom	mTo	Mineralised zone	Style	Ore Zone
Murchison	AHDH0006	68	84	16m	Low Tenor Disseminated/ Fine Stringers	Open
Murchison	AHDH0006	222.07	231	8.93m	Low Tenor Disseminated/ Fine Stringers	Open

Metal sulphide assemblage visually identified as Pyrrhotite (Pyo) > Pentlandite (Pnt) > Copper (Cu) + Magnetite Mnt. Full assays attached in appendices.

A distinct increase in lithium, lanthanum, sulphur, lead and aluminum occurs with the change in lithology to sediment coincident with a drop in magnesium MgO and chrome.

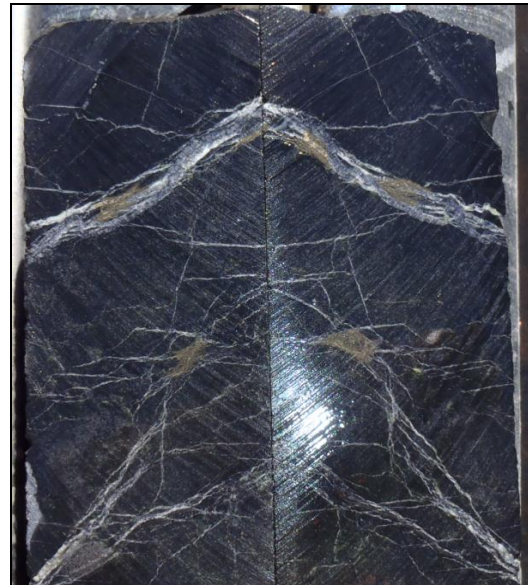
### **AHDH0007**

AHDH0007 was drilled vertically near to the west contact but within the Milly Milly Intrusion targeting Anomaly 1, (Figure 2), the peak of a high amplitude gravity anomaly also coincident with a magnetic anomaly alongside the west contact, striking 2.5 kilometers along the body. End of hole was 537.1m. The western contact is the closest physical feature to anomalous nickel in soils at four broad locations along the western margin of the northern lobe, (Figure 1 and 3). AHDH0007 intersected stringer and disseminated sulphides of low tenor dominated by the iron sulphides pyrite and pyrrhotite. Structures in the hole are interpreted to be parallel to the contact with the sediment package to the west. In several locations, due to these structures it is interpreted the hole is proximally very close to the contact.

**Figure 6a** Sulphides at 427m



**Figure 6b** Cut section from 427m



Notably the MgO within the ultramafic package close to the contact in hole AHDH0007 is low with an average of 26% MgO compared to the central lobe commonly above 41%MgO

## Athena Resources Limited – Second Quarter Activities

### **AHDH0008 and AHDH0008a**

AHDH0008 was drilled to test the northern section of the western contact and the gravity Anomaly 1 at depth. AHDH0008 was drilled at -70 degrees dip to the west perpendicular to the contact. This hole was positioned 1.2km kilometers to the north of AHDH0007 in an effort to test for a higher tenor sulphide assemblage at the contact and to test the gravity response at depth and potentially below the sediment package.

AHDH0008 was originally cased off in HQ at 74.8m. NQ Drilling continued until the hole intersected the Ultramafic / Sediment contact at 246.45m traversing an intensely sheared zone for 6.35m. Drilling continued a further 20m but torque on the drill string reached unmanageable levels and it was decided to case the hole to just beyond the contact. This decision meant the program would cost more both in direct drilling costs and in time onsite but it was considered worthwhile in order to test the gravity anomaly. The extension to the casing ran off the original hole at 88.6 and the hole was then named AHDH0008a and drilled to 680.9m.

Where possible following successful orientation of the core, logging included alpha and beta angle readings on foliations and structures. Analysis of these readings is ongoing. In large scale, the contact has been defined as steeply dipping at an average 85 degrees to the west from surface to 247m down hole where the contact was intercepted. A dominant foliation within the core at the ultramafic contact of  $\alpha$  angle =  $10^{\circ} \sim 15^{\circ}$  to core axis (TCA). At and near the contact the  $\beta$  angle was not measured due to incompetent core, however  $\beta$  angles measured further down hole at 338.5m onwards are  $330^{\circ} \sim 350^{\circ}$  to a depth of 666.4m. This angle is consistent with the outcrop strike orientation and the magnetic signature of the body suggesting the orientation of the contact is relatively consistent to that depth.

The chemistry of the ultramafic component within AHDH0008 has a considerably lower MgO at 26.4% and is consistent with the geochemistry from AHRC0026 and AHDH0007. A total of four holes have been drilled through or near the outer margin of the intrusion. The Ni vs MgO global normative in all four holes near the margin is consistent with the Pyroxenite to Peridotite normative. Holes AHDH0001 (2011 campaign) and AHDH0006 (current campaign Sept Quarter), drilled within the central lobe have average MgO above 40%. This Ni vs MgO ratio is consistent with an Olivine Peridotite / Dunite. The difference in MgO is consistent with phase of flow and partial fractionation in the primary chamber. The optimum nickel potential exists at the mixing boundary of the outer pyroxenitic layer and the inner dunite flow assuming a dynamic flow through system as seen by the MgO (wt%) : (Al<sub>2</sub>O<sub>3</sub>)% ratio.

### **In summary**

The gravity survey conducted this campaign has shown two very large anomalous zones with an unmistakable proximal relationship to the west contact. This has been drill tested and now interpreted to be at depth below the sediment. More work is needed to understand this anomaly which has the potential to be an indication of a mineralised feeder tube, a mixing zone or sub chamber.

The West contact has been intercepted twice (AHRC0026 and AHDH0008), and the east contact has been intercepted once (AHRC0025). Four holes have been drilled at depth within the outer margin of the intrusion (AHRC0025, AHRC0026, AHDH0007, AHDH0008 and 8a),

## Athena Resources Limited – Second Quarter Activities

east and west sides. In all cases the outer pyroxenitic margin and contact show little sign of nickel fertility, accumulation or reasonable tenor. The optimum nickel potential remains at the mixing boundary of the pyroxenitic layer and the inner dunite flow assuming a dynamic flow through system where drilling has intersected nickel mineralisation of 22.7m @ 0.301%Ni from 232.3m including 0.5m @ 0.64% Ni.

Athena and its subsidiary, Complex Exploration, have only scratched the surface of this intrusion with a total of 8 holes drilled using modern geochemistry and geophysics techniques. The indicators or credentials for this system still point to a fertile intrusion and further exploration is warranted.

### **BYRO IRON ORE PROJECT (Mt Narryer Magnetite Prospect)**

Davis Tube Recovery Results received for the Byro Iron Project during the December quarter were taken from two reverse circulation drill holes, AHRC0067 and AHRC0068 drilled at the Mt Narryer Prospect during the September Quarter.

Preliminary test work for optimum grind and recovery was completed first using a representative bulk composite sample of the intersection from the two drill holes.

#### **Davis Tube Test Work Details**

Test work undertaken determined optimum grind and grade of coarse 90µm grind and high 66.8% Fe listed below. The grades and grind size are very good and when considered in terms of proximity to the Port of Geraldton, have made the Mt Narryer Body a priority for the companies iron exploration program in the Murchison district.

Results show very low levels of impurities, notably low levels of the common contaminants phosphorous and sulphur, Table 4.

Significantly the three major constituents are Magnetite, Silica and Oxygen forming 90% of the rock mass, Table 4. Removal of the discrete metamorphic silica fraction in a coarse grind is relatively simple as a result of the discrete quartz grains forming at the boundary of the relatively pure magnetite and not within the magnetite itself.

Grind times are low at below ten minutes to achieve milling to a P80 of 90µm, Table 5a and 5b, a precursor to favourable impact, bond and ball mill indices. More detailed metallurgical test work will follow diamond drilling to establish the criteria for processing design.

**Table 4 Optimum Grind DTR Head Assay**

Sample ID	Assays (%)							
	Fe	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	P	S	Fe <sub>3</sub> O <sub>4</sub>	LOI
AHRC0067-68	24.84	48.61	3.10	0.62	0.066	0.798	19.69	0.615

Note: Fe: Iron; SiO<sub>2</sub>: Silicon Dioxide; Al<sub>2</sub>O<sub>3</sub> : Aluminium Oxide; TiO<sub>2</sub> Titanium Oxide P: Phosphorus; LOI: Loss On Ignition

**Athena Resources Limited – Second Quarter Activities**

**Table 5 Optimum Grind DTR Concentrate**

Actual P <sub>80</sub> (µm)	Feed		Mags		Assays (%)						
	g	g	%	Fe	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	P	S	Fe <sub>3</sub> O <sub>4</sub>	LOI
45	20.00	4.27	21.4	69.99	1.80	0.54	0.17	0.002	0.174	93.27	-3.77
75	20.00	4.36	21.8	68.04	4.06	0.60	0.19	0.003	0.155	90.37	-3.16
<b>90</b>	<b>20.01</b>	<b>4.67</b>	<b>23.3</b>	<b>66.84</b>	<b>5.59</b>	<b>0.62</b>	<b>0.19</b>	<b>0.006</b>	<b>0.156</b>	<b>88.56</b>	<b>-3.12</b>
125	20.00	4.94	24.7	61.52	11.6	0.73	0.18	0.010	0.178	78.25	-2.52

Table 5a Grind Establishment Times			Table 5b Grind Size Checks			
Sample ID	AHRC0067 - 68		Sample ID:	Bulk Comp P <sub>80</sub> = 90 µm		
Mill Number	Time (min)	Time (sec)	Size Fraction (µm)	Mass (g)	Mass (%)	Cumulative (%) Passing
P80 Size						
125 µm	5.75	345	<b>90</b>	<b>18.64</b>	<b>12.6</b>	<b>82.3</b>
106 µm	7.35	441	63	29.27	19.8	62.6
<b>90 µm</b>	<b>9.38</b>	<b>563</b>	45	20.36	13.7	48.9
75 µm	12.4	744	-45	72.82	49.1	-
45 µm	27.3	640	Total	148.61	100.3	

Following the establishment of a 90micron grind the composites for the two magnetite intersections were processed.

**Feed Assay Results**

AHRC0067 Intersected 30m of iron ore including **4m** of hematite plus **26m** magnetite @ **29.38% Fe** from 42m. of coarse grain magnetite This intersection includes **8m @ 41.39% Fe** from 54m down hole with maximum magnetic susceptibility of 1131 SI units.

And

AHRC0068 Intersected **16m** of magnetite iron ore @ **31.85% Fe** from 32m down hole of coarse grain magnetite This intersection includes **4m @ 41.39% Fe** from 54m down hole with maximum magnetic susceptibility of 1004 SI units.

**DTR Assay Results**

- AHRC0067 - **26m @ 66.16%<sup>DTR</sup> Fe** from 42m  
Including **8m at 70.41%<sup>DTR</sup> Fe** from 54m
- AHRC0068 **16m @ 67.14%<sup>DTR</sup> Fe** from 28m  
Including **4m @ 69.68%<sup>DTR</sup> Fe** from 32m

## Athena Resources Limited – Second Quarter Activities

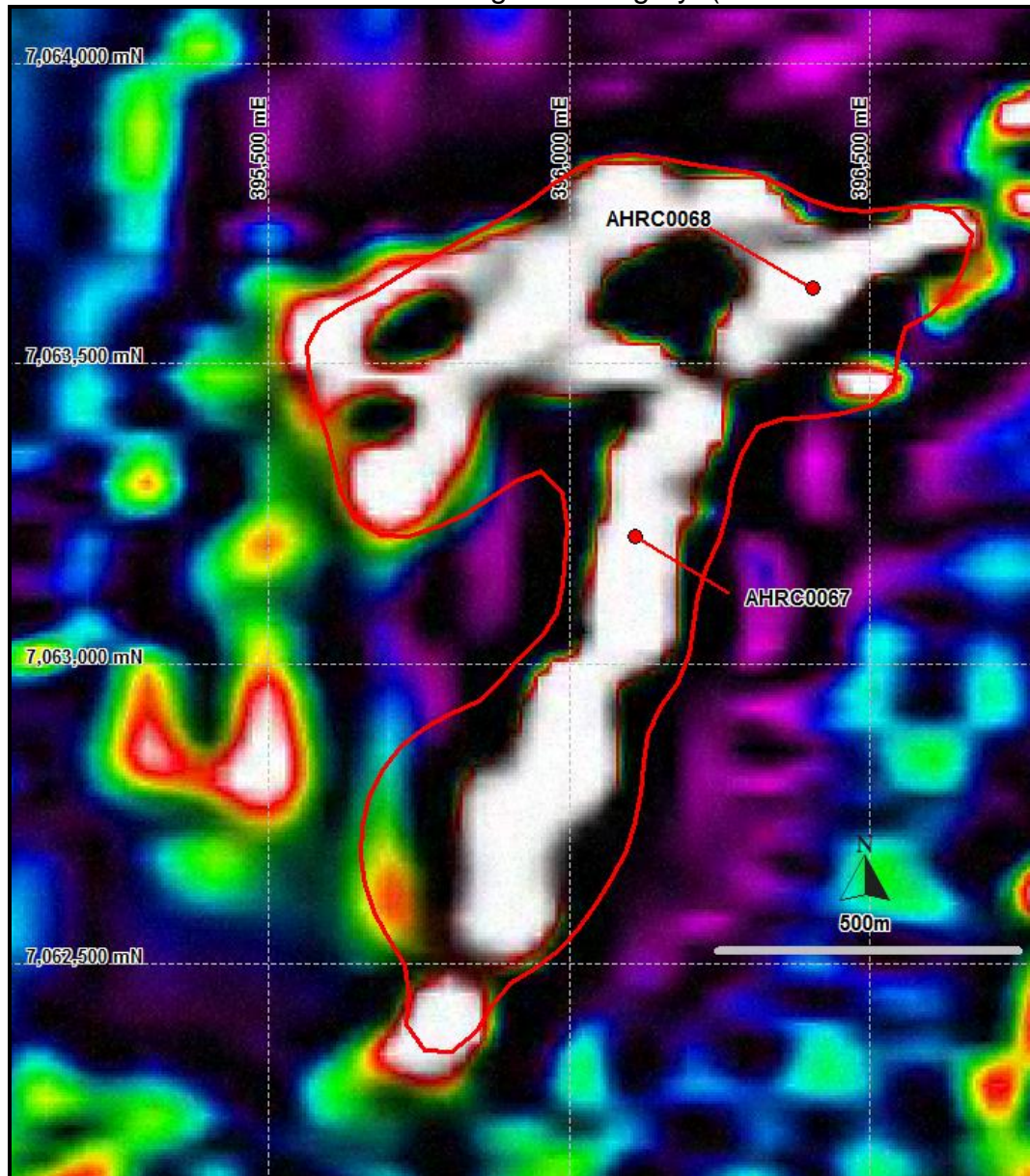
The Mount Narryer magnetite body is within tenement E09/1938 located 210 Km north from Mullewa and 310Km by road north from the Port of Geraldton. Drilling was completed by Mt Magnet Drilling and sample was recovered from the two holes for metallurgical tests and sent to Perth laboratories for optimum grind, liberation and recovery analysis. This was followed by head grade assay and DTR analysis. The samples display a large grain size of up 0.5mm. This is promising as this is similar to the grain size found at the Athena FE1 Resource in neighbouring tenement E09/1507. Metallurgical results completed, Tables 4, 5, 7 and 8 indicate similarities to the coarse grain magnetite at FE1 which also resulted in a coarse optimum grind size and other subsequent low cost processing characteristics.

**Table 6 Collar Table** (Drilled in September Quarter)

Hole ID	EOH	Easting	Northing	Dip	Azi	Tenement
AHRC0067	82m	396111	7063213	-60	97	E09/1938
AHRC0068	76m	396406	7063626	-60	336	E09/1938

Coordinate system MGA-94/50

**Figure 7.** Drill Hole Location over TMI Magnetic Imagery. (Red line = 1000nT isobar)



**Athena Resources Limited – Second Quarter Activities**

**Table 7. AHRC0067 DTR Head and DTR Assay Results**

Sample ID	Head % Fe	DTR % Fe	SiO2	Al2O3	TiO2	P	S	LOI1000
Composite 1	36.3	68.78	2.83	0.37	0.14	0.002	0.017	-1.89
Composite 2	19.1	61.97	6.44	0.90	1.55	0.007	0.141	-1.91
Composite 3	11.6	64.17	5.26	0.84	0.86	0.014	0.331	IS
Composite 4	30.7	67.95	4.62	0.56	0.21	0.003	0.139	-3.14
Composite 5	43.0	<b>71.32</b>	0.58	0.43	0.13	0.001	0.006	-3.41
Composite 6	39.8	69.49	2.87	0.51	0.15	0.002	0.027	-3.31
Composite 7	30.9	66.41	7.06	0.43	0.11	0.003	0.042	-3.17
Composite 8	11.9	52.43	23.64	0.87	0.23	0.011	0.286	-2.5
Composite 9	9.0	60.07	10.88	1.28	0.59	0.005	0.987	IS

Note: Fe: Iron; SiO2: Silicon Dioxide; Al2O3 : Aluminium Oxide; TiO2 Titanium Oxide P: Phosphorus; LOI: Loss On Ignition

**Table 8. AHRC0068 DTR Head and DTR Assay Results**

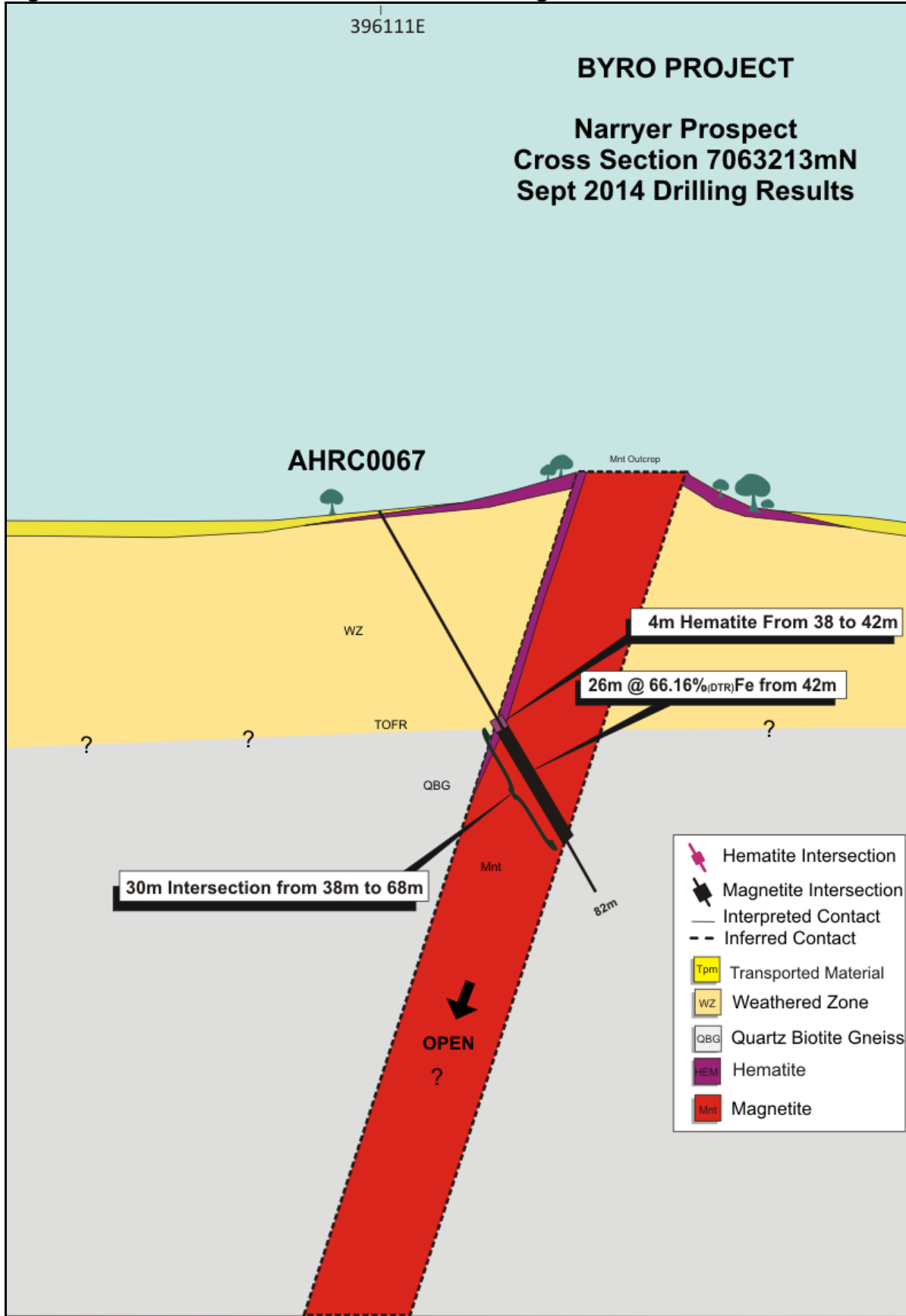
Sample ID	Head % Fe	DTR % Fe	SiO2	Al2O3	TiO2	P	S	LOI1000
Composite 1	26.9	67.19	4.5	0.59	0.18	0.006	0.083	-2.97
Composite 2	31.9	69.68	2.55	0.46	0.04	0.003	0.021	-3.36
Composite 3	18.9	67.27	4.75	0.8	0.24	0.004	0.342	-3.17
Composite 4	21.9	64.42	8.01	0.88	0.4	0.007	0.177	-2.92

Note: Fe: Iron; SiO2: Silicon Dioxide; Al2O3 : Aluminium Oxide; TiO2 Titanium Oxide P: Phosphorus; LOI: Loss On Ignition

Figure 8 shows the 30m intersection Outcrop has a surface expression of 35m on the horizontal plane with the body dipping steeply at 85° suggesting the body maintains a relatively uniform width. True width has not been calculated due to the limited amount of drilling.

From both holes drilled to date, AHDH0067 and AHDH0068 at Mt Narryer, it has been demonstrated the mineralised zone continues to depth from outcrop and remains open on strike. These results give support to the magnetite exploration target estimates published August 2014 particularly in regards to depth of the stratigraphy.

Figure 8. AHRC0067 Cross Section at Northing 7063213mN with DTR Results



## Athena Resources Limited – Second Quarter Activities

The Mount Narryer magnetite exploration target included a maximum of 127 million tonnes to a minimum of 38 million tonnes with a grade range of upper and lower limits from 36.4% Fe to 46.4% Fe from whole rock assay of surface samples.

**Table 9. Narryer Exploration Estimate Parameters. (ASX: August 2014)**

Parameter	Exploration Target Range	Mt Narryer
Width at Outcrop (m)	Maximum	45
GPS Field measurement contact to contact	Minimum	25
Vertical Depth (m) estimated (Estimated from outcrop and topography)	Maximum	150
	Minimum	100
Strike Length (m) Measurement from GPS and Geophysics	Maximum	5400
	Minimum	4320
Average SG (t/m3)	Maximum	3.5
	Minimum	3.5
Fe% Surface Assay	Maximum	46.38
	Minimum	36.4

**Table 10. Narryer Exploration Estimate. (ASX: August 2014)**

Location	Range	Tonnes	Mt	% Fe
Mt Narryer	Maximum	127,575,000.00	127.5	46.4
	Minimum	37,800,000.00	37.8	36.4

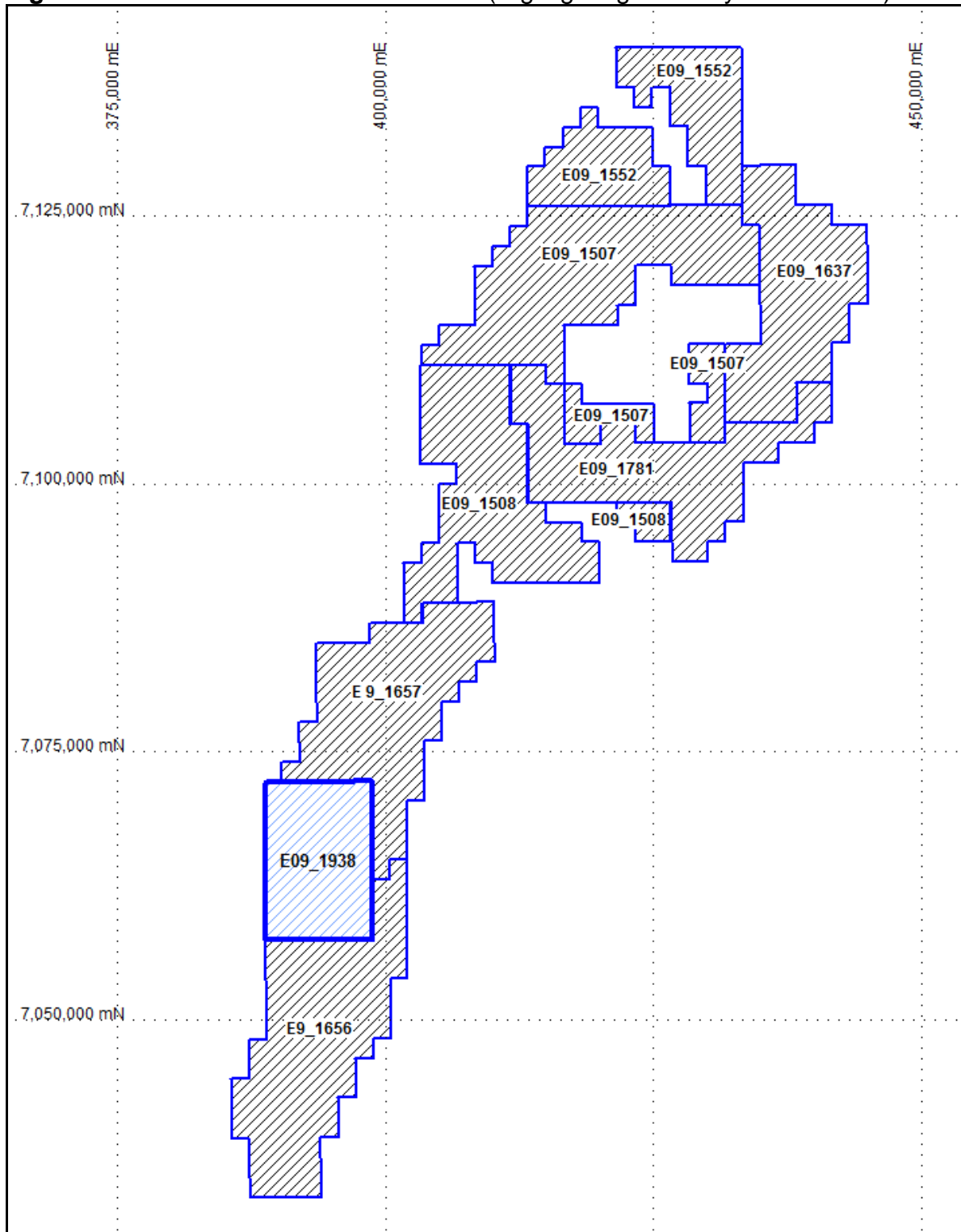
Drilling and assay results in this quarterly report support the key aspects of the exploration estimates published August 2014, however the quantity and grade is conceptual in nature. There has been insufficient exploration to define a mineral resource. Further exploration is warranted to improve understanding and reduce uncertainty about this body.

## Athena Resources Limited – Second Quarter Activities

### **About Athena Resources Limited.**

Athena Resources Limited (ASX:AHN), which is based in Perth was listed on the ASX in 2006 and currently has 173 million shares on issue. Athena owns a 100% interest in the Byro Project through its subsidiaries Complex Exploration and Byro Exploration where it is exploring for copper, nickel, PGE's and iron ore. Figure 9 below, shows the current tenement holdings which have been reduced in size since October 2014, this year towards meeting Department of Mines and Petroleum relinquishment requirements. Relinquishment was also in response to rising expenditure and was carried out on the basis that explored areas that have not produced significant exploration targets were withdrawn.

**Figure 9 Athena Tenement Boundaries (Highlighting Mt Narryer Tenement)**



## Athena Resources Limited – Second Quarter Activities

The Byro Iron Ore Project is strategically located in the Midwest Iron province which includes a substantial mining sector. The projects southern boundary is 210km north of the Mullewa Rail Siding by road and 310km from the Port of Geraldton. Development of the Byro Iron project is expanding the overall resource in the Midwest region along with neighbours at the Gindalbie and Ansteel's Karara Iron Project, Sinosteel's Weld Range Project, the proposed Jack Hills Expansion Project, Padbury's Robinson Range Project, and Mt Gibson's Extension Hill Mine, amongst others. Access and improved infrastructure to the maturing iron ore province is growing with development of the CSIRO SKA Project and increased capacity and further development at the Port of Geraldton.

**Figure 10 Regional Project Location**



Yours faithfully

Ed Edwards  
**Managing Director**  
**ATHENA RESOURCES LIMITED**

## Athena Resources Limited – Second Quarter Activities

JORC Code, 2012 Edition – Table 1 report template

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li><i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></li> </ul>	<ul style="list-style-type: none"> <li>This Report includes magnetic susceptibility readings taken from RC drill hole AHRC0067, AHRC0068. Visual logging of chips was completed by qualified geologist followed by assays from sampling.</li> <li>The measurement tool used for magnetic susceptibility readings was a hand held KT-10 with serial number # 8791;</li> <li>Half NQ diamond drill core was logged sampled from hole ADHD0006 and AHDH0007 and AHDH0008 and 8a by qualified geologists.</li> <li>A gravity survey was completed using a Cintrex Gravity meter and DGPS location methods. Refer to other substantive work later this table.</li> </ul>
	<ul style="list-style-type: none"> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> </ul>	<ul style="list-style-type: none"> <li>Magnetic susceptibility readings were taken at every meter interval with the average reading noted from scanning mode</li> <li>Samples assigned to down hole depth using industry standard methods of survey and measurement.</li> </ul>
	<ul style="list-style-type: none"> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>Industry standard processes were used during the reverse circulation and diamond drilling program to obtain 1m individual samples to 4 m composite samples from which up to 5kg sample weight was delivered to labs to be processed according to international standards. These assays are reported in this report. There are no new assays released in this report.</li> <li>Visual identification of metal sulphides has been described in this report by qualified geologists using standard identification techniques and checked with assay results</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li><i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i></li> </ul>	<ul style="list-style-type: none"> <li>Standard Reverse Circulation (RC)</li> <li>Diamond Core (NQ) has been cut and half core submitted with orientation and structural measurement taken on holes with greater than -90 degrees dip</li> </ul>

## Athena Resources Limited – Second Quarter Activities

Criteria	JORC Code explanation	Commentary
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>• Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>• Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>• Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>• RC samples recovered from cyclone splitter using 1m intervals and 2 to 4m composites</li> <li>• Collection of RC Chips from sieved sample</li> <li>• No bias was observed between recovery and sample quality or loss or gain</li> <li>• Collection of Diamond Core following meter marking RQD and recovery using QA methods</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>• The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>• Drill chips have been geologically logged as well as recording major geotechnical features observable in chip over the full depth of the holes by qualified geologists.</li> <li>• Drill core has been logged and sampled by qualified geologists using Industry standard methods.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all core taken.</li> </ul>	<ul style="list-style-type: none"> <li>• RC Drilling, chips sieved to chip trays as well as sampled from splitter</li> <li>• Sawn by core saw, half core sampled using Industry standard methods</li> </ul>
	<ul style="list-style-type: none"> <li>• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> </ul>	<ul style="list-style-type: none"> <li>• Chip samples were dry rotary split</li> </ul>
	<ul style="list-style-type: none"> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	<ul style="list-style-type: none"> <li>• Industry standard sampling preparation procedures were used</li> </ul>
	<ul style="list-style-type: none"> <li>• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>	<ul style="list-style-type: none"> <li>• Industry standard sampling preparation procedures were used</li> </ul>
	<ul style="list-style-type: none"> <li>• Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> </ul>	<ul style="list-style-type: none"> <li>• Industry standard sampling procedures were used</li> <li>• No field duplicate/second-half sampling</li> </ul>
	<ul style="list-style-type: none"> <li>• Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>• Average sample size from splitter was 5kg</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>• For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>• Nature of quality control procedures adopted (eg standards, blanks,</li> </ul>	<ul style="list-style-type: none"> <li>• Assays are pending from QA certified laboratories.</li> <li>• The measurement tool used was a hand held KT-10 with serial number # 8791 using units of 10<sup>-3</sup> Standard SI units</li> <li>• Industry standard procedures were used in obtaining the magsus readings and samples for assay</li> <li>• Standards and Blanks have been inserted to sampling sequence as</li> </ul>

## Athena Resources Limited – Second Quarter Activities

Criteria	JORC Code explanation	Commentary
	<i>duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	well as repeats at set intervals to ensure checks are in place to for quality control of assay returns and reports
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No adjustments have been made to readings</li> <li>• Assays have QA checked</li> <li>• No twinned holes occur in this report</li> <li>• Significant intercepts are reviewed externally by specialist geochemists and modeling consultants</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Hand held GPS</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• This report includes one meter sampling of magnetic susceptibility. This is an acceptable frequency of testing at this level of resolution. Assays are pending</li> <li>• Collar and end of hole surveys were taken and combined with collar location at surface for hole trajectory</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No sampling bias was introduced by drilling orientation</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No sampling bias was introduced by drilling orientation</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sample integrity was maintained throughout the sampling process</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sample integrity audits were completed prior and after receipt of sample at labs</li> </ul>

### Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
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## Athena Resources Limited – Second Quarter Activities

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> </ul>	<ul style="list-style-type: none"> <li>Tenements referred to in this report E09/1931 and E09/1637 are 100% Athena owned and operated within native title claim WAD 6033/98, made on behalf of the Wajarri Yamatji People.</li> </ul>
	<ul style="list-style-type: none"> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The tenements are in good standing and no known impediments exist.</li> <li>See tenement listing attached.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Historic exploration within the project area largely confined to south of a line extending from Imagi Well to the Byro East intrusion (Melun Bore). The earliest work with any bearing on Athena's activities is that of Electrolic Zinc Co (1969) exploring for chromatite at Imagi Well, followed closely by Jododex Australia (1970-1974) at Byro East. Much of the exploration of a more regional nature is of limited use either because of the vagaries of the accuracy of positional information and the limited range of elements analysed. More recent surveys pertinent to Athena's current investigations include that of Redback Mining (1996-2002), Yilgarn Mining Limited (2003-2008) and Mithril (2007, JV with Yilgarn) at Byro East, and Western Mining Corporation (1976-1979) and Precious Metals Australia at Imagi Well. Newcrest Mining carried out a limited reconnaissance RAB drilling programme for platinum just to the east of Byro homestead (1998-1990).</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Upper amphibolite to granulite metamorphic facies with mafic to ultramafic intrusive. Granite and migmatite are common</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Summary Information on holes AHRC0067, AHRC0068, ADHD0006, ADHD0007 and AHDH0008 and 8a. See main body of announcement</li> </ul>

## Athena Resources Limited – Second Quarter Activities

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>No information has been excluded</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> </ul>	<ul style="list-style-type: none"> <li>No weighting, min max, ave, truncation or cut off techniques were used in this report</li> </ul>
	<ul style="list-style-type: none"> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> </ul>	<ul style="list-style-type: none"> <li>No aggregation has been used</li> </ul>
	<ul style="list-style-type: none"> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>No metal equivalent are referred to in this report</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<p>These relationships are particularly important in the reporting of Exploration Results.</p>	
	<ul style="list-style-type: none"> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported</li> </ul>	<ul style="list-style-type: none"> <li>See main body of report. All widths are down hole and not reported as true width</li> </ul>
	<ul style="list-style-type: none"> <li>.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>All reference to widths are down hole length, true width is not calculated</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Figures 1, 2, 3, 4, 5, 6, 7,8,9,10 and 11 in the body of the report</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>This report covers representative one meter samples of magnetic susceptibility results; and</li> <li>the visual inspection of diamond core drill hole ADHD0006. Assays are pending; and</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density,</li> </ul>	<ul style="list-style-type: none"> <li>Geophysical gravity data was acquired over an area of 39 square kilometers and included 950 stations for a total of 65 line kilometers. The sample stations were at 50m, 100m and 200 meter spacing's. All measurements were taken in units of</li> </ul>

## Athena Resources Limited – Second Quarter Activities

Criteria	JORC Code explanation	Commentary
	<i>groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	milliGals, and locations measured by DGPS technology
<b>Further work</b>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> </ul>	<ul style="list-style-type: none"> <li>Drilling programs have been planned and approvals have been granted. The registration ID of the granted PoW's is  E09/1781 <b>ID 36923</b> E09/1637 <b>ID 36920</b> E09/1552 <b>ID 36924</b> E09/1507 <b>ID 36922</b></li> </ul>
	<ul style="list-style-type: none"> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>The planned drilling information is commercially sensitive and is not included in this report.</li> </ul>

## **Athena Resources Limited – Second Quarter Activities**

### **INTEREST IN MINING TENEMENTS**

**Athena Resources Limited 100%**

#### **Byro**

E09/1507	E – Exploration License
E09/1508	
E09/1552	
E09/1637	
E09/1656	
E09/1657	
E09/1781	
E09/1938	

### **Cautionary Notes**

#### ***Forward Looking Statements***

*This announcement contains certain statements that may constitute “forward looking statements”. Such statements are only predictions and are subject to inherent risks and uncertainties, which could cause actual values, results, performance achievements to differ materially from those expressed, implied or projected in any forward looking statements.*

#### ***JORC Code Compliance Statement***

*Some of the information contained in this announcement is historic data that have not been updated to comply with the 2012 JORC Code. The information referred to in the announcement was prepared and first disclosed under the JORC Code 2004 edition. It has not been updated since to comply with the JORC Code 2012 edition on the basis that the information has not materially changed since it was last reported.*

#### ***Competent Persons Statement***

*The information included in the announcement 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 2012 Edition)”. Mr Kelly consents to the inclusion of the information in the announcement in the context and format in which it appears and that the historical information was compliant with the relevant JORC Code, 2004 Edition, and new information announced in this report is compliant with the JORC Code 2012 Edition.*

#### ***Competent Persons Disclosure***

*Mr Kelly is an employee of Athena Resources and currently holds securities in the company.*