Athena Resources

ACN 113 758 900

8 April 2014

The Company Announcements Office
Australian Stock Exchange Limited
4 Floor 20 Bridge Street
SYDNEY NSW 2000

BYRO IRON ORE PROJECT

HEMATITE ASSAY AND MAPPING RESULTS DEFINE FURTHER POTENTIAL DSO HEMATITE BODY

- Total length of outcrop mapped to date is over 500 meters
- Highest assay **60.50% Fe**
- Average Assays from outcrop sampling **55.55% Fe**

FE12 ORE BODY FIRST PASS BENFICIATION FROM BASIC SPIRAL SUCCESSFUL

- Feed Grade Assay **47.55% Fe**
- Concentrate Assay **55.40% Fe**
- Recovery **67.10% Fe**

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The Directors of Athena Resources Limited (ASX: AHN) are pleased to announce that the Company received assay results from two progames being run at the FE12 Ore Body. The first program was designed to test for a Direct Shipping Ore (DSO), the second to produce a benifiable product from the main hematite body at FE12 to a furnace grade concentrate.

Assays have revealed DSO grades of up to 60.5% Fe in hematite. Samples were taken from out crop which was mapped with a significant total length of 500m. Figure 1. Applications are currently being made to drill test this body.

Figure 1. **FE12 DSO** and main ore body

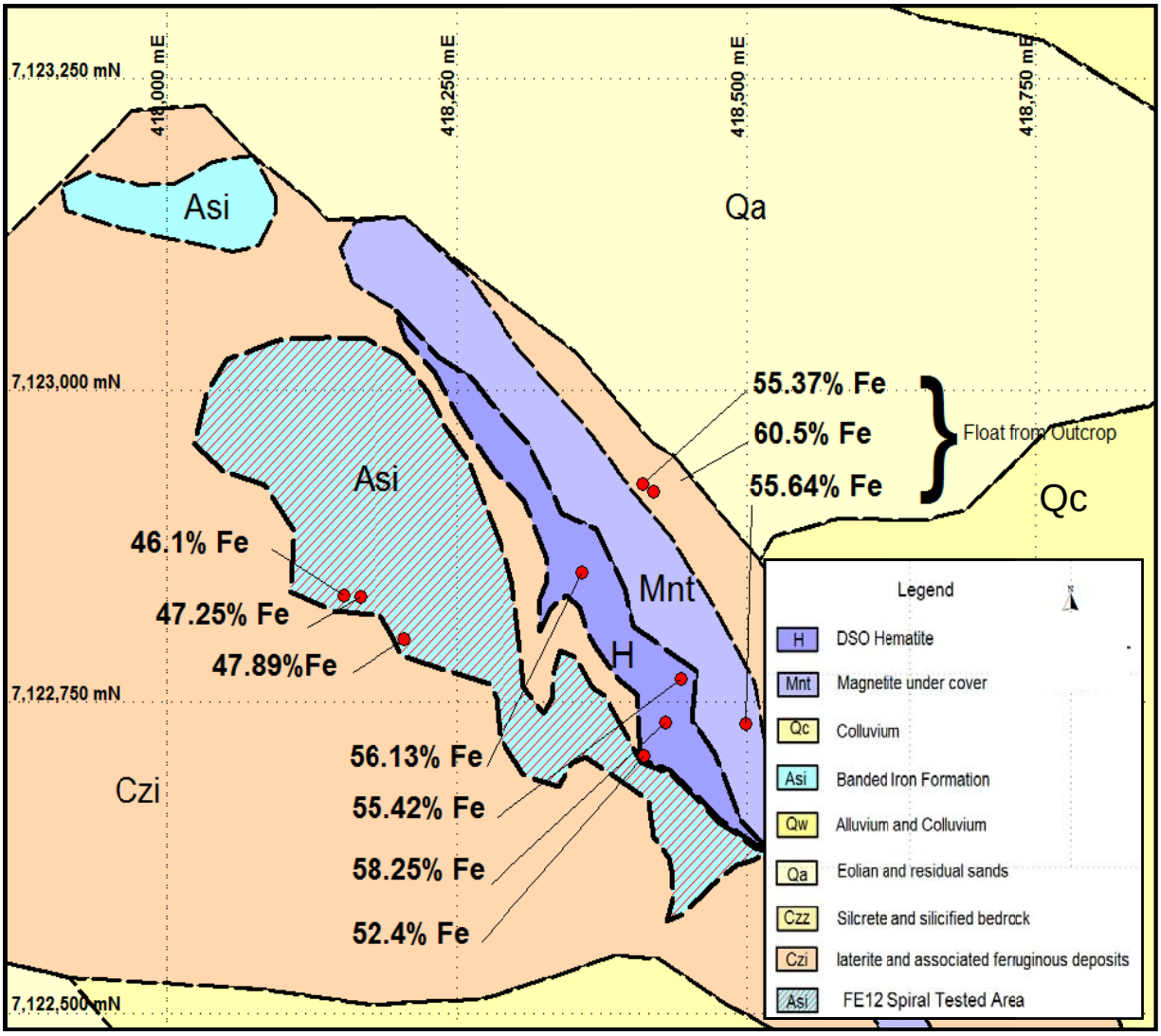


Table 1. FE12 Surface Assays from Figure 1.

Sample_Id	East	North	Al2O3	Fe	P	S	SiO2	LOI
MBCR180	418500	7122732	na	55.64	0.019	na	4.74	na
MBCR181	418455	7122774	na	55.42	0.017	na	7.92	na
MBCR182	418460	7122775	na	48.54	0.028	na	13.65	na
MBCR183	418439	7122747	na	58.25	0.067	na	5.61	na
MBCR184	418358	7122854	na	56.13	0.015	na	12.08	na
MBCR312	418415	7122923	5.01	55.37	0.039	0.157	7.15	7.17
MBCR313	418419	7122922	1.17	60.50	0.024	0.062	5.86	5.05
MBCR504	418153	7122835	3.41	46.10	0.036	0.106	25.83	3.73
MBCR505	418167	7122834	4.08	47.25	0.100	0.061	24.22	3.80
MBCR506	418412	7122707	1.94	52.40	0.073	0.071	16.55	5.50
MBCR507	418205	7122800	0.86	47.89	0.015	0.139	27.02	2.71

Fe: Iron; SiO_2: Silicon Dioxide; Al_2O_3 : Aluminum Oxide; P: Phosphorus; LOI: Loss On Ignition. Assays are XRF, na: not assayed.

Bulk sample at the FE12 ore Body from the central area of the banded iron formation (Asi) shown in Figure 1, were crushed to 1.7mm. After screening and size assay these were passed down a spiral gravity separator. Results showed a significant first pass upgrade to a furnace grade of 55.4% Fe. Tables 2, 3 and 4 show the assay results from the first pass Spiral test.

Table 2. Feed grade assay and calculated head grade

Cumulative grade	Chemical Assay (%)					
	Fe	SiO_2	Al_2O_3	P	S	LOI 1000
Calc Head	49.12	26.07	0.96	0.015	0.055	2.30
Assay head	**47.55**	27.66	1.23	0.020	0.088	2.71

Table 3. Chemical assay

BUREAU VERITAS - Amdel Spiral Testwork 1st Pass Results							
			Assays				
Order	ID	Mass Pull %	Fe%	SiO2%	Al2O3%	P%	S%
1	Cut 3 Con	5.9	59.49	11.46	0.98	0.02	0.05
2	Cut 1 Con	14	57.63	13.87	0.97	0.02	0.05
3	Cut 2 Con	27.9	55.44	17.03	0.96	0.02	0.05
4	Cut 3 Con-Mid	37.1	54.88	17.88	0.96	0.02	0.05
5	Cut 1 Con-Mid	52.2	52.99	20.48	0.97	0.02	0.05
6	Cut 2 Con-Mid	61.7	**55.4**	17.27	0.94	0.02	0.05

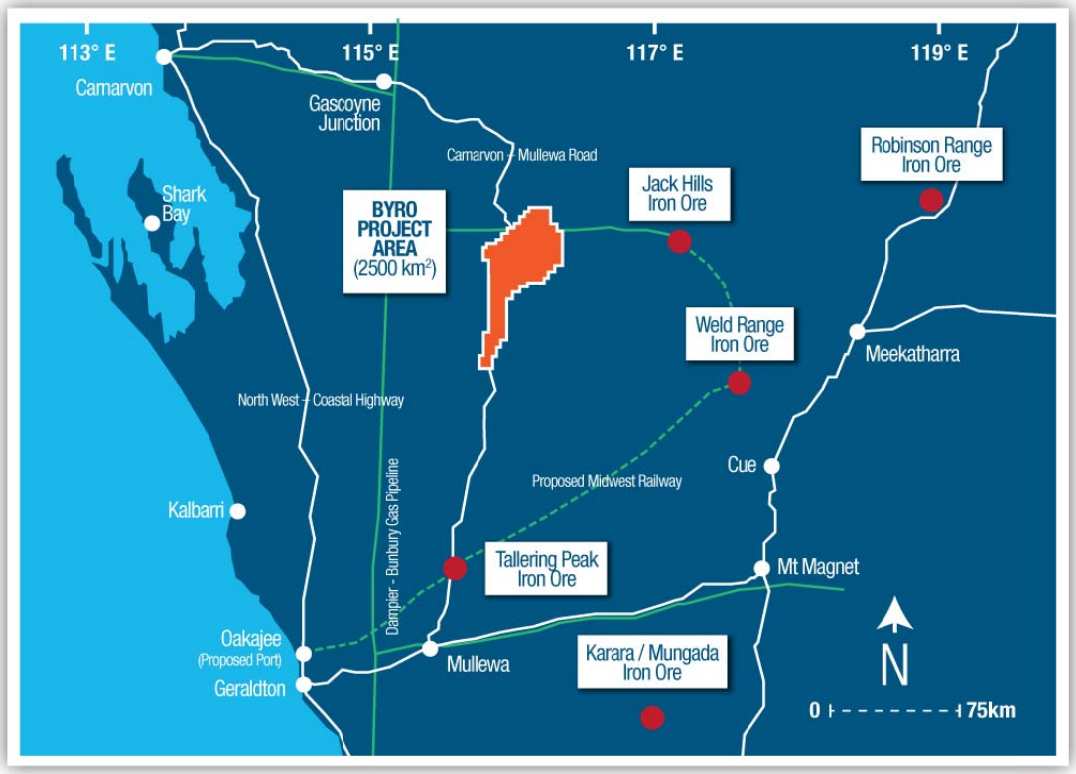
Results show significant upgrade at first stage processing. Current work now being undertaken to improve recoveries to above 80%. Significant discrete quartz remained in all fractions, which can be removed with second phase processing. Minor improvements in separation could be gained from finer grind to 1000µm.

Table 4. Cumulative Recoveries

			Recoveries %				
Order	**ID**	**Mass Pull %**	**Fe**	**SiO2**	**Al2O3**	**P**	**S**
1	Cut 3 Con	5.9	7.1	2.6	5.9	6.4	5.4
2	Cut 1 Con	14	16.2	7.8	14.1	15.2	12.7
3	Cut 2 Con	27.9	30.3	20.1	28.3	29.3	27.6
4	Cut 3 Con-Mid	37.1	41.4	25.4	37	37.4	35.8
5	Cut 1 Con-Mid	52.2	55.5	42.8	52.7	54.4	51.1
6	Cut 2 Con-Mid	61.7	**67.1**	45.1	61.6	64.8	59.2

CONSIDERATIONS for NEXT PHASE (Phase Two processing).
There is considerable room for improved grade and recoveries by investigating a simple two stage spiral treatment. The removal of SiO2 by floatation before spiral testing will improve spiral efficiency and may increase over all discrete SiO2 reduction. Athena hope to achieve a specification which will produce 60% Fe and 80% recovery.

ABOUT ATHENA



ATHENA

Athena Resources Limited (ASX:AHN), which is based in Perth, was listed on the ASX in 2006 and currently has 123 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 Byro Iron Ore Project (Athena 100% through its wholly owned subsidiaries – see also ASX announcement 25 March 2014) 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 neighbors 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 Tallering Peak 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. The region is also awaiting the inevitable development of a deep water bulk shipping port north of Geraldton to cater for the export of the many billions of tonnes of iron ore currently in JORC compliant resources in the region.

E W Edwards
Managing Director
8 April 2014

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
Sampling techniques	• *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.*	• Rock chips were broken from insitu outcrop. Placed in unused new numbered calico bags and closed. Chips ranged in size From 100mm cross section by +/- 50mm • Three samples were taken from float near outcrop on the downward slope, the samples were taken to test the scree apron. The samples compared to outcrop lithology and on the basis that they were the same lithology were assayed.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• Sample locations were measured with hand held Garmin GPS. Magnetic susceptibility measurements were taken using a hand held meter as per manufacturers recommendations
	• *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.*	• Rock chips were assayed using X-Ray Fluorenence. Samples were pulverized in lab conditions to obtain a pulp then into a glass disc using a Lithium Borate flux. For ore grade materials, flux composition and sample to flux ratios were varied to ensure the sample dissolves completely and that re-crystallisation does not occur as the melt is cooled. Oxidising agents may be added to ensure retention of Sulphur or conversion of certain elements to highest state.
Drilling techniques	• *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).*	• Rock Chip sample collected with a geo-hamer/pick
Drill sample	• *Method of recording and assessing core*	• chips from outcrop were placed in

Criteria	JORC Code explanation	Commentary
recovery	*and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	sample bags .All chips were used in sample preparation to pulp for analysis. Overall recoveries were good and there were no significant problems • Samples were chosen as representative of the outcrop • Sample was a whole rock analysis. There is insufficient samples collected to evaluate sample bias at this stage QAQC protocols were followed to reduce any sample bias.
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Rock chips were geologically identified and described in terms of standard rock classification techniques. • Sample sites were photographed at the location the sample was taken from. • No intersections are reported but outcrop dimensions are measured using tape measures, GPS coordinates and odometers where practical
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	• No core sample taken
	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*	• Samples are collected dry hewn from outcrop
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	• Best practice XRF analysis as per Bureau Veritas Laboratories
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	• Lab results are reviewed and checked for deviation using lab certified references and in house analysis
	• *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.*	• Where possible at least two samples are taken at each site.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Sample sizes taken are large enough to be representative of the whole rock constituents.
Quality of assay data and laboratory	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers,*	• XRF fusion techniques are suitable for the analysis of most mineralogical ores, metallurgical products and complex matrices.

Criteria	JORC Code explanation	Commentary
tests	*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.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• No ground geochemical measurements were taken • Lab QAQC involved internal lab standards, certified reference material blanks and duplicates.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Summary inspection by contract Geologist • No drilling conducted • Primary data was collected in combined forms in the field on paper note book and laptop field computers. This was later transferred and stored to hard drive. Electronic data captured in the field was also downloaded to hard drive. • No adjustments have been made to assay data in this report
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Sample locations were measured with Garmin hand held GPS. Accuracy is within +/-5m • MGA_GDA94 Zone 50 • Topographic surface recorded with handheld Garmin GPS +/- 10m
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• Spacing is randomly biased by outcrop location. • Mineralisation domains have not demonstrated continuity in either grade or geology. Therefore cannot support the definition of a Mineral Resource or Reserve, and the classifications under the 2012 JORC Code. • No sample compositing was applied to individual outcrop samples reported. Composites from individual sample over large outcrops were composited for metallurgical average

Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	• Rock chip samples provide a local sample only
	• *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.*	• No orientation based sampling bias has been identified in this data at this point
Sample security	• *The measures taken to ensure sample security.*	• Chain of custody was maintained from sample site to lab
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No reviews of data management systems has been carried out

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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.*	• Tenements referred to In this report E09/1552 are 100% Athena owned and operated within native title claim WAD 6033/98, made on behalf of the Wajarri Yamatji People.
	• *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.*	• The tenements are in good standing and no known impediments exist. • See tenement listing attached.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Nearby historic exploration within the greater project area is 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

Criteria	JORC Code explanation	Commentary
		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).
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Upper amphibolite to granulite metamorphic facies with mafic to ultramafic intrusive. Granite and migmatite are common
Drill hole Information	• *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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.*	• No drilling was undertaken in the quarter and no result are reported in this report
	• *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.*	• No information has been excluded
Data aggregation methods	• *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.*	• No weighting, min max, ave, truncation or cut off techniques were used in this report
	• *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.*	• No aggregation has been used

Criteria	JORC Code explanation	Commentary
	• *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No metal equivalent are referred to in this report
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.*	
	• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported*	• No drilling was undertaken in the quarter and no result are reported in this report
	• . • *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').*	• No drilling was undertaken in the quarter and no result are reported in this report
Diagrams	• *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.*	• Refer to figures 1, in the body of the report
Balanced reporting	• *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.*	• All exploration results for this area are reported in this report
Other substantive exploration data	• *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, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• This report contains substantive information from mineralogical and beneficiation work completed by external independent labs Bureau Veritas. This report details all substantive information related to the project.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	• Drilling programs have been planned and approvals have been granted. The registration ID of the granted PoW's is E09/1781 **ID 36923** E09/1637 **ID 36920** E09/1552 **ID 36924** E09/1507 **ID 36922**

Criteria	JORC Code explanation	Commentary
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• The planned drilling information is commercially sensitive and is not included in this report.

INTEREST IN MINING TENEMENTS
Athena Resources Limited 100%
Byro

E09/1507	E – Exploration License
E09/1508	LA – Miscellaneous Water Search Licence Application
E09/1552	
E09/1637	
E09/1638	
E09/1656	
E09/1657	
E09/1781	
E09/1938	
LA09/30	
LA09/37	
LA09/38	

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.