ASX: AHN

Issued Capital
812,967,558 shares
75,000,000 @ $0.02 options

Athena Resources Limited
ACN 113 758 900

Directors
Ed Edwards
Hau Wan Wai
David Wheeler
Clint Moxham

Company Secretary
Joe Graziano

About Athena Resources

AHN is an Australian ASX listed explorer and developer of high-grade iron ore assets in Western Australia.

The Company is focused on its Byro Project, strategically located in the Mid-West region 410km from the Port of Geraldton.

The Byro Iron Ore Project has potential to mine and supply premium grade, low impurity magnetite (>70% Iron Content) for the production of green steel, a fast-growing global market opportunity. The Byro Project also contains exciting base metal potential.

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Byro Industrial Minerals Project

FE1 Drilling Results MagSus

Highlights

- **Completion of RC and Diamond Drilling Program to update Mineral Resource Estimate (MRE) to JORC 2012**
- **All samples submitted with results for 80% received**
- **Results from DTR analysis anticipated in coming weeks**
- **Magnetic susceptibility (MagSus) and specific gravity (SG) readings correlate strongly with visual estimates of magnetite mineralisation**
- **Broad zones of magnetite mineralisation up to 103m in downhole width**

Athena Resources Ltd Chief Geologist Liam Kelly comments

"This drilling program was designed to increase the confidence level of the current Inferred Mineral Resource and to further establish geological continuity of magnetite mineralisation. We are very encouraged by the MagSus readings which clearly demonstrate magnetite mineralisation outside the modelled resource parameters. We look forward to receiving the results of the samples and progressing to an updated MRE."

Athena Resources Limited ("the Company") are pleased to announce completion of all data acquisition from the recent drilling program at the FE1 Deposit at the Companies Byro Industrial Minerals Project. Acquisition and compilation of data has included geological, structural, and geotechnical logging of all core, photography, magnetic susceptibility, and specific gravity measurements. This data will be integral and of sufficient quality to upgrade the confidence of the mineral resource when the MRE is completed.

A total of 849 samples were taken from chips and drill core and submitted to ALS Global for multi-element X-ray fluorescence (XRF) analysis which includes a suite of 24 elements. From this assay data, intervals will be determined for DTR test work. Previous DTR test work from drill samples at FE1 has shown that the grade increases substantially with magnetic separation.

The drilling program, completed during July 2022, included 15 Reverse Circulation (RC) drill holes, of which eleven were diamond tailed. Each of the diamond tails were cut, sampled, and submitted for assay. Project and drill holes location are shown in the attached map. A total of 1,304.95m of HQ diameter diamond core, and 1,038.3m of RC was drilled. The program will satisfy data gaps within the existing Inferred Mineral Resource and provide evidence to further establish geological continuity of magnetite mineralisation.

Magnetic susceptibility (MagSus) is a direct measurement of the concentration of magnetite minerals within the core and is an excellent tool in estimating the width and extent of mineralisation. Nearly every diamond hole drilled showed broadly elevated zones with readings frequently above the upper detection limit of the KT-10 instrument used.

MagSus readings from current drilling clearly demonstrate magnetite mineralisation outside the modelled Inferred Resource parameters. Figure 1 below, shows historic hole AHRC0034 and correlation of Magsus to iron grade. MagSus readings on the same section line from Hole AHRC0107D show continued mineralisation of up to 50m below the inferred resource model while AHRC0108D shows a broad intersection of high MagSus to the west and outside the modelled Inferred Resource.

Magnetic susceptibility intersections are tabulated in Table 1 below. These broad intersections correlate with heavily disseminated magnetite minerals that occasionally occur as a matrix within the host lithology. Due to the high metamorphic grade, such mineralisation is frequently banded with kinked and folded structures such as shown in Figure 2 and Figure 3.

Table 1. Downhole Magnetic Susceptibility Intersections.

Drill Hole	From (m)	To (m)	Interval (m)	Mag Sus 10^{-3} SI Units
AHRC0107D	78.3	99.6	21.3	1066.3
AHRC0107D	113.9	176.08	62.18	1465.74
AHRC0108D	116	132	16	1526.35
AHRC0108D	136.48	194.7	58.22	1617.59
AHRC0110D	34	44.97	10.97	883.98
AHRC0110D	50.82	71.2	20.38	1343.71
AHRC0110D	76.78	96	19.22	1548.24
AHRC0111D	93.63	197.25	103.62	1546.05
AHRC0112D	83	96.42	13.42	1025.78
AHRC0112D	117	132.94	15.94	1348.78
AHRC0112D	138	152.38	14.38	11117.5
AHRC0112D	167	210.43	43.43	1129.35
AHRC0112D	217	250.9	33.9	990.96
AHRC0113D	162	209	47	883.42
AHRC0114D	105	174.77	69.77	1339.23
AHRC0115D	63.99	121.24	57.25	1584.93
AHRC0115D	136.17	185	48.83	1571.52
AHRC0118	68	118	50	915.16
AHRC0120D	42	72	30	1140.85
AHRC0120D	80	98.12	18.12	1118.55
AHRC0121D	151	168.45	17.45	969.25

Interval measurement is an average throughout the interval and includes sections of internal dilution.

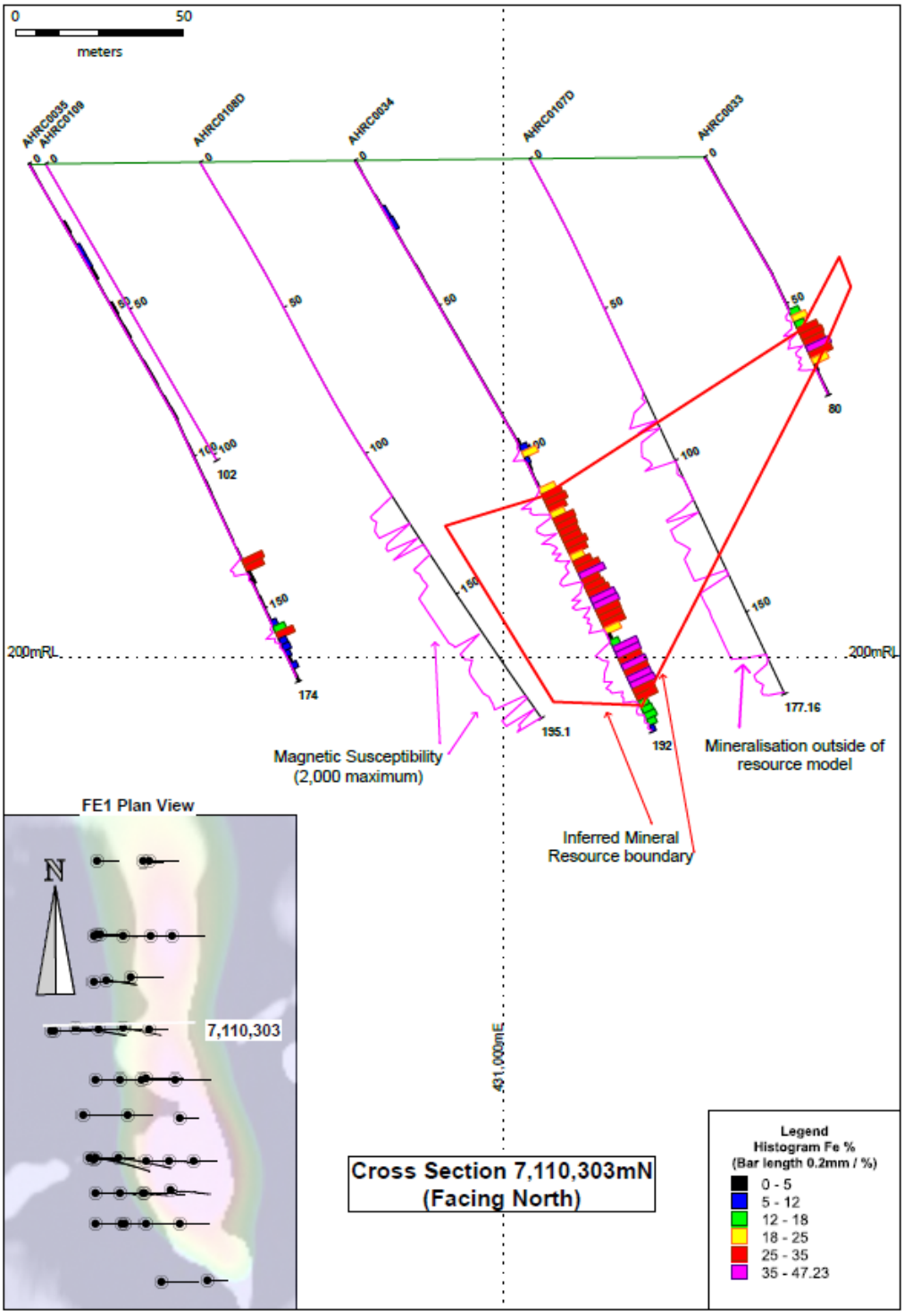


Figure 1. Cross Section 7110303.
Previous RC drill holes with Fe histograms within Inferred Mineral Resource.
The section shows recent drilling intersecting magnetite mineralisation with purple histogram of MagSus outside of inferred model, (Red box).

Figure 2. Gneiss banding of magnetite (silver colour), in biotite (black colour).

Figure 3. Concentrated matrix magnetite mineralisation.

Further support of the significant intersections was gained from the specific gravity results. Where heavily disseminated magnetite was present, the specific gravity measured was typically between 3.4 and 3.6. The 103.36m intersection of magnetite mineralisation in diamond drill hole AHRC0111D held and average SG of 3.36 across the entire intersection further substantiating the continuity of magnetite mineralisation.

Assay data is expected to be returned to AHN over the coming weeks, with DTR test work results due a few weeks thereafter. All data will be validated, compiled, and provided to Entech Mining Consultancy. Entech Pty Ltd have been commissioned by the Company to undertake the MRE, lifting the resource from inferred category to indicated. This will in turn reduce the risk and increase the confidence level for further economic studies, namely a pre-feasibility study (PFS) anticipated to commence shortly thereafter.

This announcement has been authorised by the Board of Directors

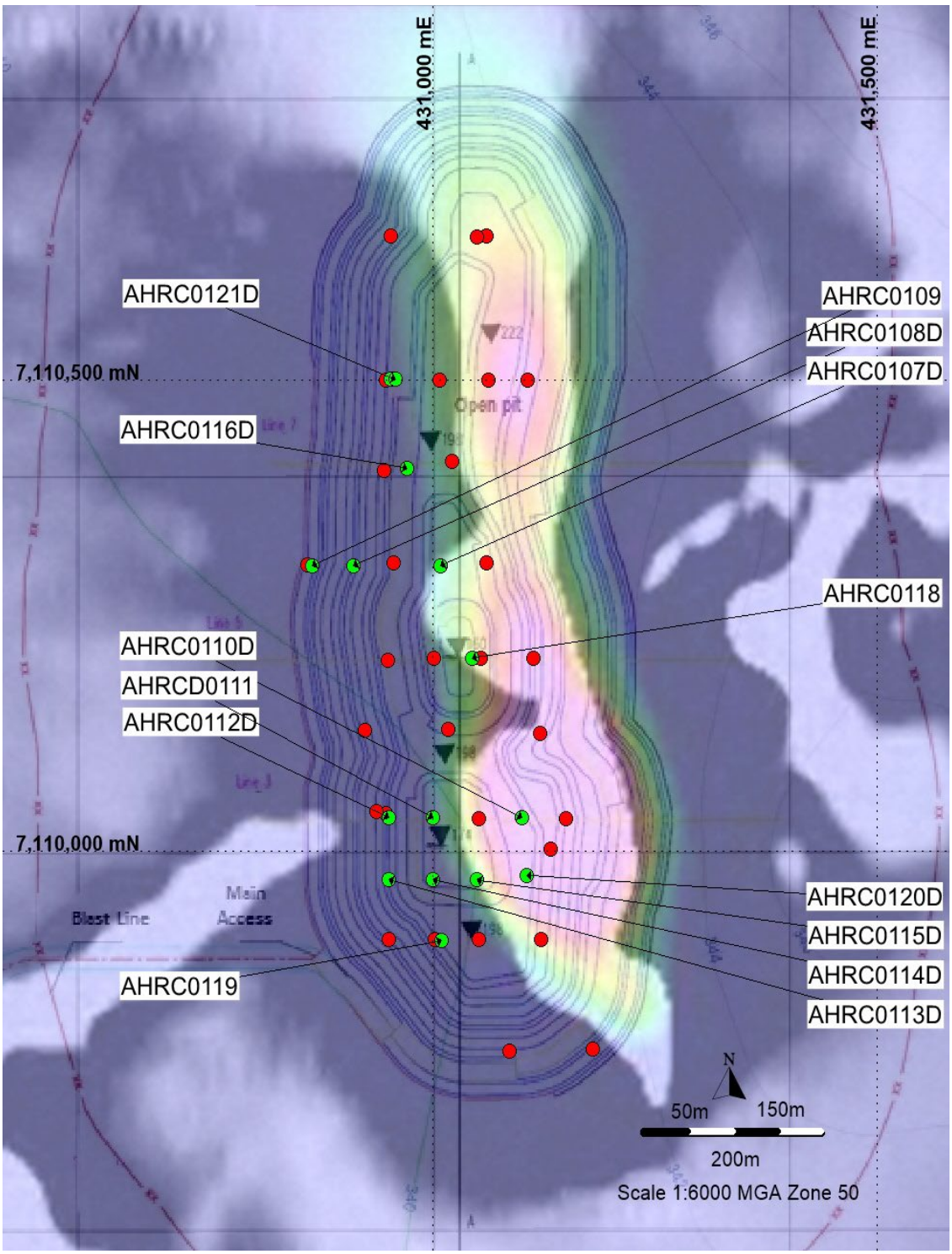
Yours faithfully

Ed Edwards

Executive Director
Athena Resources Limited

FE1 drill collars on magnetic signature overlaid with preliminary pit design

(Red dots – existing drill holes, green dots - infill holes).



Byro Industrial Minerals Project Location

CAUTIONARY NOTES AND DISCLOSURES

Disclosures

All data and Information of material nature referred to within this Report with reference to historical drilling have previously been reported on the ASX platform in compliance with the relevant JORC compliance reporting format at the time of data acquisition.

Cautionary Notes and 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. Some 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 Disclosure

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

Competent Person Statement

The information included in the report was compiled by Mr Liam Kelly, an employee of Athena Resources Limited. Mr Kelly has had over twenty years' experience as a geologist in mining and exploration and is a Member of the Australasian Institute of Mining and Metallurgy, (306501). Mr Kelly 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)". The historical information included is compliant with the relevant JORC Code, 2004 Edition, and new information announced post that version of the JORC Code is compliant with the JORC Code 2012 Edition. Mr Kelly consents to the inclusion of the information in the report in the context and format in which it appears.

INTERESTS IN MINING TENEMENTS

Athena Resources Limited 100%	Tenement Type
Byro Exploration	E – Exploration License
E09/1507	
E09/1552	
E09/1637	
E09/1781	
E09/1938	
Byro Project Mining	M - Mining Lease
M09/166	
M09/168	

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.*	• Drill core and cuttings were lithologicaly and geotechnically logged and measured for magnetic susceptibility. Solid core was measured and core recovery was recorded. All core runs where possible were ORI marked and an orientation line applied to the core. The measurement tool used for Magnetic susceptibility was a handheld KT-10 with serial number # 8791 • Specific Gravity (SG) of each sample was calculated using the dry weight and wet weight method. • Wet and dry readings for each sample were taken using an Adam CKT 8H scale incorporated in an industry standard SG wet and dry weighing station.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• Multiple magnetic susceptibility readings were taken over lithological units/intervals with the average reading noted from scanning mode. • SG station tare weight was zeroed before each measurement • The scale was checked with a 5kg calibrated weight every tenth sample.
	• *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.*	• Reverse Circulation drilling, (RC) was used to obtain 2m composite samples from which 5 kg samples were taken for assay per 2-meter interval' • Sampling from solid core did not overlap lithological boundaries. • Although the nature of RC drilling includes reduced inherent contamination from previous intervals it is an appropriate drilling method to determine basic lithology and to complete pre-collars for diamond tails.

Criteria	JORC Code explanation	Commentary
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).*	• Reverse Circulation Drilling, (RC) was used to pre-collar holes for diamond tails. • Pre-collars were drilled through the regolith to interpreted depths above the ore body upper contact with the Diamond tails coring through the ore body and up to 10m into the footwall.
Drill sample recovery	• *Method of recording and assessing core 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.*	• Original samples recovered from RC drill cuttings at 2m intervals • Collection of RC cuttings both chips and fines were retrieved from a cyclone splitter • No bias was observed between recovery and sample quality or loss or gain. • Solid core was measured, and core recovery was recorded. All core runs where possible were ORI marked and an orientation line applied to the core.
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.*	• Original RC drill chips were geologically logged as well as recording geotechnical features observable in chip over the full depth of the holes by a qualified geologist. • RC Sample piles and chip trays were photographed. • All RC intercepts were logged to an accuracy of 1m intervals. • HQ diameter core have been geologically and geotechnically logged using standard techniques to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • All core was photographed • Intersections are still being calculated and will be finalised on receipt of assays.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	• HQ diamond core has been quarter cut for assay and DTR work. Remainder in storage for metallurgy.
	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*	• Original RC sample splits were retrieved directly from dry rotary cyclone for assay

Criteria	JORC Code explanation	Commentary
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	• Samples were collected directly from cuttings and core, and are representative of the interval. • Samples are suitable for application of best practice XRF and DTR analysis as per ALS Laboratories
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	• Industry standard sampling preparation procedures were used such as Blanks, Standards and Repeat assays. Lab results will be 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.*	• 5kg splits were collected directly from cyclone using industry standard procedures and sent directly to lab. • Core was cut representing lithological boundaries and ore variation. • Blanks, Standards and Repeat assays have been included at set intervals throughout sampling.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Original average RC drill sample size retrieved was 5kg, average chip size is 2-20mm. Sample sizes taken are large enough to be representative of the whole rock constituents. • Diamond quarter core samples ranged from minimum interval 100mm to maximum interval of 2m and are appropriate to the grain size.
Quality of assay data and laboratory tests	• *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, 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*	• Samples are currently being submitted with assays pending.

Criteria	JORC Code explanation	Commentary
	accuracy (ie lack of bias) and precision have been established.	
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.*	• Initial inspection and logging by onsite Geologist • Holes have been twinned to interpret variability. • Samples and assays to be verified using standard QA QC methods • All primary data from drilling is recorded in the Company data base. • Assays pending
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.*	• GPS +/- 10m Drill hole locations were measured with Garmin hand held GPS. Accuracy is within +/-5m • MGA_GDA94 Zone 50 • Topographic surface recorded with handheld Garmin • Continuous down hole surveys were completed with a down hole north seeking gyro camera Axis/Reflex.
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.*	• No assay results have been reported. • Sample intervals were routinely 2m or less dependent on geology and mineralisation and are appropriate for the mineral resource estimation being considered.
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.*	• This report refers to testing down dip lithology with vertical hole orientations at -60° dip. • This report makes no interpretation or reference to the shape or size of the structure.
	• *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 is being 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 have 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.*	• The tenement referred to in this report, M09/166 is 100% Athena owned and operated within native title determined 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 tenement is 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.*	• Historic exploration within the greater 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).
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

Criteria	JORC Code explanation	Commentary

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:*
	  • *easting and northing of the drill hole collar*
	  • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  • *dip and azimuth of the hole*
	  • *down hole length and interception depth*
	  • *hole length.*
		• Refer to body of text for collar location, elevation, dip, azi, and EoH for holes drilled;

	• *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. • Average MagSus readings were taken from scan mode over 1 meter intervals and recorded from KT-10 magnetic susceptibility meter with serial number # 8791
	• *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 metal equivalent is referred to in this report
	• *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 relationship to the geometry of mineralisation or drill hole angle has been made.

Criteria	JORC Code explanation	Commentary
	• *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').*	• There is no relationship to the width or depth extent of the body only down hole length.
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.*	• All relevant data is tabulated within the body of the announcement.
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.*	• This report contains all meaningful results to date. • Assays are pending.
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 all meaningful results to the completion of drilling and data collection.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	Further metallurgical work will be undertaken to obtain definitive and conclusive data to be incorporated into the exploration database. If warranted further drilling will be undertaken to gain better understanding of the body shape, size and characteristic.
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Planned drilling information is not complete. • Future drilling is commercially sensitive and is not included in this report.