



ACN 113 758 900

16 November 2022

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

Dear Sirs,

**Assay Results from Infill Drilling for Indicated MRE – Revised**

Further to your query on this announcement we attach a revised Announcement as requested.

The changes to the original announcement include the following statement with regard to Table 1 Significant Infill Intercepts to Date on page 3.

*Table 1 contains all results to date for whole rock feed assay grades above a 10% Fe cut-off and where DTR concentrate assay grades were above a 65% Fe cut-off.*

In addition to this a number of changes have been made to the following section:

**JORC Code 2012 Edition – Table 1 report template**

Disclosure of cut-off for reported results.

This announcement is Authorised by the Board

Ed Edwards  
Executive Director  
16 November 2022

**ASX: AHN****Issued Capital**

870,467,558 shares

75,000,000 @ \$0.020 options

62,500,000 @ \$0.018 options

**Athena Resources Limited**

ACN 113 758 900

**Directors**

Ed Edwards

Hau Wan Wai

Peter Newcomb

**Company Secretary**

Ed Edwards

**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.

**Address**

21 Millstream Rise, Hillarys  
Perth WA 6025

**Tel:** +61 448 895 664

[ahn@athenaresources.com.au](mailto:ahn@athenaresources.com.au)

**BYRO MAGNETITE PROJECT**

**DTR Assay Results from Infill Drilling for Indicated  
Mineral Resource Estimation.  
Record Intersection 124m @ 70.6% Fe (DTR)**

**Highlights**

- The preliminary results for FE1 high-grade Davis Tube Recovery (DTR) have been received to undertake a JORC compliant Indicated Mineral Resource Estimation (MRE).
- DTR analysis to date demonstrate continued exceptional ultra-high grades and purity within the resource. Intersections include:

<b>AHRC0111D</b>	<b>103.6m @</b>	<b>70.9%Fe</b>	from	<b>91.3m</b>
<b>AHRC0112D</b>	<b>59.6m @</b>	<b>71.3%Fe</b>	from	<b>152.4m</b>
<b>AHRC0113D</b>	<b>39.2m @</b>	<b>70.5%Fe</b>	from	<b>166.0m</b>
<b>AHRC0114D</b>	<b>79.0m @</b>	<b>70.8%Fe</b>	from	<b>105.0m</b>
<b>AHRC0115D</b>	<b>124.27m @</b>	<b>70.6%Fe</b>	from	<b>62.0m</b>

FE Concentrate grades of up to 71.5 Fe%.

Magnetite in concentrate of up to 98.8%, (Fe<sub>3</sub>O<sub>4</sub>).

DTR Weight recoveries of up to 57.7%.

- Preliminary results expand the footprint of the orebody interpreted from the existing JORC compliant Inferred Resource.
- Results assist in addressing increased focus on the development of mines that can produce high-quality, low-impurity and low-cost iron ores for supply to growing global Green Steel demand.

**Athena Resources Ltd Chief Geologist Liam Kelly comments**

*"This drilling program was designed to extend the limits and confidence in the current resource model. We are very pleased with the quality of data and encouraged by the DTR results clearly demonstrating high grade magnetite mineralisation outside the modelled resource parameters. We look forward to receiving the remaining results and progressing to an updated MRE."*



Athena Resources Limited (“the Company”) are pleased to announce the preliminary results for FE1 high grade Davis Tube Recovery (DTR) from infill drilling at the globally unique FE1 magnetite project. These results support the milestone MRE for the upgrade of the existing inferred resource to an indicated mineral resource.

It is anticipated the remaining DTR analysis will be available for publication within the next two weeks and will be announced once validated and added to the Mineral Resource Estimation (MRE), data set.

The relationship of DTR magnetite iron grade - Magnetic Susceptibility (MagSus) and Specific Gravity (SG) data are routinely used in correlation for modelling variation and internal dilution within magnetite ore bodies. MagSus and SG data were collected onsite for every sample assayed. ALS Laboratories completed independent SG analysis of 1 in every 27 determinations and confirmed a 99.9% accuracy. Analysis of SG Data to date highlights an average SG within ore of 3.43g/cm<sup>3</sup> and an average SG of 2.74 g/cm<sup>3</sup> outside the ore allowing detailed modelling of the internal variation within the ore body.

The MRE data set is well advanced, already including geological, structural, and geotechnical logging of all core, photography, magnetic susceptibility, and specific gravity measurements. The Company considers the data collected to date is integral and of sufficient quality to add to the confidence of the mineral resource. The Company anticipates once the data set has been completed and submitted, Entech Mining will take up to 4 weeks to complete the MRE.

These latest DTR results in excess of 70%Fe further confirm the unique, high grade, low impurity nature of the Byro magnetite concentrate and potential product supply to high purity “Green Steel” production and other premium industrial processes with the uppermost grade and purity available.

Development timelines of the Byro project have become aligned with increasing industry action driven by environmental awareness and goals set by major steel producers towards low carbon emission steel production and decarbonisation of the mining industry. Work towards upgrade of existing furnaces and increase in the number of hydrogen reduction Electric Arc Furnace, (EAF) systems to cater for green steel demand is underway. The Institute for Energy Economics and Financial Analysis reported in June 2022, ThyssenKrupp, one of the large global steel manufacturers, is planning to begin replacing blast furnaces with DRI plants with integrated melting units from 2025.

As hydrogen reduction Electric Arc Furnace, (EAF) systems come online so too will the demand for suitable high grade feed stock. The Company has set a goal to be in a position to meet this demand and aims to complete the MRE and Pre-Feasibility Study (PFS) as soon as possible in order to undertake a full Definitive Feasibility Study (DFS) in 2023, allowing two years to make applications for mining approvals by late 2025.



Table 1. Significant Infill Intercepts to Date

Hole	Metres	Fe Grade	Metres	DTR %
AHRC0110D	33.2 m	@ 20.0% from 23.0m	33.2 m	@ 70.2% from 23.0m
	27.7 m	@ 25.9% from 60.5m	27.7 m	@ 70.5% from 60.5m
	9.0 m	@ 15.7% from 92.0m	9.0 m	@ 71.0% from 92.0m
AHRC0111D	16.0 m	@ 19.3% from 60.0m	16.0 m	@ 69.8% from 60.0m
	103.6 m	@ 29.6% from 91.3m	103.6 m	@ 70.9% from 91.3m
AHRC0112D	18.0 m	@ 19.5% from 82.0m	18.0 m	@ 70.3% from 82.0m
	15.2 m	@ 26.4% from 111.7m	15.2 m	@ 69.7% from 111.7m
	4.0 m	@ 17.9% from 136.0m	4.0 m	@ 71.1% from 136.0m
	59.6 m	@ 19.5% from 152.4m	59.6 m	@ 71.3% from 152.4m
	25.9 m	@ 19.3% from 218.1m	25.9 m	@ 71.1% from 218.1m
	3.5 m	@ 33.1% from 247.4m	3.5 m	@ 71.0% from 247.4m
AHRC0113D	10.5 m	@ 19.7% from 90.0m	10.5 m	@ 70.5% from 90.0m
	3.6 m	@ 19.5% from 119.5m	3.6 m	@ 71.3% from 119.5m
	22.1 m	@ 13.2% from 127.9m	22.1 m	@ 70.5% from 127.9m
	39.2 m	@ 18.9% from 166.0m	39.2 m	@ 70.5% from 166.0m
AHRC0114D	8.5 m	@ 18.1% from 80.0m	8.5 m	@ 70.5% from 80.0m
	79.0 m	@ 25.6% from 105.0m	79.0 m	@ 70.8% from 105.0m
	26.4 m	@ 23.9% from 189.6m	26.4 m	@ 70.7% from 189.6m
AHRC0115D	8.0 m	@ 12.4% from 42.0m	8.0 m	@ 70.4% from 42.0m
	124.3 m	@ 27.5% from 62.0m	124.3 m	@ 70.6% from 62.0m
AHRC0120D	12.6 m	@ 17.9% from 42.0m	12.6 m	@ 70.2% from 42.0m
	18.3 m	@ 27.1% from 57.7m	18.0 m	@ 70.0% from 57.7m
	18.1 m	@ 17.9% from 80.0m	18.1 m	@ 71.0% from 80.0m
	2.5 m	@ 32.2% from 137.6m	2.5 m	@ 71.1% from 137.6m
	8.0 m	@ 24.9% from 155.0m	8.0 m	@ 70.5% from 155.0m

(All assays were completed using Xray Florescence (XRF) for an extended iron ore suite for 24 elements)

Table 1 contains all results to date for whole rock feed assay grades above a 10% Fe cut-off and where DTR concentrate assay grades were above a 65% Fe cut-off.

High grade Magnetite concentrate is rarely greater than 68% in iron content compared to the Byro magnetite product at greater than 70%Fe. Every tonne of 68%Fe concentrate contains just over 40kg of impurities which harbour processing and quality problems. Engineering design and refined processing pilot trials completed on the Byro magnetite show we can deliver 71.5% iron ore with about 28% Oxygen, and include only 5 kg of impurities, approximately one eighth (12.5%) of the impurities of most producers around the world. Byro magnetite far exceeds the minimum requirement for hydrogen reduction Electric Arc Furnace, (EAF) systems.

DTR results reported in this announcement include drilling on a new infill line and Line 3, (Figure 1), within the southern portion of the resource. Infill collar details are tabled below. Holes for which the Company have completed data assessment are highlighted in bold.

**Table 2. Encryption Drilling Collar Details**

Hole ID	Type	MGA N	MGA E	RL	Dip	Azimuth	Diamond Tail Start Depth	Final Depth
AHRC0110D	DD	7110036	431100	349.5	-60	90	86.86	127.36
AHRC0111D	DD	7110036	431000	349.0	-60	90	108.16	198.26
AHRC0112D	DD	7110036	430950	349.0	-60	90	174.10	258.30
AHRC0113D	DD	7109970	430950	348.5	-60	90	116.60	209.90
AHRC0114D	DD	7109970	431000	349.0	-60	90	128.80	219.10
AHRC0115D	DD	7109970	431050	349.0	-60	90	139.67	186.27
AHRC0107D	DD	7110303	431008	348.5	-60	90	110.66	177.16
AHRC0108D	DD	7110303	430910	347.5	-60	90	95.40	195.40
AHRC0116D	DD	7110407	430971	349.0	-60	90	131.50	131.60
AHRC0117	RC	7110501	430952	348.0	-60	90	102.00	102.00
AHRC0118	RC	7110907	430990	348.0	-60	90	120.00	120.00
AHRC0119	RC	7109906	431010	348.0	-60	90	102.00	102.00
<b>AHRC0120D</b>	<b>DD</b>	<b>7109975</b>	<b>431105</b>	<b>350.0</b>	<b>-60</b>	<b>90</b>	<b>138.60</b>	<b>165.30</b>
AHRC0121D	DD	7110501	430958	348.0	-60	90	176.80	176.08

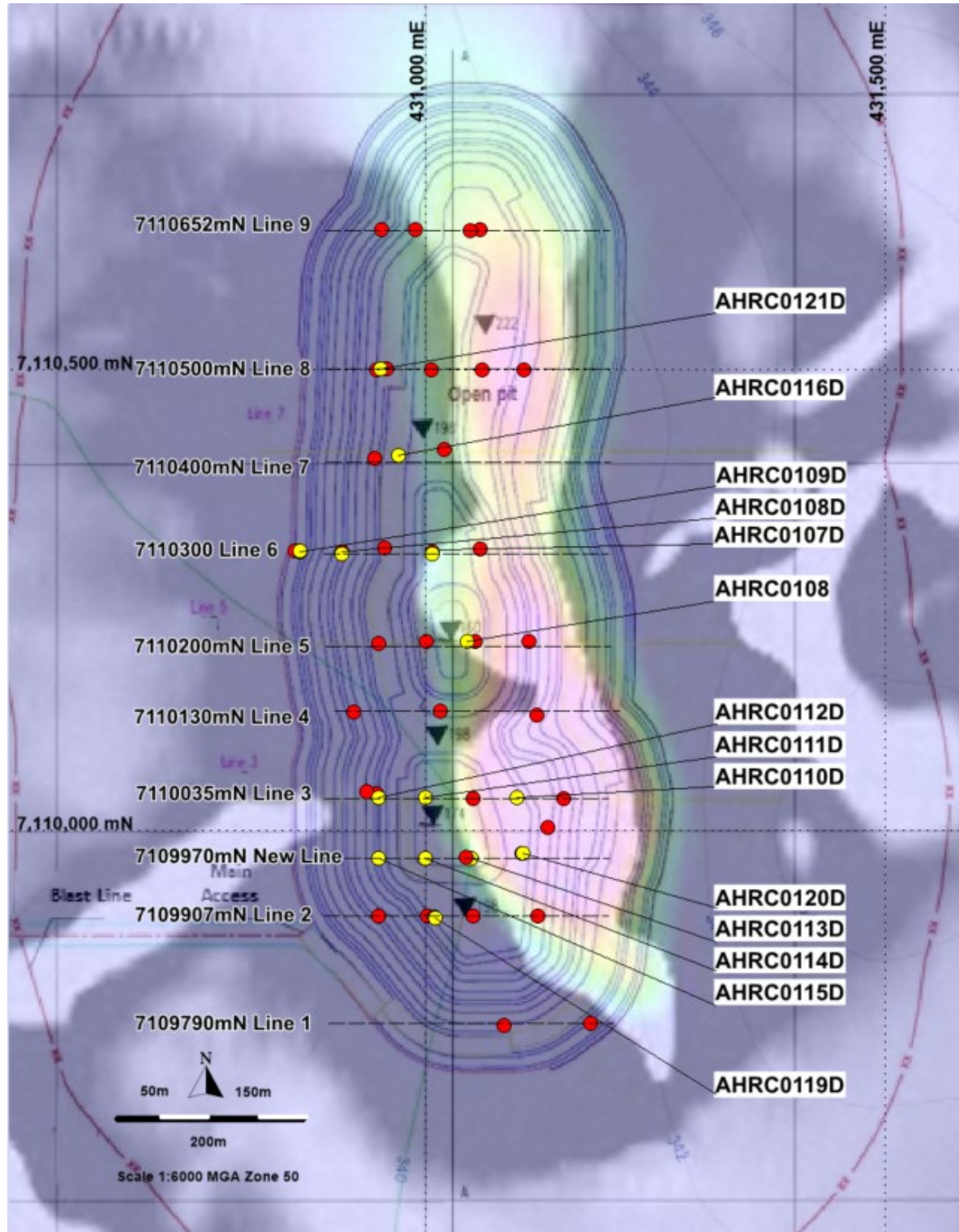
Coordinates: MGA94 Zone 50

### Sample Processing and DTR Grind Optimisation

The Byro magnetite ore is not only unique because of the stellar grades but also the simplicity of retrieval of the magnetite during processing with all samples processed using an optimised grinding technique. The results in Table 1 were achieved using the lowest cost factor due to the large magnetite grain size and brittle nature of the ore. The ore is crushed to 100% below 3.35mm and screened at 150 micron to achieve an 80% product passing a 106-micron screen. Residency time in the mill is measured in minutes and for this reason processing costs are a fraction of other common magnetite products. The Company is confident, supported by MagSus and SG data, in further high grade results for the MRE from the remaining outstanding DTR analysis.



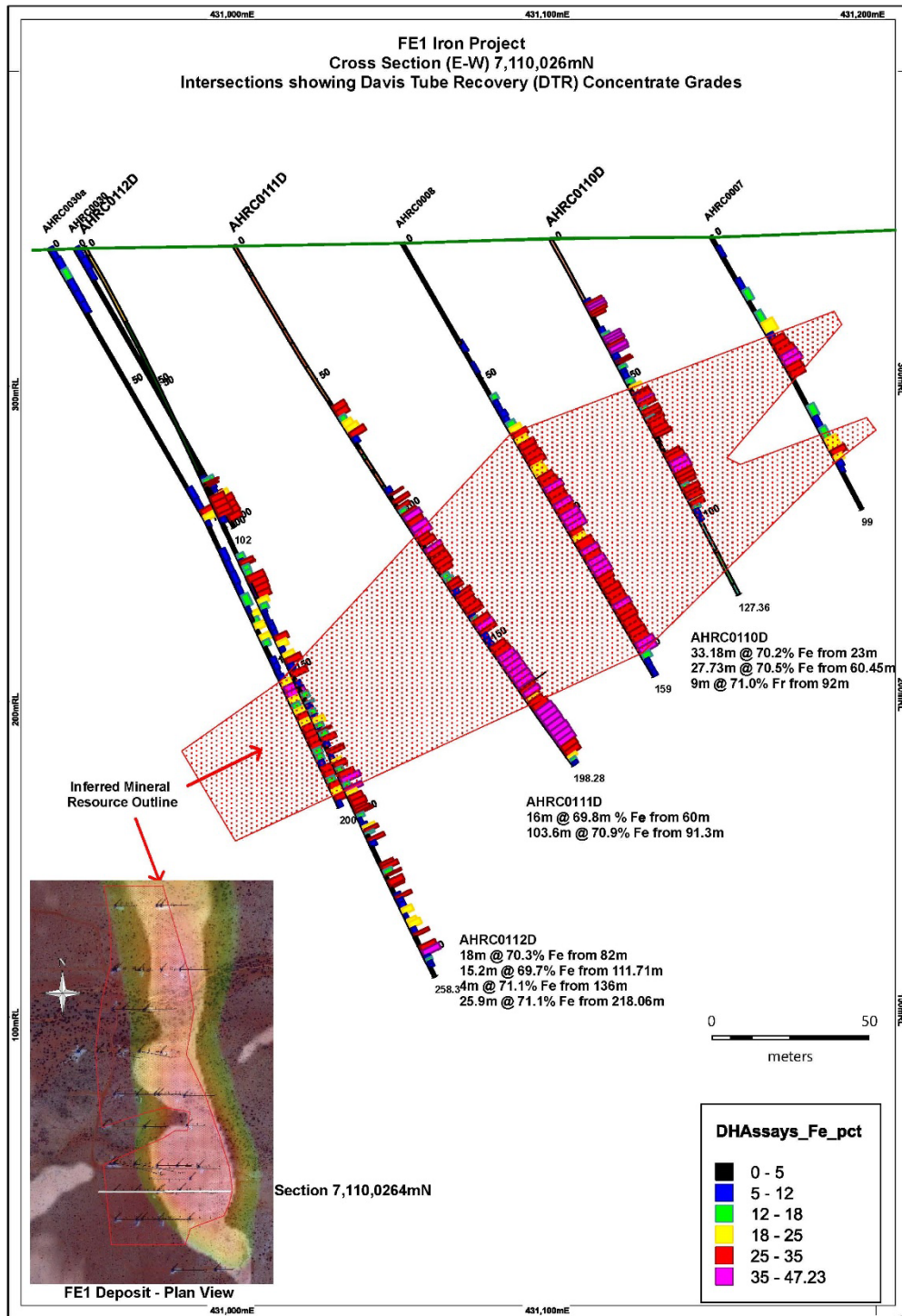
**Figure 1. Collar Locations**



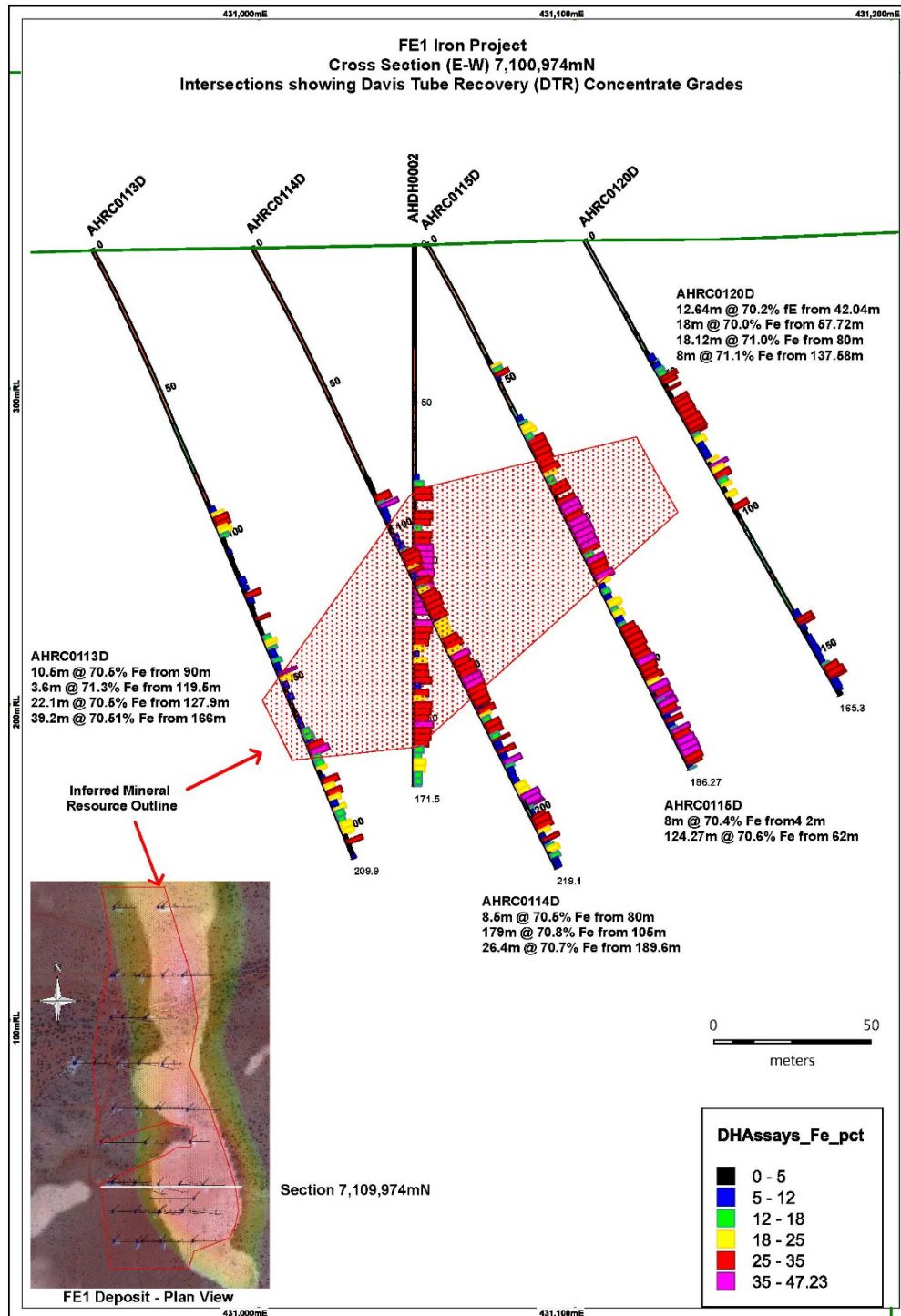
Coordinates: MGA94 Zone 50



**Figure 2.** Cross Section Line 3 (7,110,026mN)



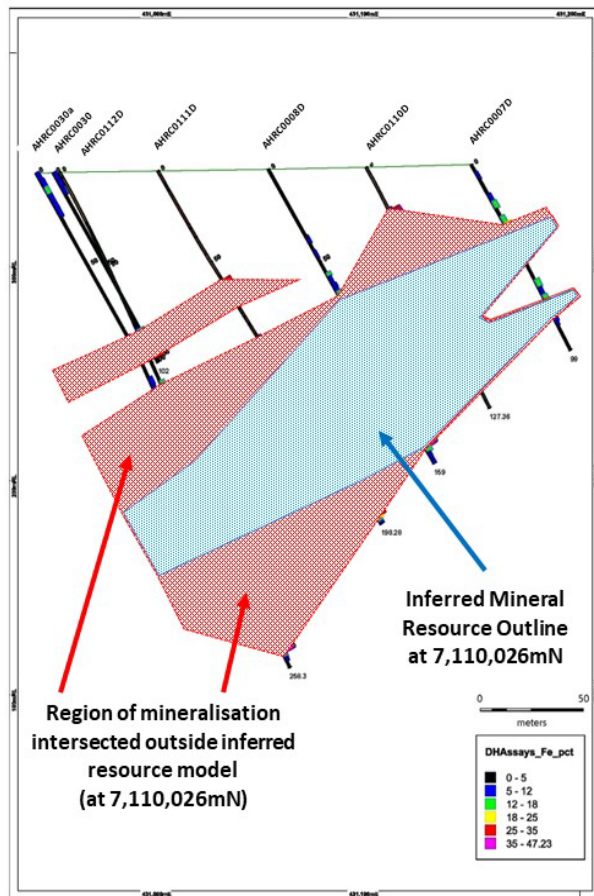
**Figure 3. Cross Section Infill Line, (7,100,974mN)**



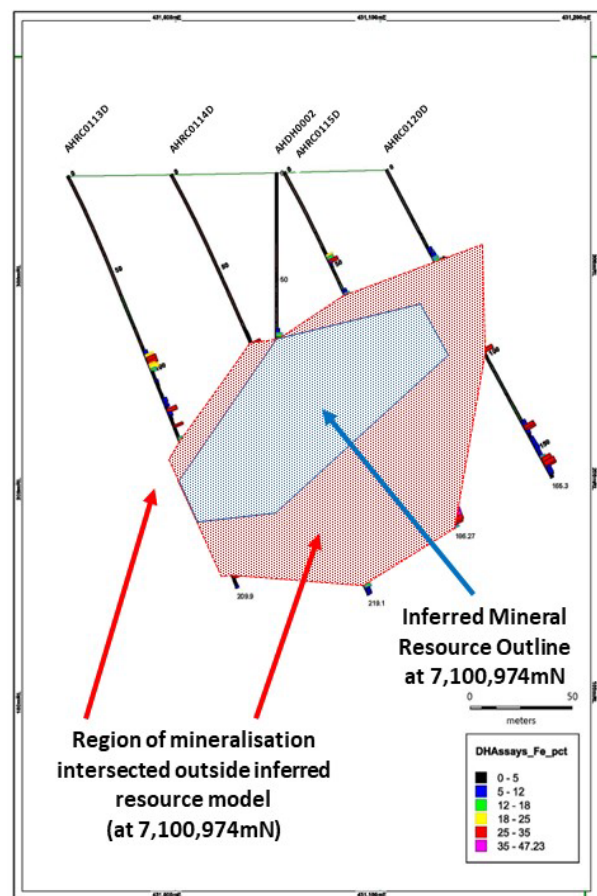


Two of the key preliminary findings from the data processed to date are the continued, exceptional high grade of the FE1 ore body greater than 70%Fe and the increase in the footprint of the ore body beyond that modelled in the inferred resource. The exact increase in volume will be determined once block modelling is completed through the MRE process for the entire ore body. Cross section interpretation on Line 3 at northing 7,110,296mN and the new infill line at 7,100,026mN graphically demonstrate the extent of magnetite ore intersected beyond the inferred model boundary

**Figure 4.** Magnetite outside section 7,110,026mN



**Figure 5.** Magnetite outside section 7,100,974mN



All infill program assays have been received by the Company. The company is working on QA-QC checks on the remaining data in order of receipt of assays. Outstanding results will be announced immediately on completion of this work.

Athena Resources Limited (ASX:AHN), which is based in Perth was listed on the ASX in 2006. Athena owns a 100% interest in the Byro Project through its subsidiaries Complex Exploration and Byro Exploration where it is exploring for iron ore, copper, nickel, and PGE's.



This announcement has been authorised by the Board of Directors

Ed Edwards  
Executive Director  
16 November 2022



## CAUTIONARY NOTES AND DISCLOSURES

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### **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

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Athena Resources Limited 100%	Tenement Type
<b>Byro Exploration</b>	E – Exploration License
E09/1507	
E09/1552	
E09/1637	
E09/1781	
E09/1938	
<b>Byro Project Mining</b>	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
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Drill core and cuttings were lithologically 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.</li> </ul>
	<ul style="list-style-type: none"> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	<ul style="list-style-type: none"> <li>Multiple magnetic susceptibility readings were taken over lithological units/intervals with the average reading noted from scanning mode.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Reverse Circulation drilling, (RC) was used to obtain 2m composite samples from which 5 kg samples were taken for assay per 2-meter interval'</li> <li>Sampling from solid core did not overlap lithological boundaries.</li> <li>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.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>Reverse Circulation Drilling, (RC) was used to pre-collar holes for diamond tails.</li> <li>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.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Original samples recovered from RC drill cuttings at 2m intervals.</li> <li>• Collection of RC cuttings both chips and fines were retrieved from a cyclone splitter.</li> <li>• No bias was observed between recovery and sample quality or loss or gain.</li> <li>• 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.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• RC Sample piles and chip trays were photographed.</li> <li>• All RC intercepts were logged to an accuracy of 1m intervals.</li> <li>• 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.</li> <li>• All core was photographed.</li> <li>• Further intersections are still being calculated and will be finalised on completion of QA-QC process on assays..</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> </ul>	<ul style="list-style-type: none"> <li>• HQ diamond core has been quarter cut for assay and DTR work. Remainder in storage for metallurgy.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Original RC sample splits were retrieved directly from dry rotary cyclone for assay.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Samples were collected directly from cuttings and core, and are representative of the interval.</li> <li>• Samples are suitable for application of best practice XRF and DTR analysis as per ALS Laboratories.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<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 such as Blanks, Standards and Repeat assays. Lab results will be reviewed and checked for deviation using lab certified references and in house analysis.</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>5kg splits were collected directly from cyclone using industry standard procedures and sent directly to lab.</li> <li>Core was cut representing lithological boundaries and ore variation.</li> <li>Blanks, Standards and Repeat assays have been included at set intervals throughout 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>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.</li> <li>Diamond quarter core samples ranged from minimum interval 100mm to maximum interval of 2m and are appropriate to the grain size.</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, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>All assays were completed using Xray Florescence (XRF) for an industry standard extended iron ore suite for 24 elements.</li> <li>The nominal DTR procedure used the following conditions: <ul style="list-style-type: none"> <li>Stroke Frequency 60/minute</li> <li>Stroke length – 38mm</li> <li>Magnetic field strength – 3000 gauss</li> <li>Tube Angle – 45 degrees</li> <li>Tube Diameter – 25mm</li> <li>Water flow rate – 540ml/min</li> <li>Washing time 10 minutes or until the water runs clear</li> </ul> </li> <li>Concentrate collected and assayed</li> <li>The tailings sample not collected</li> </ul>



Criteria	JORC Code explanation	Commentary
<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>Initial inspection and logging by onsite Geologist.</li> <li>Holes have been twinned to interpret variability.</li> <li>Samples and assays verified using standard QA QC methods</li> <li>All primary data from drilling is recorded in the Company data base.</li> <li>All Assays completed.</li> <li>QA-QC completed on data contained in this announcement.</li> <li>QA-QC underway on remaining results.</li> <li>Significant Intersections Reported by company personnel only</li> <li>Documentation and review is ongoing prior to final enter into database.</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>GPS +/- 10m Drill hole locations were measured with Garmin hand held GPS. Accuracy is within +/- 5m.</li> <li>MGA_GDA94 Zone 50.</li> <li>Topographic surface recorded with handheld Garmin.</li> <li>Continuous down hole surveys were completed with a down hole north seeking gyro camera Axis/Reflex.</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>Initial sample intervals were routinely 2m or less dependent on geology and mineralisation and are appropriate for the mineral resource estimation being considered.</li> <li>DTR composites were combined from sequential initial sample intervals.</li> <li>DTR composites form up to 5m intervals.</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>This report refers to testing down dip lithology with vertical hole orientations at -60° dip.</li> <li>This report makes no interpretation or reference to the shape or size of the structure.</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 orientation-based sampling bias has been identified in this data at this point.</li> </ul>

Criteria	JORC Code explanation	Commentary
<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>Chain of custody is being maintained from sample site to lab.</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>No reviews of data management systems have been carried out.</li> </ul>



## JORC Code, 2012 Edition – Table 1 report template

### Section 2 Reporting of Exploration Results

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

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>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.</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 tenement is 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 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).</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>

Criteria	JORC Code explanation	Commentary
<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>Refer to body of text for collar location, elevation, dip, azimuth, and EoH for holes drilled.</li> </ul>
	<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>Whole rock feed assay grades reported from above a 10%Fe cut-off.</li> <li>DTR concentrate assay grades reported from above a 65%Fe cut-off.</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 metal equivalent are referred to in this report.</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>There is no relationship to the geometry of mineralisation or drill hole angle.</li> </ul>
	<ul style="list-style-type: none"> <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>There is no relationship to the width or depth extent of the body only down hole length.</li> </ul>

Criteria	JORC Code explanation	Commentary
<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>All relevant data is tabulated within the body of the announcement.</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 contains all meaningful results to date for whole rock feed assays grades above a 10%Fe cut-off.</li> <li>This report contains all meaningful results to date for DTR concentrate assay grades above a 65%Fe cut-off.</li> <li>Further assays are pending.</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, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>This report contains all meaningful results to the completion of drilling.</li> <li>This report contains all meaningful results to date for whole rock feed assays grades above a 10%Fe cut-off.</li> <li>This report contains all meaningful results to date for DTR concentrate assay grades above a 65%Fe cut-off.</li> <li>Further assays are pending.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
	<ul style="list-style-type: none"> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Planned drilling information is not complete.</li> <li>Future drilling is commercially sensitive and is not included in this report.</li> </ul>