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RESOURCES

ASX Announcement
21st August 2025

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ATHENA CONFIRMS BYRO PRODUCES ULTRA HIGH-QUALITY IRON ORE CONCENTRATE PRODUCT GRADING 70.55% IRON

Athena Resources Limited (ASX: AHN) (“**Athena**” or the “**Company**”) is pleased to advise the Company has produced a 10kg product sample of high-grade magnetite concentrate grading 70.55% iron.

HIGHLIGHTS

- Ore from Athena’s Byro Magnetite Project (“**Byro**”) has produced a 10kg product sample of high-grade magnetite concentrate grading 70.55% Iron.
- Processing to achieve the high-grade concentrate product sample involved standard crushing, grinding and Low Intensity Magnetic Separation (LIMS).
- The high-grade magnetite concentrate product sample is of exceptional quality and contains no material deleterious elements or impurities.
- The new product sample will now be tested for Green Iron applications including suitability for pelletising potential and Direct Reduced Iron (“**DRI**”) production.

Athena’s Managing Director & CEO, Mr Peter Jones, was delighted with the new metallurgical test results and confirmation of Byro’s product potential:

“Athena believes that the future of Green Iron and Green Steel is entirely dependent on the future supply of premium quality high-grade magnetite concentrates. Byro’s ability to efficiently produce ultra-high-grade iron ore concentrates grading above 70% iron is a game changer and sets our project apart from peers. The results are particularly pleasing and are consistent with the world class test results Athena has achieved previously.”

About Athena Resources: AHN is an Australian ASX listed explorer and developer of highgrade 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 Dense Media Separation material, Green Steel and other Industrial Mineral applications. The Byro Project also contains exciting base metal potential.

Directors: John Welborn, Peter Jones, Peter Newcomb, Terry Weston, Garry Plowright • **Company Secretary:** Peter Newcomb • **Athena Resources Limited** ACN 113 758 900



HIGH GRADE CONCENTRATE PRODUCT SAMPLE

Using drill core samples from Athena's high-grade flagship FE1 ore body ("**FE1**"), which makes up part of the Company's 100% owned Byro Magnetite Project ("**Byro**"), Athena has produced approximately 10kg of iron ore concentrate grading 70.55% Iron.

The concentrate product sample was prepared using standard processing methods. The material was crushed and ground down to approximately P80 of 90um. The resulting material was then put through Low Intensity Magnetic Separation (LIMS) stage to produce a concentrate of 70.55% Iron.

Further details of the sampling and testwork methods are provided in the attached JORC Table 1.

BYRO MAGNETITE PROJECT

Athena's flagship Byro Magnetite Project is located within the Murchison Province of Western Australia. The Murchison Province forms a part of the mid-west region, a well-established mining and pastoral hub.

The Project is situated approximately 90km north of the Murchison Shire Settlement, 285km north-northeast of the town of Mullewa, 340km north-east of the Port of Geraldton, and 650km north of Perth. (refer Figure 1 Byro Project Location).



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Figure 1 Byro Project Location

The Byro Magnetite Project hosts a series of high priority magnetite targets including FE1, Byro South, and Mt Narryer. At FE1, Athena has defined a magnetite deposit with a Whole Rock Mineral Resource of 29.3Mt @ 24.7% Fe (10% cut-off) comprising 24.0Mt indicated at 25.1% Fe and 5.3Mt inferred at 22.7% Fe. This has yielded Magnetite Mineral Resource of 21MT @ 70.7% Fe (DTR 33.4%, 20% cut-off) comprising 17.7 Mt indicated at 70.7% Fe and 3.3 Mt inferred at 70.8% Fe.

[ASX Announcement](#)

‘MRE – upgraded JORC classification and increased tonnes’ – dated 17/1/2023



MID WEST GREEN IRON

Athena is a foundation partner along with Warradarge Energy Limited (“Warradarge Energy”) and Fenix Resources Limited (“Fenix”)(ASX:FEX) in the establishment of a new Green Iron Project in Western Australia’s Mid-West Region.

Green Iron is a description of iron products that have been produced via sustainable processes using carbon neutral energy (such as hydrogen rather than coal or natural gas or other fossil fuels). Producing Green Iron requires the purification of iron ore where hydrogen replaces coking coal in the reduction process. If the hydrogen used in the reduction process is produced using renewable energy, then the resulting purified iron can be produced with a reduction in carbon emissions by as much as 90% compared to traditional processes. Currently, steel production is responsible for approximately 8% of worldwide carbon emissions and so Green Iron is an important opportunity to significantly reduce global emissions. In addition to the environmental benefits, Green Iron is also an opportunity to develop more efficient steel making technologies, diversify the iron ore and steel economy, and support the development of renewable energy sources and other environmentally positive outcomes.

Almost all Green Iron technologies require ultra-high-grade iron ore concentrates (greater than 65%Fe and preferably greater than 68%Fe) as feedstock. As a result, there is a growing industry focus on sourcing higher grade iron ores for green steel production. Magnetite, with its higher iron content is a preferred feedstock for green iron production, especially when beneficiated to high-grade concentrates. Athena’s Byro Magnetite Project has the potential to produce a 70%Fe grade concentrate and so is ideally suited for potential Green Iron applications.

Western Australia’s Mid-West has been identified as a region that has the potential to be a global leader in green iron production due to the potential to produce hydrogen from available renewable energy resources (wind and solar) and the abundance of undeveloped magnetite resources with potential to produce high-grade iron ore concentrates.

For further details on the Mid West Green Iron Project see Athena’s ASX Announcement dated 14 July 2025. ([ASX Announcement](#))



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ABOUT ATHENA <https://athenaresources.com.au/>

Athena Resources (ASX: AHN) is an Australian mineral exploration company focused on the development of the Byro Magnetite Project in Western Australia. The Company aims to unlock the potential of its high-grade magnetite mineralisation to deliver value to shareholders.

Athena is focused on the exploration and development of high-quality magnetite projects in Western Australia to support the emerging global green steel industry. The Byro Magnetite Project is strategically located within 100km of Sinosteel's Jack Hills Magnetite Project and approximately 180km from Fenix Resources Limited's Iron Ridge Iron Ore Mine.

Byro has unique project advantages in quality, scale, location and metallurgy which provide an opportunity to partner with relevant regional project partners to build an integrated value chain. Work completed at Byro demonstrates the project can produce an exceptionally high-grade clean magnetite concentrate product with potentially very low capital intensity.

This announcement has been authorised for release by the Board of Athena Resources Limited.

Peter Jones
Managing Director
Athena Resources Limited

Email: peter.jones@athenaresources.com.au

CAUTIONARY NOTES AND DISCLOSURES

Disclosures

All data and Information of material nature referred to within this Report with reference to the Byro FE1 ore body have previously been reported on the ASX platform to meet the guidelines of the relevant JORC compliance reporting format at the time of data acquisition.

Forward Looking Statements

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Athena Resources Ltd (ASX: "AHN") planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may", "potential," "should," and similar expressions are forward-looking statements. Although Athena Resources Ltd (ASX: "AHN") believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties, and no assurance can be given that actual results will be consistent with these forward-looking statements.

Competent Person Statement - Geology

The geological information included in this ASX Announcement is based on information compiled by Mr Paul Hogan, a consultant to Athena Resources Limited. Mr Hogan is a Member of the Australasian Institute of Mining and Metallurgy (Member ID 226716). Mr Hogan has sufficient relevant experience in the styles of mineralisation and deposit type under consideration, and to the activity which he is undertaking, 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 Hogan consents to the inclusion in this Announcement of the matters based on his information in the form and context in which it appears.

Mr Hogan does not currently hold securities in the Company.

Competent Person Statement - Metallurgy

The metallurgical information included in this ASX Announcement is based on information compiled by Mr Terence Weston, a consultant to Athena Resources Limited. Mr Weston is a Member of the Australasian Institute of Mining and Metallurgy (Member ID 106114). Mr Weston has sufficient relevant experience in the styles of mineralisation and deposit type under consideration, and to the activity which he is undertaking, 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 Weston consents to the inclusion in this Announcement of the matters based on his information in the form and context in which it appears.

Mr Weston is a Director of Athena Resources and currently holds securities in the company.

Exploration Results

The information in this announcement that relates to exploration results has been extracted from the ASX announcement titled 'MRE – upgraded JORC classification and increased tonnes' released on 17/01/2023 and which is available at www.asx.com.au. The competent person for the exploration results in that announcement was Liam Kelly. The Company confirms it is not aware of any new information or data that materially affects the exploration results set out in the in the original announcements.

The information in this Announcement that relates to previous Exploration Results was prepared and first disclosed under the JORC Code 2012 and has properly and extensively cross-referenced in the text to the date of the original announcement to the ASX.

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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. 	Core was selected from previously cut sections of two select drill holes. All details previously reported. (AHN:ASX Announcement 17/01/2023)
	<ul style="list-style-type: none"> Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 	All details previously reported. (AHN:ASX Announcement 17/01/2023)
	<ul style="list-style-type: none"> 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. 	All details previously reported. (AHN:ASX Announcement 17/01/2023)
Drilling techniques	<ul style="list-style-type: none"> 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). 	HQ diamond drill holes. Details previously reported. (AHN:ASX Announcement 17/01/2023)
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. 	All details previously reported. (AHN:ASX Announcement 17/01/2023)
Logging	<ul style="list-style-type: none"> 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. 	All details previously reported. (AHN:ASX Announcement 17/01/2023)
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. 	HQ diamond core has been quarter cut.
	<ul style="list-style-type: none"> For all sample types, the nature, quality and appropriateness of the sample preparation technique. 	Samples considered to be of suitable quality and composition for the work carried out.

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 	No sub-sampling used
	<ul style="list-style-type: none"> 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. 	All details previously reported. (AHN:ASX Announcement 17/01/2023).
	<ul style="list-style-type: none"> Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> All samples considered appropriate.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> 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 accuracy (ie lack of bias) and precision have been established. 	<ul style="list-style-type: none"> The nominal DTR procedure used the following conditions: <ul style="list-style-type: none"> Stroke Frequency 60/minute Stroke length – 38mm Magnetic field strength – 3000 gauss Tube Angle – 45 degrees Tube Diameter – 25mm Water flow rate – 540ml/min Washing time 10 minutes or until the water runs clear Concentrate collected and assayed Low Intensity Magnetic Separation (LIMS) was conducted at 1100 gauss on wet sample The tailings sample not collected
Data spacing and distribution	<ul style="list-style-type: none"> 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. 	<p>Initial sample intervals were routinely 2m or less dependent on geology and mineralisation and are appropriate for the mineral resource estimation being considered.</p> <p>DTR composites were combined from sequential initial sample intervals</p> <p>DTR composites form up to 5m intervals.</p>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 	All details previously reported. (AHN:ASX Announcement 17/01/2023)
	<ul style="list-style-type: none"> 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. 	All details previously reported. (AHN:ASX Announcement 17/01/2023)
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	Chain of custody is being maintained from sample site to lab
Audits or reviews	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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.
	<ul style="list-style-type: none"> 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 Geology Drill hole Information	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties 	All details previously reported. (AHN:ASX Announcement 17/01/2023)
	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	All details previously reported. (AHN:ASX Announcement 17/01/2023)
	<ul style="list-style-type: none"> 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"> 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.
	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 were used in this report. Whole rock feed assay grades reported from above a 10%Fe cut-off. DTR concentrate assay grades reported from above a 65%Fe cut-off.
	<ul style="list-style-type: none"> 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 are referred to in this report
	<ul style="list-style-type: none"> The assumptions used for any reporting of metal equivalent values should be clearly stated. 	No metal equivalent are referred to in this report

Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	
	<ul style="list-style-type: none"> <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported</i> 	There is no relationship to the geometry of mineralisation or drill hole angle.
	<ul style="list-style-type: none"> <i>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').</i> 	There is no relationship to the width or depth extent of the body only down hole length.
Diagrams	<ul style="list-style-type: none"> <i>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.</i> 	All relevant data is tabulated within the body of the announcement.
Balanced reporting	<ul style="list-style-type: none"> <i>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.</i> 	This report contains all meaningful results to date for whole rock feed assays grades above a 10%Fe cut-off. This report contains all meaningful results to date for DTR concentrate assay grades above a 65%Fe cut-off. Further assays are pending.
Other substantive exploration data	<ul style="list-style-type: none"> <i>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.</i> 	This report contains all meaningful results to the completion of drilling. This report contains all meaningful results to date for whole rock feed assays grades above a 10%Fe cut-off. This report contains all meaningful results to date for DTR concentrate assay grades above a 65%Fe cut-off. Further assays are pending.
Further work	<ul style="list-style-type: none"> <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> 	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.
	<ul style="list-style-type: none"> <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> 	Drilling information is not complete. Future drilling is commercially sensitive and is not included in this report.