ASX Announcement
October 2023

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QUARTERLY ACTIVITIES REPORT

QUARTER ENDED SEPTEMBER 2023

Exploration Activity for the Quarter

Byro Fe1

Athena Resources Limited (ASX: AHN) ("Athena" or the "Company") is pleased to present its Quarterly Report for the period ending September 30, 2023.

COMPANY HIGHLIGHTS

- Appointment of Non-executive Directors.
- Announcement of Low Intensity Magnetic Separation (LIMS) positive test-work results.
- Attendance at the "AusIMM Iron Ore Conference" in Perth, during which contact was made with several major vendors of Process Equipment used in the production of magnetite concentrates. Discussions are continuing regarding incorporating items in the Byro Process Flowsheet.
- Completion of reconnaissance field work at Mt Narryer E09/1938.

Byro Magnetite Project

The Byro Magnetite Project is 340km north-east of the port of Geraldton in Western Australia's Mid-West region. Central to the project is the Fe1 magnetite deposit with a Whole Rock Mineral Resource of **29.3Mt @ 24.7% Fe (10% cut-off)** with a Magnetite Mineral Resource of **21MT @ 70.7% Fe (DTR, 20% cut-off)** (ASX: AHN Announcement 17 January 2023).

LIMS Optimisation Testwork Results

During the Quarter, Athena progressed the Byro Project Study with further metallurgical test-work. Composites were obtained from weathered and fresh ores from diamond drill holes AHRC0107D and AHRC01010D, drilled in the 2022 campaign. Following the initial testwork, (ASX: AHN Announcement 16 June 2023) wet Low Intensity Magnetic Separation (LIMS) produced high-grade magnetite concentrates of 67.4% to 70.4% Fe from weathered and fresh ores respectively.

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During the Quarter, further testwork was carried out to confirm the suitability of coarse "Cobber" LIMS, with results exceeding the rejection rate in the process mass balance. GR Engineering Services designed a process flow sheet which included a coarse wet LIMS (referred to as a "Cobber" LIMS) stage after primary grinding and prior to secondary grinding. The objective of the Cobber LIMS was to reject large percentages of non-magnetic material direct to tailings and reduce the load on secondary grinding, classification, and rougher/cleaner LIMS stages.

The recent LIMS testwork (AHN: ASX Announcement 26 July 2023) investigated the capabilities of the Cobber LIMS with a coarse feed of -1mm. The results included the following highlights:

- The mass rejection of all four composites were excellent with all four exceeding the allowance of 40% in the process mass balance.
- Rejection rates were up to 61.8%.
- The overall mass calculated rejection rate for the non-magnetic product is 51.1%

The higher rejection rate reduces the load by approximately 10% within the subsequent stages including:

- Secondary Grinding
- Classification
- Rougher/Cleaner LIMS Stages

This important testwork will result on an overall reduction in Capex, Opex, and Power Demand during these stages.

Given the success of the -1mm testwork, the next step is to continue investigation into slightly coarser feeds. The results would be expected to provide further load reduction and power demand at each subsequent processing stage.

Mt Narryer Project

The Mount Narryer Project consists of a single Exploration Licence (E09/1938-I) and single Mining Lease (M09/168-I). The Project is approximately 50km south of the Byro Magnetite Project and contains iron mineralisation in numerous outcrops across the project.

During the Quarter, company geologist carried out geological mapping and rock chip and soil sampling for lithogeochemistry and to test banded iron outcrops for iron content. A number of units were positively correlated with magnetic highs. A total of 50 rock chip samples and 20 soil samples were analysed. Results were pending at the end of the Quarter.

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Figure 1. Outcropping banded iron units at Mt Narryer Project

Links to relevant Exploration Announcements during the Quarter

24/07/2023	LIMS Optimisation Testwork Results
24/08/2023	Update on Status of Exemption Applications

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Corporate Activity for the Quarter

Management and Board

Non-executive Directors Terry Weston and Jeff Swingler were appointed in July 2023. See announcement link below for brief details of these Directors.

Shares and Options

No Shares or Options have been issued during the quarter.

Exploration expenditure

	This Quarter	2023 YTD
Information Systems	34,000	90,500
Travel	4,000	14,500
Field Camp	3,500	10,500
Surface Exploration	18,500	43,500
Geophysics and Remote Sensing	0	500
Ground Surveys	500	500
RC Drilling	500	2,000
Diamond Drilling	3,500	5,000
Metallurgy and Project Management	106,000	392,000
Tenement administration	31,000	61,500
Rent and Rates	42,000	124,500
	243,500	745,000

This expenditure is reported on an accrual basis.

YTD comparative is for the Calendar Year to date commencing 1 January 2023.

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Related Party Payments

During the period under review payments were made to related parties as follows:

During the period under review payments of fees and arrears were made to related parties in the sum of $182,262 excluding GST as follows:

Director	Services provided	b/fwd $	Payable $	Paid $
Ed Edwards	Directors Fees	-	15,000	15,000
Ed Edwards	Consultancy	-	30,000	30,000
Hau Wan Wai	Directors Fees	-	15,000	15,000
Jeff Swingler	Directors Fees	-	15,000	15,000
Peter Newcomb	Consultancy	29,500	72,400	85,212
Terry Weston	Consultancy	-	32,050	22,050
		29,500	179,650	182,262

Payables outstanding to related parties at the end of the quarter amounted to $26,888 excluding GST.

Links to relevant Corporate Announcements during the Quarter

03/07/2023	Director Appointment
03/07/2023	Director Appointment
21/09/2023	Outcome of Judicial Review

In addition to these specific announcements, the Month Quarterly Activities Report and Quarterly Appendix 5B Cash Flow Report were lodged on 31 July 2023 and the Annual Report to Shareholders and Corporate Governance Statement 2023 were lodged on 1 August 2023.

This announcement was authorised by the Board.

Yours faithfully

Ed Edwards
Managing Director
31 October 2023

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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.

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.

The Byro South, Whistlejack and the Mt Narryer ore bodies have had extensive drilling and metallurgical studies, drilling to date at the ore bodies supports aspects of the forward looking statement above. The quantity and grade reported for Byro South, Whistlejack and the Mt Narryer ore bodies are conceptual in nature. There has been insufficient exploration to define a mineral resource for each of the ore bodies. Further exploration is warranted to improve understanding and reduce uncertainty.

JORC Code Compliance Statement

Some of the information contained in this announcement is historic data that have not been updated to meet the 2012 JORC Code guidelines. 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 Martin Dormer is an employee of Athena Resources and currently holds securities in the company.

Competent Person Statement

The information included in the report is based on information compiled by Mr Martin Dormer, a consultant to Athena Resources Limited. Mr Dormer is a Member of the Australasian Institute of Mining and Metallurgy (Member ID 304615), and the Australian Institute of Geoscientists (Member ID 7370). Mr Dormer 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 Dormer consents to the inclusion in this report of the matters based on his information in the form and context 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	
Byro Project Water	
L09/112	L – Miscellaneous Licence