30 July 2021
Edmond Edwards
Executive Director
Athena Resources Limited

Athena Resources Limited

(ACN 113 758 900)

Supplementary Prospectus

Important Information

This is a supplementary prospectus (**Supplementary Prospectus**) intended to be read with the prospectus dated 14 July 2021 (**Prospectus**) issued by Athena Resources Limited (ACN 113 758 900) (**Company**).

This Supplementary Prospectus is dated 30 July 2021 and was lodged with ASIC on that date. Neither ASIC nor ASX take any responsibility as to the contents of this Supplementary Prospectus.

This Supplementary Prospectus should be read together with the Prospectus. Other than the changes set out in this Supplementary Prospectus, all other details in relation to the Prospectus remain unchanged. To the extent of any inconsistency between this Supplementary Prospectus and the Prospectus, the provisions of this Supplementary Prospectus will prevail. Unless otherwise indicated, terms defined and used in the Prospectus will have the same meaning in this Supplementary Prospectus.

The Directors believe that the changes in this Supplementary Prospectus are not materially adverse from the point of view of an investor. Accordingly, no action needs to be taken if you have already subscribed for Shares under the Prospectus.

The Company has issued electronic versions of this Supplementary Prospectus and the Prospectus. Electronic versions may be accessed at https://athenaresources-ri.online.computershare.com .

This Supplementary Prospectus and the Prospectus are important documents that should be read in their entirety. If you are in any doubt as to the contents of this Supplementary Prospectus or the Prospectus, you should consult your stockbroker, lawyer, accountant or other professional adviser without delay.

1. Reasons for Supplementary Prospectus

The Company wishes to update the Prospectus to correct and clarify the matters set out in sections 2 – 5 below.

The Company also wishes to correct and clarify information set out in the Independent Geologist Report. A new updated Independent Geologist Report is included in Annexure A of this Supplementary Prospectus.

The updates are not materially adverse from the point of view of an investor. As such, no action needs to be taken by Eligible Shareholders have already applied for their Entitlement under the Prospectus.

2. Reinstatement Conditions

The first paragraph on page 15 of Section 3.3 of the Prospectus be amended to include the below sentence at the end of the paragraph:

> "*Under ASX Guidance Note 33, such extension is restricted to no more than 3 months. The Company currently anticipates that it will satisfy the Reinstatement Conditions, including the exploration program Reinstatement Conditions, within 3 months of the Reinstatement Conditions Deadline subject to any unforeseen or external factors outside of the Company's control.*"

3. Future exploration

The Section titled "Future Exploration" under Section 6.3 of the Prospectus be deleted and replaced with the below:

> ***"Future Exploration***
>
> *In the coming months, the Company intends to focus predominantly on its nickel exploration.*
>
> *Athena is applying the latest technology to de-risk the 6 targets areas identified, by conducting high powered moving loop electromagnetic survey (**HP MLTEM**). The purpose of the survey is to develop high resolution de-risked and drill ready drill targets.*
>
> *Athena also intends to conduct infill drilling to restate the FE1 2004 JORC Inferred Resource to a 2012 compliant JORC Indicated Resource.*
>
> *In conjunction with development of the FE1 resource, Athena intend to improve confidence in the satellite magnetite ore bodies in support of the FE1 development."*

4. Use of Funds

The table in Section 6.4 of the Prospectus is deleted and replaced with the below table which includes a breakdown of the overheads:

The proceeds of the Rights Issue will be used as follows:

Proposed use of funds[1]	Amount ($)
Underwriting Fee (6%)	173,296
Overheads[2]	442,763
Exploration to be conducted in the near term (see Annexure A)	626,000

Exploration to be conducted in the mid-term (specific base metals activity) (see Annexure A)	662,000
Exploration to be conducted in the mid-term (industrial magnetite) (see Annexure A)	984,211
Total	**$2,888,270**

Note:

1. The above table is a statement of current intentions as at the date of this Prospectus. Shareholders should note that, as with any budget, the allocation of funds set out in the above table may change depending on a number of factors including, but not limited to, the outcome of operational and development activities, as well as regulatory developments and economic conditions. In light of this, the Company reserves the right to alter the way the funds are applied.
2. Overheads comprise the following:

Personnel Fees (including Director, company secretary and geologist Fees and Director & Officer Insurance)	279,300
Professional Fees (including ASX fees, ASIC fees and CPS monthly advisory fee)	112,462
Other office and administration costs (including general insurance, share registry fees, printing and postage and software fees)	51,001
	442,763

5. Hau Wan Wai – Interest in the Company

Section 9.1(a) of the Prospectus incorrectly provides that Brilliant Glory Industrial Corporation Ltd holds 19.9% of Shares in the Company.

Section 9.1(a) is hereby amended so that 19.9% is deleted and replaced with 11.91%.

6. Independent Geologist Report

A new updated Independent Geologist Report is included in Annexure A of this Supplementary Prospectus (**New Independent Geologist Report**).

The New Independent Geologist Report replaces the previous Independent Geologist Report included with the Prospectus.

7. Entitlement and Acceptance Forms

Eligible Shareholders who have NOT previously submitted an Entitlement and Acceptance Form

To apply for Shares under the Offer you must use the Entitlement and Acceptance Form accompanying the electronic Prospectus and Supplementary Prospectus available at https://athenaresources-ri.online.computershare.com.

The Entitlement and Acceptance Form contains detailed instructions on how it is to be completed and the required payment methods.

Eligible Shareholders who HAVE previously submitted an Entitlement and Acceptance Form

No action needs to be taken if you have already subscribed for Shares under the Prospectus.

8. Consents

The Company confirms that as at the date of this Supplementary Prospectus, each of the parties that have been named in the Prospectus have not withdrawn that consent.

9. Directors' authorisation and consent

This Supplementary Prospectus is issued by the Company and its issue has been authorised by a resolution of the Directors.

In accordance with section 720 of the Corporations Act, each Director has consented to the lodgement of this Supplementary Prospectus with ASIC.

Edmond Edwards
Executive Director
For and on behalf of
Athena Resources Limited

Annexure A - Independent Geologist Report

GEOMIN SERVICES PTY LTD

INDEPENDENT GEOLOGIST REPORT

On the Basemetal and Industrial Magnetite Projects of Athena Resources at Byro Western Australia

30 July 2021

The Directors,
Athena Resources Limited,
Level 2, 46-50 Kings Park Road,
West Perth,
Perth, 6005

Dear Sirs

Independent Geologist Report on the Mineral Assets of Athena Resources Limited

Geomin Services Pty Ltd ("**Geomin**") has been engaged by Athena Resources Limited ("**Athena**" or the "**Company**") to prepare an Independent Geological Report ("**the Report**") on properties located in the Byro area of the Gascoyne Mineral Field of Western Australia which are owned by Complex Exploration Pty and Byro Exploration Pty Ltd, fully owned subsidiaries of Athena Resources Limited.

The Report is to be included in a Prospectus ("**the Prospectus**") to be lodged with the Australian Securities & Investments Commission ("**ASIC**"), on or about 15 July 2021, pursuant to Section 710 of the Corporations Act (2000) in relation to a proposed capital raising. The majority of the funds raised will be used for further exploration and evaluation of the mineral properties, and ongoing working capital.

This review is based upon information provided by the Company, along with technical reports by consultants, relevant published and unpublished data for the exploration properties, and personal knowledge of the areas by the Independent Geologist. A listing of the principal sources of information is included in this Report. Geomin has endeavoured, by making all reasonable enquiries, to confirm the authenticity, accuracy and completeness of the technical data upon which this Report is based.

This Report has been prepared in accordance with the Code and Guidelines for Assessment and Valuation of Mineral Assets and Mineral Securities for Independent Expert Reports ("**VALMIN Code**") and the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("**JORC Code**") December 2012 edition, and the rules and guidelines issued by such bodies as the ASIC and the Australian Securities Exchange ("**ASX**") which pertain to Independent Expert Reports. The Report complies with section 716(2) of the *Corporations Act 2001* (Cath) where consent is required if statements have been attributed to third parties.

In consideration of the definition provided by the ASX and in the JORC Code, these properties are a mix of *early-stage and mid-stage exploration projects*, which are inherently speculative in nature. The properties are considered to be sufficiently prospective, subject to varying degrees of risk, to warrant further exploration and development of their economic potential, consistent with the programmes proposed by Athena. Mineral Resources estimated in accordance with JORC 2012 guidelines have not previously been reported for the Projects included in this Report. Mineral Resource estimates in accordance with JORC 2004 are included in this Report, and have not been up-graded to JORC 2012 as there have been no material change in facts.

The Company has prepared staged exploration programmes, specific to the exploration potential of the individual licences, which are consistent with its budget allocations. It is considered that the Projects are sufficiently prospective to justify the proposed programmes and expenditure. The proposed exploration and development budgets exceed the minimum annual statutory expenditure requirement on the exploration properties.

This Independent Geologist Report has been compiled based on, and fairly represents, information and supporting documentation available up to and including the date of this Report. The information in this Report that relates to Exploration Results is based on information compiled by Dr Dennis Gee who is a consultant to Geomin. Dr Gee is a member of the Australian Institute of Geoscientists. Dr Gee has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code. Dr Gee has 56 years of relevant experience in the Technical Assessment of Mineral Properties.

Dr Gee consents to the inclusion in the Report of the matters based on his information in the form and context in which it appears.

Dr Dennis Gee, Geomin and its employees are not, nor intend to be, Directors, officers or other direct employees of the Company. The relationship with the Company is solely one of professional association between client and independent consultant. The review work and this Report are prepared in return for professional fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this Report.

Yours faithfully

Paddy Reidy,

Director

For and on behalf of:

Geomin Services Pty Ltd

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SUMMARY OF PROJECTS

Athena Resources has two mineral exploration and development projects in the Byro area of the Gascoyne Mineral Field of Western Australia. They occur in the high-grade metamorphic Archaean rocks of the Narryer Terrane within the northwest margin of the Yilgarn Craton. Rock assemblages include gneiss, migmatite, quartzite-banded iron formation and mafic-ultramafic intrusions, similar in geological setting to other high-grade metamorphic terranes that host the emerging Cu-Ni-PGE province at the Julimar Project under development by Chalice Mining Limited (ASX: CHN).

The *Byro Basemetal Project* is focussed on mafic-ultramafic bodies that may relate both to the ancient Manfred Layered Complex, and later gabbroic intrusions. Specifically, the Milly Milly Body has strong nickel and copper soil anomalies, highly anomalous rock chips on both its western and eastern contacts, and Ni-sulphide magmatic disseminations, established from limited RC drilling. Moreover litho-geochemical signatures show elevated basemetal and PGE signatures along with sulphur undersaturation. Several historic EM anomalies have not been effectively drilled, and new targets have been generated using more modern EM techniques that have been successful in finding blind Ni-Cu orebodies elsewhere in metamorphic terrains. Similarly, EM and geochemical anomalies define the regolith-covered Moonborough Prospect that is interpreted to be another mafic-ultramafic body. Two other such bodies may also exist in the area. Athena also has parts of yet another mafic-ultramafic body – the Imagi “Intrusion” which has previously been shown to be fertile for PGEs.

The *Byro Industrial Magnetite Project* relates to the resisters of coarse-grained metamorphosed BIF, which are uniquely devoid of iron-silicate minerals and other contaminants, and thus provide quality feedstock for magnetite iron ores. Davis tube recoveries “DTR” of drill material demonstrate that a high-quality magnetite concentrate can be produced at grind sizes much coarser than any other known magnetite deposit in Western Australia. This gives technical and financial advantages over other magnetite projects. Magnetite concentrates produced from extensive low-intensity magnetic separation “LIMS” tests fall into the category of High Purity and Super High Purity industrial magnetite, which has multiple industrial and speciality uses. Athena is therefore evaluating a development focussed primarily on the industrial metal market, with the project termed the *Byro Industrial Magnetite Project.*

Athena Resources has proposed work programs and budgets for both projects. The Byro Industrial Magnetite Project will aim to generate Mineral Resources estimated in accordance with JORC 2012 guidelines, and obtain further ore characterisation data for a formal pre-feasibility study. It will include 11 DD/RC drill holes, for which $533,811 has been budgeted. Future mid-term costs to deliver a comprehensive Pre-feasibility study of the Byro Industrial Magnetite Project are estimated at $2.46M.

Development at the Byro Basemetal Project will include an 18-hole RC drilling program targeting EM anomalies that have been sharpened by recently completed high-powered MLTEM surveys with SQUID sensors. Budget costs are $626,000.

A longer-term budget has been proposed by Athena, which the independent Geologist considers that this is a well-conceived program.

1. INTRODUCTION

1.1 Terms of Reference

Geomin Services Pty Ltd (ACN 623 624 251) (“**Geomin**”) has been engaged by Athena Resources Limited (ABN 69 113 758 900) to prepare an Independent Geological Report (“**the Report**”) on the Byro Projects in the Gascoyne Mineral Field of Western Australia. Athena has been listed on the Australian Securities Exchange (“**ASX**”) since 2006 but its securities are currently suspended from trading on the ASX.

This Report is to be included in a Prospectus (“**the Prospectus**”) to be lodged with ASIC for a non-renounceable entitlement offer of Shares by the Company. This report reviews exploration and assessment programs proposed by Athena and comments on their appropriateness.

This Report has been prepared in accordance with the Code and Guidelines for Assessment and Valuation of Mineral Assets and Mineral Securities for Independent Expert Reports (“**VALMIN Code**”) and the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (“**JORC Code**”) December 2012 edition, and the rules and guidelines issued by such bodies as the Australian Securities and Investment Commission (“**ASIC**”) and the Australian Securities Exchange which pertain to Independent Expert Reports.

The legal status of the tenure of the mineral assets has not been independently verified by Geomin, other than to ascertain the tenements are recorded on the latest spatial datasets of Department of Mines, Industry Regulation and Safety (“**DMIRS**”). The Report has been prepared on the assumption that the tenements will prove lawfully accessible for evaluation and development.

This Independent Geologist Report has been compiled based on, and fairly represents, information and supporting documentation available up to and including the date of this Report. Geomin has endeavoured, by making all reasonable enquiries, to confirm the authenticity, accuracy and completeness of the technical data upon which this Report is based. The information in this Report that relates to Exploration Results is based on information compiled by Dr Dennis Gee who is a consultant to Geomin (see qualifications, experience and independence below).

Consent has been given for the distribution of this Report in the form and context in which it appears.

1.2 Qualifications, Experience and Independence

Geomin is an independent, privately owned consulting firm which has provided exploration, mining and Mineral Resource consulting services to the minerals industry since 2018.

Mr Paddy Reidy MSc (Mineral and Energy Economics), BA (Hons, Geology) is the Director of Geomin with over 25 years experience in the Australian and International resource sector. Mr Reidy has extensive experience in project management, scoping and feasibility studies, project review, mineral asset valuation and mineral resource estimation across a wide range of commodities.

Dr Dennis Gee is the author of this Independent Geologists Report, and has over 56 years of professional experience as a geologist. He holds the degrees of BSc (First Class Hons) and PhD from the University of Tasmania, is a long-standing member of the Australian Institute of Geoscientists, and is a Graduate of the Australian Institute of Company Directors.

On graduation he worked for nine years with the Tasmanian Mines Department before joining MIM subsidiary Carpentaria Exploration Company based in Kalgoorlie. In 1972 he took up the position of Supervising Geologist with the Geological Survey of Western Australia (“GSWA”) guiding the completion of 1:250 000-scale geological mapping of the State, and later became Deputy Director of GSWA. In 1986 he took up the position of Technical Director of Reynolds Australia Metals, representing the owner’s participation in JV operations at Boddington, Mount Gibson and Marvel Loch gold mines, as well as responsibility for gold exploration in WA, NT and Qld. After withdrawal of Reynolds Metals from Australia he became Regional Exploration Manager for Mount Isa Mines subsidiary MIMEX. His subsequent positions were as Director of the Northern Territory Geological Survey and CEO of the Cooperative Research Centre for Landscape Environments and Mineral Exploration attached to CSIRO.

For the last 15 years he has been consulting to listed exploration companies and private syndicates on a range of commodities including gold, copper, zinc, vanadium, iron ore, heavy mineral sands, coal, potash and geothermal energy. He has held directorships with ASX-listed companies.

Information in this Report that relates to Technical Assessment and Valuation of Mineral Assets is compiled by Dr Gee, a Member of the Australian Institute Geoscientists. He has sufficient experience to qualify as a Practitioner as defined in the 2015 edition of the Australasian Code for the Public Reporting of Technical Assessments and Valuations of Mineral Assets.

Dr Gee has sufficient experience relevant to the style of mineralisation and types of deposits under consideration, to qualify as an Expert and Competent Person as defined under the VALMIN Code, and in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("**JORC Code"**).

Neither Dr Gee nor Geomin are, or intend to be a director or employee of the Company.

This Report is made in return for professional fees based upon agreed commercial rates.

Dr Gee consents to the inclusion in the Report of the matters based on his information in the form and context in which it appears.

1.3 Principal Sources of Information

This review is based on the information provided by the Company, and on the extensive open-file West Australian mineral exploration reports ("**WAMEX**") of the areas, along with the published geoscientific datasets and reports issued by Geological Survey of Western Australia ("**GSWA**"). Also the annual technical reports of the company, together with the digital data submissions have been reviewed. This information has been synthesized using the Independent Geologist's extensive professional experience and knowledge of the geological terrains of Western Australia.

The status of agreements, royalties or tenement standing pertaining to the assets was not investigated.

During the production of this report, the Independent Geologist spent 2 days on-site at Byro in the company of Athena Exploration Manger Mr Liam Kelly to review recent exploration developments, and to view all prospective areas and existing drill collars. The Independent Geologist has viewed selected drill cores and certificates of analyses from analytical laboratories. The Independent Geologist has no equity in the project, or any of the involved corporate entities.

The author has endeavoured, by exercising reasonable due diligence along with other associated enquiries, to confirm the authenticity and completeness of the technical data upon which this Report is based. Specifically the Independent Geologist has sighted a representative selection of analytical certificates, and has read all of the relevant consultants reports. Athena was given a final draft of this Report and requested to identify any material errors or omissions prior to its final lodgement.

1.4 Location and Access

The projects are located in the Murchison Shire in the central part of Gascoyne Mineral Field, on the Byro 1:250,000 Sheet. Access from the Port of Geraldton is via Mullewa and then on the Mullewa-Gascoyne Junction Road. Byro Homestead is 298 road kms from Mullewa. The Athena tenements, (bright red), main road network (light blue) and Shire boundary (crimson), main feed gas pipeline (solid green), and the formerly proposed but now-dormant rail-link proposal (dashed green), are shown in Figure 1.

Figure 1 Geographic Location of Byro Projects

2. TENURE

The projects of Athena are based on four near-conterminous exploration licences ("**ELs"**) around Byro Homestead, including an enclosed mining lease (Table 1). In addition, an EL occurs 65km to the southwest near Mt Narryer Homestead. The tenements are in the name of Complex Exploration Pty Ltd and Byro Exploration Pty Ltd, both being subsidiaries of Athena. The tenements are subject to Group reporting.

Tenement	**Area km^2**	**End Date**	**Project**	**Group Report No**
E9/1552	33.97	22/10/20121	Think Big	C51/2010
E9/1637 (south)	37.32	22/0302022	FE1	
includes M9/166	(6.73)			
E9/1637 (north)	37.03		Milly Milly	
E9/1507	222.15	22/10/2021	Moonborough	
E9/1781	49.31	13/04/2023	Whistlejack, Whitmark, Byro South	
E9/1938	33.99	28/06/22	Narryer	C48/2011
Includes M9/168	(7.37)			
Total	**413.77**			

Table 1: Tenement schedule of Athena Resources Limited

3. GEOLOGICAL SETTING OF ATHENA PROJECTS

The tenements of Athena lie in the Narryer Terrain which is composed of ancient gneiss and high-grade (granulite-facies) metamorphics in the northwest corner of the Archaean Yilgarn Craton. It is bounded to the north by the Proterozoic Erabiddy Shear Zone, and to the west by the Darling Fault which forms the entire western boundary of the Yilgarn Craton. Its southeastern boundary with the characteristic Archaean granite-greenstone terranes of the Yilgarn Craton is a complex accretion boundary. The entire Narryer Terrane is subsequently deformed by thrusts relating to the collision of the Proterozoic orogenic belts from the north.

In recent decades the Narryer Terrane has been the object of intense geological investigations, on account of it having the world's oldest rocks and the widespread distribution of zircon mineral grains of great antiquity – circa 4.4Ga. More recently it has come under intense exploration interest on account of its geological similarity with the gneissic metamorphics and intrusive bodies of the emerging Cu-Ni-PGE mineral province at Julimar and Yarrawindah.

The oldest component of the Narryer Terrane is a layered ultramafic-gabbro-anorthosite intrusive complex known as the Manfred Complex of age 3,730Ga (Rowe 2016, Occhipinti 2001). It was intruded into sialic crust of unknown nature, evidenced by 4.4Ga zircon grains that report as xenocrysts in anorthosite and as detrital grains in later meta-sedimentary greenstones at Jack Hills (Compston and Pidgeon 1986, Spaggiari et al 2007). The Manfred Complex is now expressed as dismembered segments scattered throughout the subsequently emplaced gneissic migmatite rocks, which include the Meeberrie Gneiss (3,650-3,620Ga) and the Dugal Gneiss (3,300 – 3,385Ga), and related granitic phases (Myers and Williams 1985, Myers 1988b, Kinny et al 1988). These magmatic events were accompanied by deformation and amphibolite-granulite facies metamorphism (Kinny et al 1988, Myers 1988a, Nutman et al 1993, Pidgeon and Wilde 1998). These gneissic terranes formed the basement upon which was deposited supracrustal sedimentary sequences containing banded iron formations (BIF), ultramafic and mafic volcanics, and siliciclastic sediments. The remnant quartzite and BIF bars scattered profusely throughout the reworked gneisses of the Byro area probably relate to this supracrustal event (Compston and Pidgeon 1986, Maas and McCulloch 1991). The later reworking event is related to emplacement of gneissic granite sheets and intrusion of gabbro bodies in the period 2750Ga – 2700Ga.

Tectonic Magmatic episode	Age Ga	Metallogeny
Pan Yilgarn granite sheets and plutons	2650-2600	
Gabbro intrusions (chonoliths)	2750-2650	Cu-Ni-PGE
Mets-sediments, quartzite, BIF	3280 - 2700	Fe
Dugal Gneiss	3300 - 3385	
Meeberrie Gneiss	3650 - 3620	
Manfred Complex	3730	Cu-Ni-PGE-Cr
Ancient basement	4400 - 3750	

Table 2: Tectonic history of the Narryer Terrane

There is strong similarity of the lithological components and geological evolution of the Narryer Terrane with the Jimperding Metamorphic Belt of the Western Gneiss Terrane, which host the newly-discovered Cu-Ni PGE deposits at Julimar. The association of BIF, quartzite, ultramafic layers, layered mafic-ultramafic intrusions, and late gabbro intrusions (chonoliths), is common to both terranes. This similarity with Julimar is recognised by Athena Resources, and is reflected in the Basemetal Project which complements the Industrial Magnetite Project.

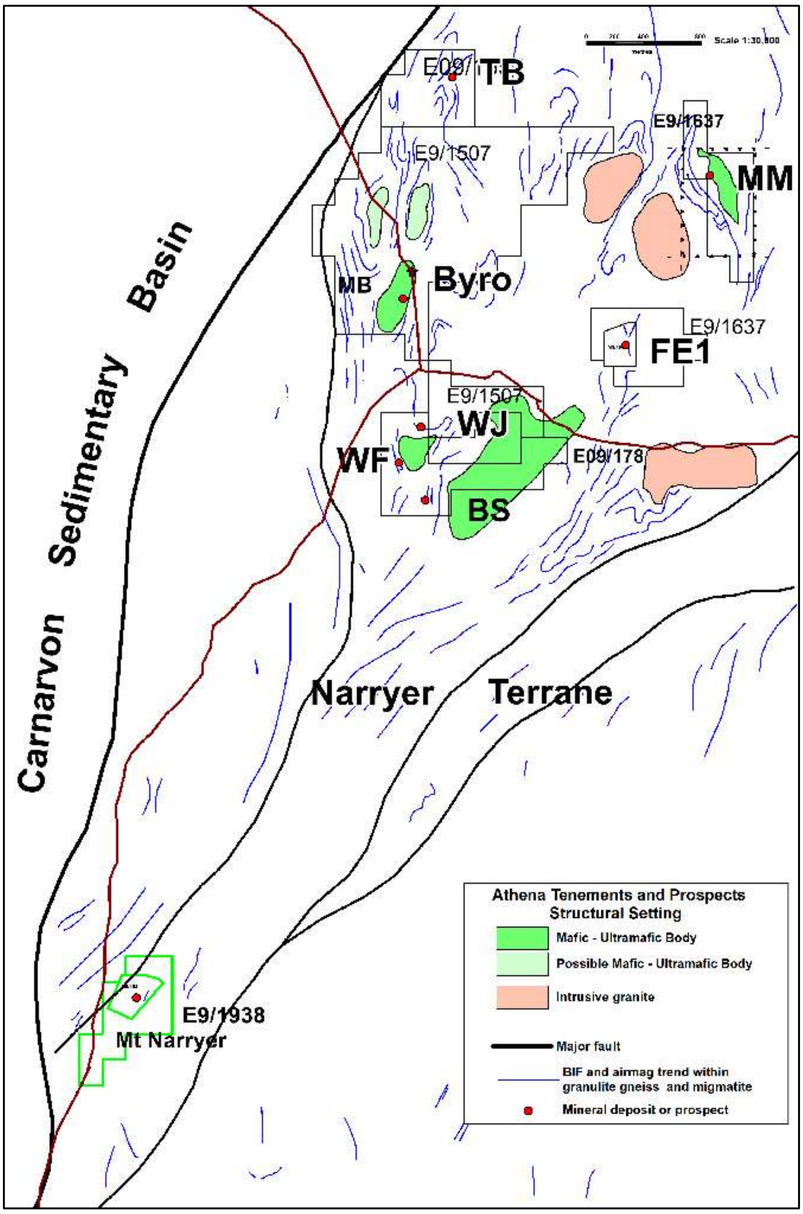


Figure 2: Structural and magmatic interpretation of Athena Byro Projects showing Milly Milly Body (MM), Moonborough Body (MB), FE1 deposit (FE), Whistlejack Prospect (WJ), Whitmarsh Find (WF), Byro South Prospect (BS), Think Big (TB) and Narryer Deposit (E9/1938).

Figure 2 shows the Athena project areas on a structural framework compiled from GSWA regional mapping (Williams et al 1983, Williams and Myers 1987) and various regional aeromagnetic datasets, including high-resolution surveys commissioned by Athena. The aeromagnetic linear traces shown on Figure 2 correspond closely to surface occurrences of BIF within the migmatitic gneiss. Some may also relate to lenses of ultramafic schist interfoliated within the migmatitic gneiss. The aeromagnetic traces form district-scale packages which may indicate the remnants of significant metasedimentary belts.

At least three bodies of mafic-ultramafic bodies occur within the Athena project areas - Milly Milly, Moonborough and Imagi. It is notable that the BIF traces tend to wrap around these bodies to form mega-boudins, suggesting they predate the deformation of the enclosing migmatitic gneiss, rather than being intrusions into the gneiss. For this reason they are termed *bodies* in this IGR, rather than *intrusions*. It is likely they are the disrupted segments of the Manfred Complex. Two similar bodies may occur just north of Byro – as shown in Figure 2. Also shown are two granite bodies that have the features of post-tectonic plutons. Pressure shadows around these plutons are potential sites of later hydrothermal gold mineralisation.

4. PREVIOUS EXPLORATION

Previous exploration of relevance to Athena's work programs has focussed on the mafic and ultramafic bodies in the general area, and are summarised in Table 3.

A No	Company	Date	Project	Comment
A2510	E Z	1972	Imagi Well	9 costeans exposing chromite lenses, 10m @17.25% Cr_2O_3
A8206	WMC	1978	Imagi Well	Concludes chromite lenses grossly uneconomic
A11047	Metals Ex	1982	Imagi Well	Chromite pods associated with UM, 1-5m wide, 100m long
A11295	Shell Mins	1982	Byro	Black ironstone with anomalous Cu, Zn Ni scavenged by Mn
A16800	Metals Ex	1985	Rebecca	Chromite pods near Moonborough
A29527	Newmont	1987	Imagi Well	Re-investigated chromite pods
A32073	Newmont	1990	Imagi Well	Showed chromite not magnetic, RAB gave no Ni, PGE values
A32606	Tarcoola Gold	1991	Milly Milly	Noted 0.29g/t Au in Byro Copper occurrence
A32662	Newmont	1990	Birrinjarra	Targeted chromite in anorthosite, RAB showed no major pods
A64178	Platinum Aust	2001	Imagi Well	IPO on PGE potential, showed Image Complex 15km x 6 km
A65996	Platinum Aust	2002	Imagi Well	Detailed mapping; 56 RC holes gave 48-141 ppb Pt+Pd
A68314	Platinum Aust	2003	Imagi Well	Detailed airmag; considers anomalies >100ppb is significant
A69999	Platinum Aust	2004	Imagi Well	2 DDH on Athena E9/1781; targeted 194ppb anomaly – poor result
A77790	Eagle Nickel	2008	Imagi Well	Interprets complex dipping steeply NW, facing SE
A86138	Red River	2009	Imagi Well	Red river undertook ground EM

Table 3: Annotated table of relevant WAMEX reports

In the period 1969 – 1972 (WAMEX A2510) **Electrolytic Zinc** "EZ" carried out exploration for chromite with geological mapping, ground magnetics, trenching and limited drilling. EZ interpreted a concealed mafic "intrusive" body 10 km long by 5km wide, which has become known in the industry as the Imagi Complex (sometimes referred to as Iniagi). Costeans indicated small podiform chromite lenses with a sporadic distribution, closely associated with "serpentinite". No immediate source was identified. Limited drilling identified norite on the south-eastern side of the body, with minor pyrite and chalcopyrite. The best results were 10m at 17.25% Cr2O3, and 4m at 1.4% nickel. The area of costeaning lies in a small excluded tenement surrounded by Athena's E9/1507 and E9/1781.

In 1977-78, **WMC** (A8206) also investigated chromite in the Imagi Body, using ground magnetics and percussion drilling. The best result was 10m at 8% Cr_2O_3.

Metals Exploration held a number of Mineral Claims in the period 1972-1982 over the Imagi Body WAMEX A11047, A16800). Assays for Co, Cu, Ni and Pt were not anomalously high, and the low Cr/Fe ratio of 1.68 was deemed to indicate low quality ore. The best value from surface sampling was 4.05% Ni, and 0.18% Co from an ultramafic cap rock, which is indicative of nickeliferous laterite.

In 1989-90 **Newmont** further investigated the chromite potential at Imagi. RAB drilling did not encounter any rich chromite pods, and it was concluded that the known chromite pods had no magnetic expression.

Redback Mining carried out exploration at Byro East (Milly Milly) and the Byro West (Imagi) in the period 1996 – 1998. Redback recognised Milly Milly as a discrete lens-shaped body 6km long and about 1.4km wide. Surface geochemical sampling was limited and no drilling was done.

The IPO of **Platinum Australia Ltd** ("PLA") in 2000 was based on the PGE potential of Imagi, which their geologists had recognised the significance newly-identified anorthosite phases. PLA considered the Imagi body to be up to 40km long and 6km wide.

Two lines of AC/RC holes were drilled across the interpreted position of the body at 100-200m intervals, which traversed an 8km-segment of Athena's E9/1781. From this, PLA interpreted a layered ultramafic intrusion with northwest steep dip, but facing southeast. Several intervals of plus 100ppb combined Pt and Pd were encountered, which PLA considered to be significant and encouraging (WAMEX A64178, A68324). A drill target of 4m at 194ppb Pt+Pd was identified on the presumed northwestern side of the body. Two follow-up diamond drill holes encountered gabbro and anorthosite but failed to find any ore-grade PGE (WAMEX A69999).

In 2009 **Red River** in farmin to the ground held by Eagle Nickel undertook a moving loop EM survey of (A86138) in search Ni-Cu sulphides in a feeder-zone position of the Imagi Body. No significant conductors were detected.

As a commentary on previous exploration, it is evident that it has been ineffective for a number of reasons:

- The boundaries of the three mafic-ultramafic bodies that constitute remnants of the Manfred Complex are still poorly understood, due to the lack of lithological drilling and the enigmatic geophysical signatures.
- What targets have been identified have not been adequately tested by deep drilling.
- Almost no drilling has been done on the eastern contact of the Milly Milly Body.
- Surface geochemistry has been ineffective in defining drill targets.
- Modern advances in surface and down-hole EM techniques have not been employed.
- Emerging new models for Ni-Cu-PGE mineralisation, based on the chonolith concept have not been used.

5. YRO BASEMETAL PROJECT

5.1 Milly Milly Body

The Milly Milly Body occurs 23km east-northeast of Byro Homestead on E9/1637. It is mostly covered by jasper-chalcedony cap rock, and surficial colluvium. Aeromagnetic imagery clearly defines a lens shaped body 6km long and 1.2km wide, oriented north-northwest, with a somewhat sigmoidal shape. Regional geological mapping (Williams et al 1983, Williams and Myers 1987) depicted it to be enclosed within the gneiss unit *Agxb* which has thin resisters of BIF and ultramafic schist. However, detailed investigations by the Athena geologist reveal the enclosing rocks on both sides of the body are pelitic schist and gneiss, probably of metasedimentary protolith. A continuous BIF layer tracks along the western side approximately 1km west of the actual contact within this metapelite. Two RC drill holes (AHRC0023 and 24) confirm the intervening area is metapelite with talc schist bands, and intervals of quite high sulphur (4050 – 7000ppm).

Aeromagnetic imagery shows the BIF rafts wrap around the Milly Milly Body giving the appearance of a mega-boudin. This suggests it pre-dates the gneiss-forming event and relates to the dismembered Manfred Complex. However, the possibility of it being a later intrusion of chonolith style, within the gneiss and subsequently deformed by a later gneissic event, cannot be dismissed.

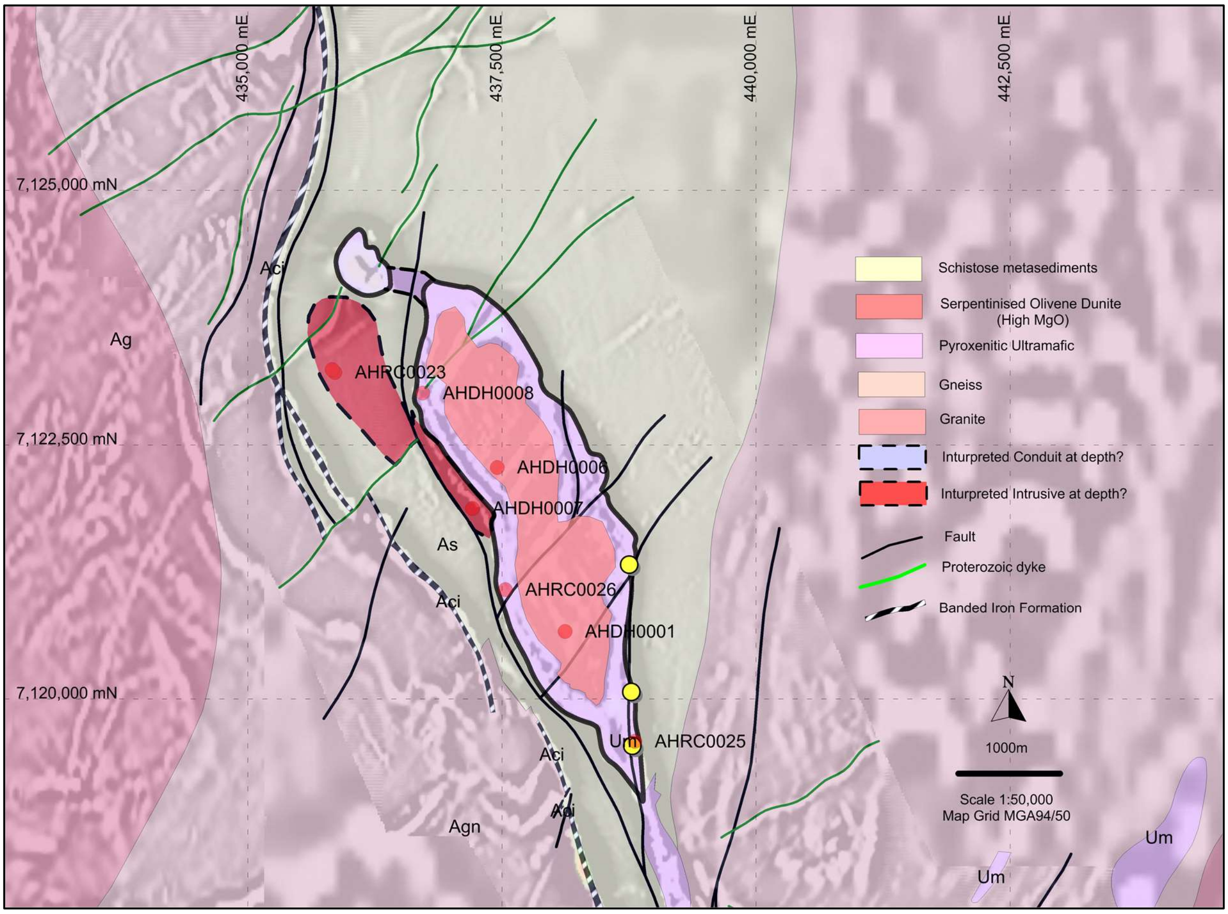


Figure 3: Geological interpretation of Milly Milly Body after Athena

In 2003, previous explorer Mithril Resources covered the Milly Milly Body with 120m x 30m soil geochemistry for basemetals. Elevated nickel occurs extensively over the body which is an expression of the extensive jasperoidal caprock. The copper shows semi-continuous anomalies at the 100ppm level all around the rim of the body (Figure 4). Several peaks up to 250ppm Cu are present, and not just on the western contact. Shallow vertical saprolite drilling by Mithril Resources produced best results of 13.7m at 1.2% Ni and 67m at 0.7% Cu (including 18m at 1.14% Cu).

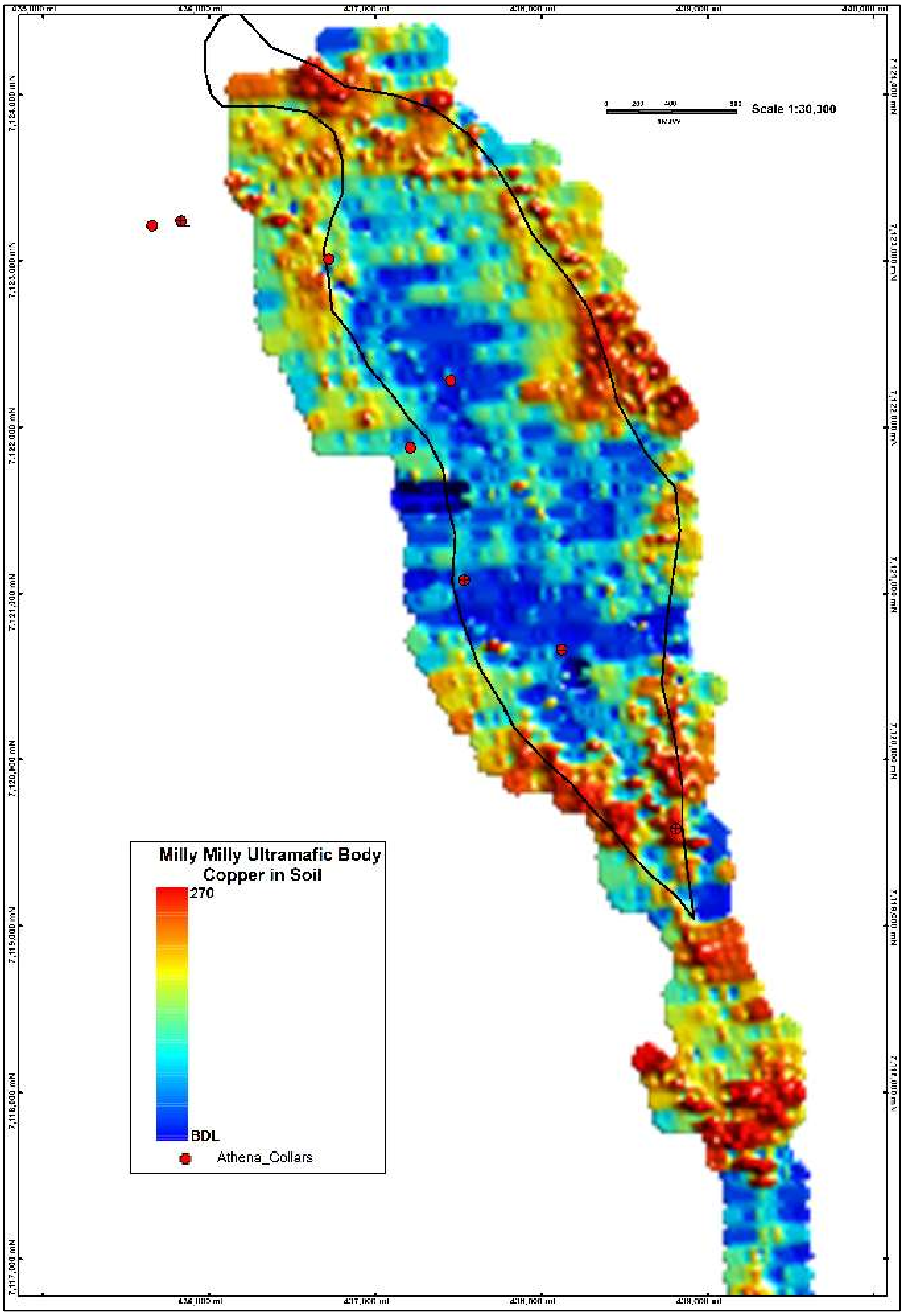


Figure 4: Copper in soil on the Milly Milly Body

The first deep hole into the Milly Milly body was Athena's AHDH0001 in 2011 which had a long diamond tail on the first RC hole, funded under the WA Government Co-funded Industry Drilling Program. It was collared centrally in the southern part of the body, 500m from the geochemically anomalous western contact. It targeted a VTEM anomaly and went to a depth of 500m. It encountered multiple zones of low-tenor nickel mineralisation:

- 1.7m at 0.31%Ni from 157m
- 22m at 0.30%Ni from 232m
- 1.5m at 0.31%Ni from 320m
- 2.6m at 0.31%Ni from 328m

Although low grade, these results indicate the likely presence of a sulphide Cu-Ni system. A subsequent DHEM has identified an off-hole conductor at about 140m downhole which has not been tested.

To better understand the nature of the body, Athena commissioned a detailed gravity survey on a 400m x 200m grid, with selected 50m infills. This produced a 3D model (Figure 5) directly matching the outline of the mafic-ultramafic body. It also identified a string of three high-mass anomalies along the favoured western contact. These became targets for three deep diamond holes partly financed through the 2014 WA Government Co-Funded Industry Drilling Program. Although this core-drilling program aimed to test Cu-Ni targets, the underlying objectives was to gain a better understanding of the geochemistry and geometry of the ultramafic body, and to provide a platform for further down-hole EM. The DHEM technique has proved remarkably successful in finding deep blind massive Cu-Ni sulphide deposits in mafic-ultramafic intrusions of the Albany-Fraser Province – for example the Nova Deposit.

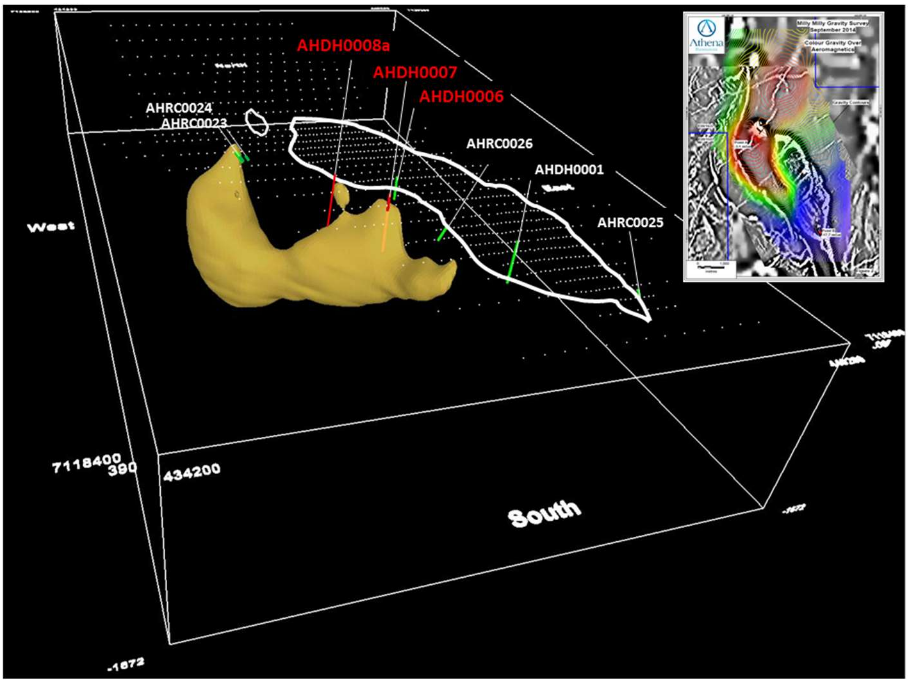


Figure 5: Gravity inversion model of Milly Milly

AHDH006 was targeted on a local gravity anomaly and a coincident nickel-soil anomaly in the northern part of the Milly Milly Body, near the western contact. It encountered two zones of nickel sulphide mineralisation at 70m and 225m downhole (141016). In both zones pentlandite stringer veins occur in meta-peridotite with disseminated pentlandite, pyrrhotite and minor native copper.

AHDH007 was drilled close to the central section of the western contact, again targeting a gravity anomaly and nickel-in-soil anomaly. It encountered low-tenor stringer and disseminated pentlandite-pyrrhotite mineralisation at 427m down hole, in meta-pyroxenite.

AHDH008 tested another gravity anomaly on a northern section of the western contact. It established an 85^0 westerly dip of the western contact, and a fracture zone between pyroxenite and meta-pelite (sedimentary gneiss). No significant mineralisation was encountered.

This 2014 core-drilling program suggests the Milly Milly body consists of a low-magnesian pyroxenite along the western contact and a core of high-magnesian peridotite in the centre. Drill information is lacking on the nature of the eastern contact. In summary, two zones of disseminated primary magmatic pyrrhotite-pentlandite mineralisation have been identified on or near the western contact. These zones host pentlandite stringer veins that have been remobilised from a primary zone. Geochemical work on the drill cores indicates that the ultramafic is unsaturated in sulphur, signifying the original magmas were fertile for sulphide crystallisation. This is further indicated by the occurrences of millerite (sulphur-poor nickel sulphide), and the presence of native copper rather than copper sulphide (eg chalcopyrite). Some zones of elevated platinum values were also encountered, which means the magma was also fertile for PGE.

The nature of the Milly Milly Body remains uncertain – whether it is part of a layered mafic-ultramafic complex, or a later ultramafic intrusion. It has to be noted that the eastern contact which hosts several significant copper-in-soil anomalies is untested.

5.2 Review of Previous EM

In conjunction with Southern Geoscience Consultants (SGS), Athena Resources has completed a detailed review of all previous electromagnetic (EM) exploration surveys at Milly Milly. These involved broad-scale airborne versatile time domain electromagnetics (VTEM), ground GeoFerret fixed-loop time-domain electromagnetics (FLTEM), ground moving-loop time-domain electromagnetics (MLTEM), and down-hole electromagnetics (DHEM).

The review determined that some of the previous techniques had inherent problems. The FLTEM and MLTEM ground surveys had induced potential (IP) and superparamagnetic (SPM) effects in the in-loop responses due to regolith effects. The FLTEM only surveyed single loop locations so that some potential conductors would have been poorly coupled and undetected. VTEM was deemed partly ineffective due to noise from conductive regolith, and IP and SPM effects masking late-time responses. Follow up ground EM was recommended but not completed on recognised VTEM anomalies.

For further EM surveys, SGS recommended the use of higher power ~100-200A low-frequency input, and SQUID B-field sensors to provide low noise, and overcome IP and SPM issues in the near surface.

The review identified three priority target areas (Figure 6) with moderate-to-strong, mid- and late-time responses that had not been effectively tested.

- **Target 1** - Central lobe where a VTEM high-amplitude anomaly immediately west of drill hole AHRC00026 / AHDH0001 at a depth of 140m has not been adequately tested. That hole gave elevated nickel of circa 0.3%Ni at that depth.

- **Target 2** - Western contact in the vicinity of AHDH007 (which had stringer and disseminated mineralisation), has not been covered effectively by ground or airborne EM at the depth of mineralisation.

- **Target 3** is a geochemical-gravity-VTEM anomaly in the meta-pelite 800m west of the Milly Milly contact. Twin holes HAHRC0023 and AHRC00024 tested a VTEM response and a high gravity anomaly. These holes encountered elevated sulphur and copper in talc schist. This could be remobilised mineralisation, and thus provide a vector to massive sulphide related to Milly Milly body.

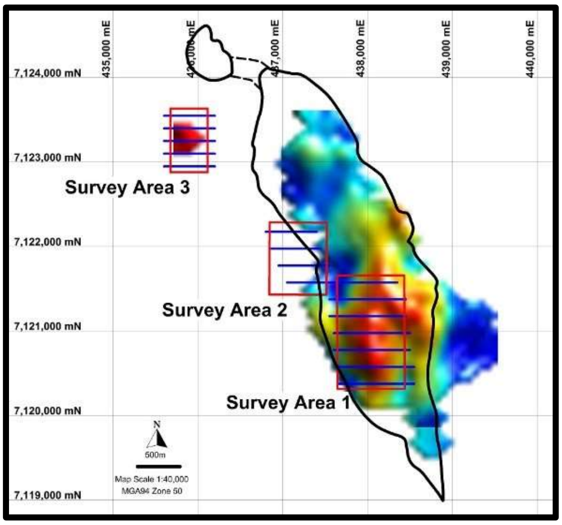


Figure 6: Proposed EM survey areas on Milly Milly

Considering the clear indications of a sulphide mineralising system in the Milly Milly Body, and the fertile nature of the ultramafic magmas, these are reasonable targets.

5.3 Moonborough Body

The Moonborough Body occurs on E9/1507 immediately west of Byro Homestead. It is an ovoid feature 5km long and 2km wide, and of similar aspect on aeromagnetic imagery to that of Milly Milly. It is mostly covered by alluvium and colluvium of Yarra Yarra Creek. However coarse-grained gabbro with copper staining occurs at the interpreted northern tip. As with the Milly Milly Body, aeromagnetic imagery shows the magnetic BIF traces wrapping around the rigid body. It is drilled by only two shallow drill holes (AHRC0019 and 20) which recorded 13m and 48m respectively of ultramafic rock. Interest is enhanced by the coincidence of a high-amplitude gravity anomaly.

Three new target areas have been identified at Moonborough from the review of the previous VTEM data by Athena Resources and Southern Geoscience Consultants (SGS). Target nomenclature follows from the three targets at Milly Milly.

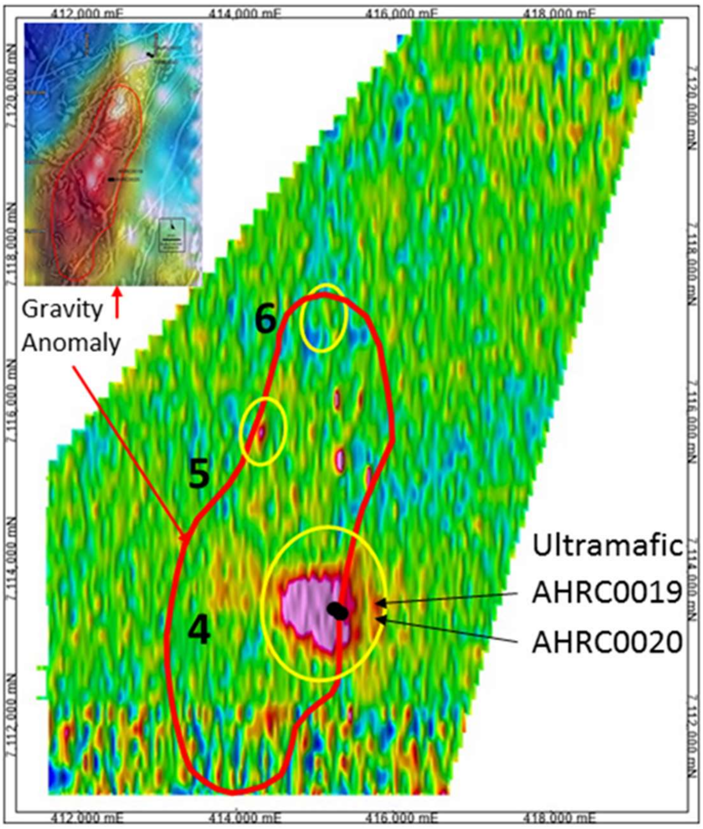


Figure 7: Moonborough EM targets

6. MAGNETITE DEPOSITS

6.1 Geology

Elongate rafts of quartz-magnetite rock are abundantly scattered throughout the migmatitic gneisses in the Byro and Narryer project areas, and are a source of magnetite ores. The rafts are interpreted to be highly metamorphosed sheared resisters of BIF within the migmatite. They generally strike northeast and dip steeply northwest, but show contortions around the mafic-ultramafic bodies. The lenses are spatially associated with discontinuous rafts of quartzite and thin layers of schistose talc ultramafics – the latter probably not being part of the dismembered Manfred Complex. Traces of meta-BIF and quartzite, as taken from outcrops presented on the 250k geological map of Williams and Myers (1997), augmented by aeromagnetic interpretations and drill data of Athena, are shown on Figures 2 and 8.

The quartz-magnetite rafts are metamorphosed to granulite facies. They have coarse granoblasic textures with moderate foliation, and grain sizes ranging from 0.5mm to 1.5mm - features which facilitate clean separation of the constituent grains during grinding. Ferro-silicate minerals (eg - hypersthene, grunerite) that generally plague most Archaean BIFs are generally absent. In essence they are essentially bi-mineralic rocks. They outcrop conspicuously in areas of exposure, but much of their extent is covered by alluvium, colluvium and laterite. They invariably have sharp high-amplitude aeromagnetic responses. Athena Resources has flown the Byro project area with 100m line spacing aeromagnetics, followed by detailed 50m and 25m line-spaced surveys. These surveys have defined up to 10 significant magnetite rafts, from which Athena Resources has identified the best occurrences for further appraisal. These prospects are shown in Figure 8, and have been given prospect names.

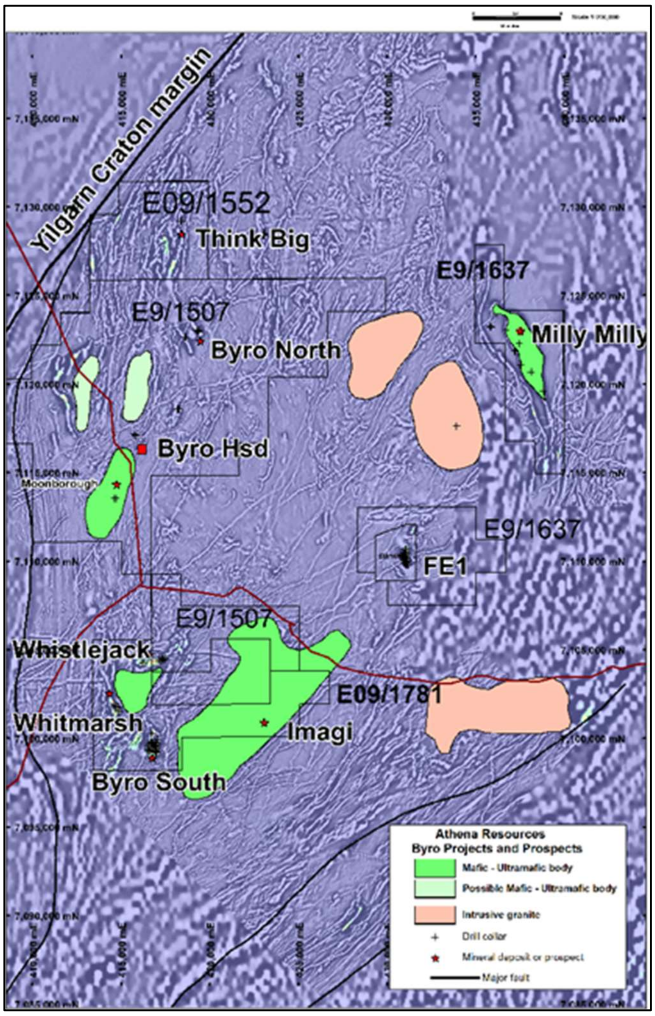


Figure 8: Byro area prospects on aeromagnetic image, showing geological interpretation and drill holes

6.2 Exploration Targets Defined

Athena has identified ten significant magnetite deposits from outcrop and aeromagnetic imagery. Exploration Targets compliant with JORC 2012 were developed for five areas containing the magnetite bodies (Table 4) by Liam Kelly, Exploration Manager of Athena Resources and announced on 11 August 2014 by way of a presentation loaded on the ASX platform. Targets were developed on the basis of:

- widths and strike lengths, as observed in the field or from high-resolution aeromagnetics,
- extrapolated to 100m depth (minimum case) and 150m depth (maximum case)
- Fe assays of surficial material
- Assumed SG of 3.5 t/m^3

Deposit	Range Mt	Range % Fe
FE1	2.0 - 6.3	31.1 - 42.1
Byro North	32.3 - 90.9	21.6 - 44.0
Byro South	23.9 - 164.6	21.6 - 38.6
Milly Milly Iron	22.6 - 56.7	24.8 - 42.4
Mt Narryer	37.8 - 127.5	36.4 - 46.4

Table 4: Exploration Targets for magnetite ore

The potential quantity and grade for these Exploration Targets are conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. The exploration targets are at varying stages of exploration. The most developed are FE1, Byro South, Whistlejack, Whitmarsh Find and the Mt Narryer magnetite deposits.

6.3 FE1 Deposit

The FE1 Deposit is located 17km east-southeast of Byro Homestead, and is covered by M9/166 which is enveloped by E9/1507. It is almost totally covered by colluvium, but a small outcrop occurs at the southeastern tip. From drilling and magnetics, the BIF raft is 1000m long, 45m thick, encased within migmatitic gneiss, and dips moderately northwest. It has been drilled by 30 RC holes mostly inclined at -60^{0} to azimuth 090^{0} (Figure 9). The boundaries of the ore body are well defined by the coincidence of geological and magnetic signatures, and drilling to down-hole depths of 200m (150m vertical).

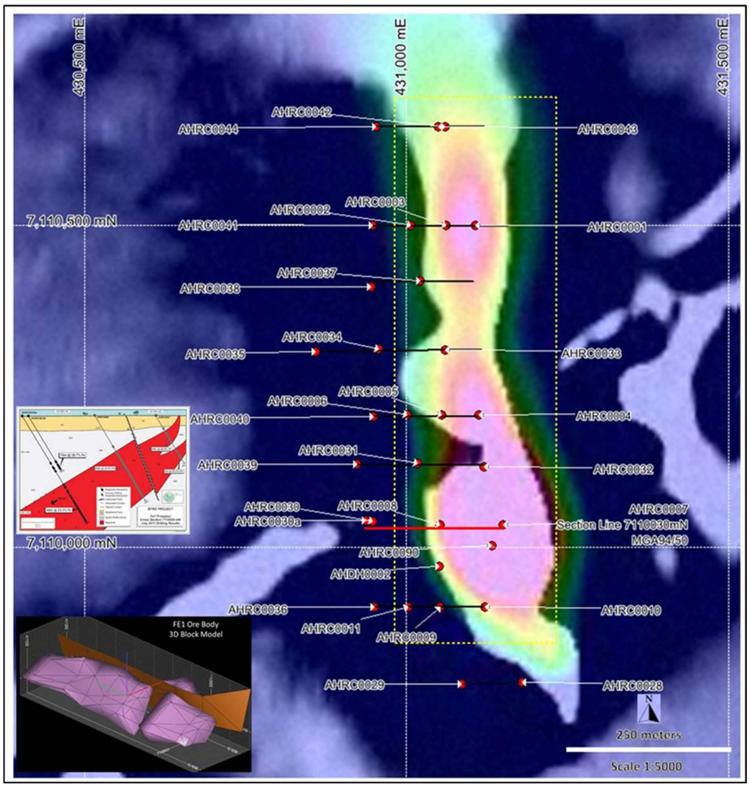


Figure 9: FE1 drill pattern on aeromagnetic image

Athena announced on the ASX on 28 Nov 2011 an initial Mineral Resource estimate of 22.8 Mt at 25.6% Fe at zero cut-off grades. This was done by AMC Consultants by Ordinary Kriging on 2m composite samples from 30 drill holes on a general 100 x 50m grid. Zero cut-off implies a sharp distinction between BIF and the enclosing gneiss. The Mineral Resource estimate was classified as Inferred in accordance with the then-JORC Code of 2004. The Independent Geologist understands that no further resource work was done on FE1 deposit because the focus turned to metallurgical test work. This is a reasonable strategy considering the requirements of a magnetite project. As discussed in the next paragraph the additional metallurgical studies have not impacted on the technical parameters applied to the 2011 Mineral Resource estimation. An updated Mineral Resource estimated in accordance with JORC Code 2012 guidelines is included within the proposed near-term work program (Table 12).

Initial DTR results from 10 RC samples composited over long intervals (up to 83m) at a constant grind size of p80 35µm gave early indication of a very pure concentrate (AHN announcement 21 Oct 2010).

Test	Grind Size μ	Fe% head	Mass pull %	Concentrate grade Fe%	SiO_2 %	Al_2O_3 %	S %	P %	LOI
DTR	35 μm	33.4	41.0	70.1	1.60	0.29		0.004	-3.1
LIMS	250 μm		49.4	68.6	4.86	0.30	0.001	0.01	-3.13
	150 μm		47.4	70.8	1.29	0.27	0.004	0.001	-3.26

Table 5: DTR and LIMS results for FE1 orebody

Follow-up wet LIMS tests by ALS at 900 Gauss through a range of grind sizes (AHN announcement 2 Aug 2011) confirmed the high purity, and indicated fine grinding was not necessary. Specifically, concentrate of 70.8% Fe could be produced at a grind size of p80 150μm with no benefit from finer grinding. An industry-acceptable product of 68.6%Fe could be produced at a very coarse grind size of 250 μm.

Average values are tabulated in Table 5. For the purposes of steel making 5% SiO_2 is considered the upper limit, with a preference below 3% SiO_2. Similarly, the Al_2O_3 threshold is 1.9% with a preference for <0.5%. Notably phosphorus and sulphur are at very low levels. These concentrate characteristics were considered quite superior to other magnetite projects mooted at the time. As discussed later in the Byro Industrial Magnetite Project section of this report, the high-purity product has induced Athena to pursue the speciality industrial market.

6.4 Byro South

Byro South occurs 16km south of Byro Homestead on E9/1781. It is one of several satellite deposits surrounding the Imagi Mafic Body. Laterite and wind-blown sand overlies sparse outcrop and sub-crop. Aeromagnetic interpretation and drilling indicates the presence of twin rafts of meta-BIF that extend for at least 1000m on a northerly strike and dip steeply west. The lenses vary from 10m to 50m in thickness. It has been drilled on a 100 x 200m pattern by 22 RC drill holes, of which three were diamond tailed, plus three diamond holes for DTR work

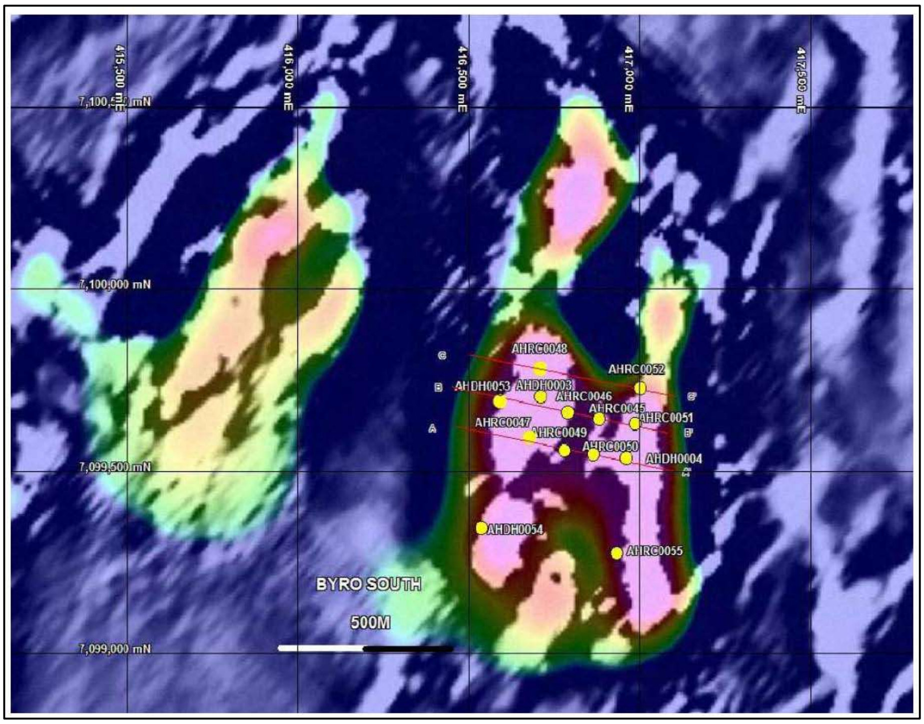


Figure 10: Byro South drill pattern on aeromagnetic image

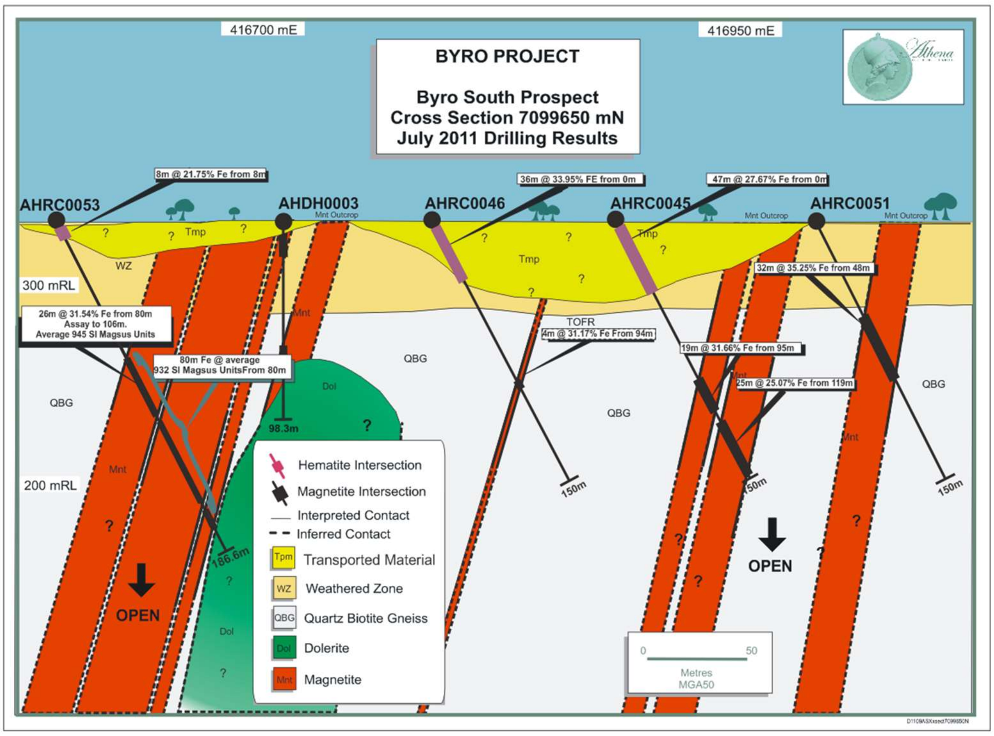


Figure 11: Byro South cross section

DTR work by Bureau Veritas (Project 3937, 30 May 2016) gave results similar to FE1. Table 6 gives indicative concentrate analyses for two grind sizes – p80 125µm and p80 75µm, from a representative composite sample.

Grind Size (µm)	Head Grade (Fe%)	Mass Pull (%)	Concentrate Grade (Fe%)	SiO2 (%)	Al2O3 (%)	P (%)	S (%)	LOI (%)
125	38.55	44.2	67.4	4.73	0.96	0.006	0.020	-3.06
75	38.48	42.5	70.22	1.59	0.75	0.003	0.018	-3.30

Table 6: DTR results for Byro South

6.5 Whistlejack

The Whistlejack magnetite orebody 11km south of Byro Homestead, straddles the boundary between E9/1507 and E9/1781. It is a segment of a highly contorted quartz-magnetite raft that wraps around the northern margin of a segment of the Imagi Complex. It is concealed by sand, silcrete and colluvium. The prospect is an arcuate east-west striking high-amplitude magnetic anomaly 1200m in length, and 45m wide. It has been drilled by six RC holes which is insufficient to estimate a Mineral Resource.

Davis Tube Tests on the RC cuttings give results slightly inferior to that of FE1.

Test	Grind size µ	Mass pull %	Concentrate grade Fe%	SiO_2	Al_2O_3	S	LOI
DTR	75	41.05	67.90	3.99	0.9	0.11	-3.16

Table 7: DTR results for Whistlejack

6.6 Whitmarsh Find

Whitmarsh magnetite prospect is 14km south-southwest of Byro Homestead. Geologically it lies on the western rim of what is interpreted to be a segment of the Imagi Mafic Body. It is expressed by an 800m long high-amplitude magnetic anomaly in an area covered by colluvium, laterite and silcrete. Drilling to date is limited to four RC holes which indicates a steep west-dipping BIF unit of similar characteristics as the other satellite magnetite deposits around the Imagi Body.

6.7 Narryer Deposit

The Narryer magnetite deposit lies 6km northeast of Mt Narryer Homestead which is some 70km south of the Byro project areas. It is covered by M9/168 which is enveloped by E9/1938.

Like the other deposits to the north, it is a raft of highly metamorphosed quartz-magnetite rock within migmatite. It is a partially outcropping raft 25 – 50m wide and 3km strike length, showing structural contortion and a strong magnetic response. It has been drilled by 11 RC holes and one diamond drill hole for metallurgical purposes.

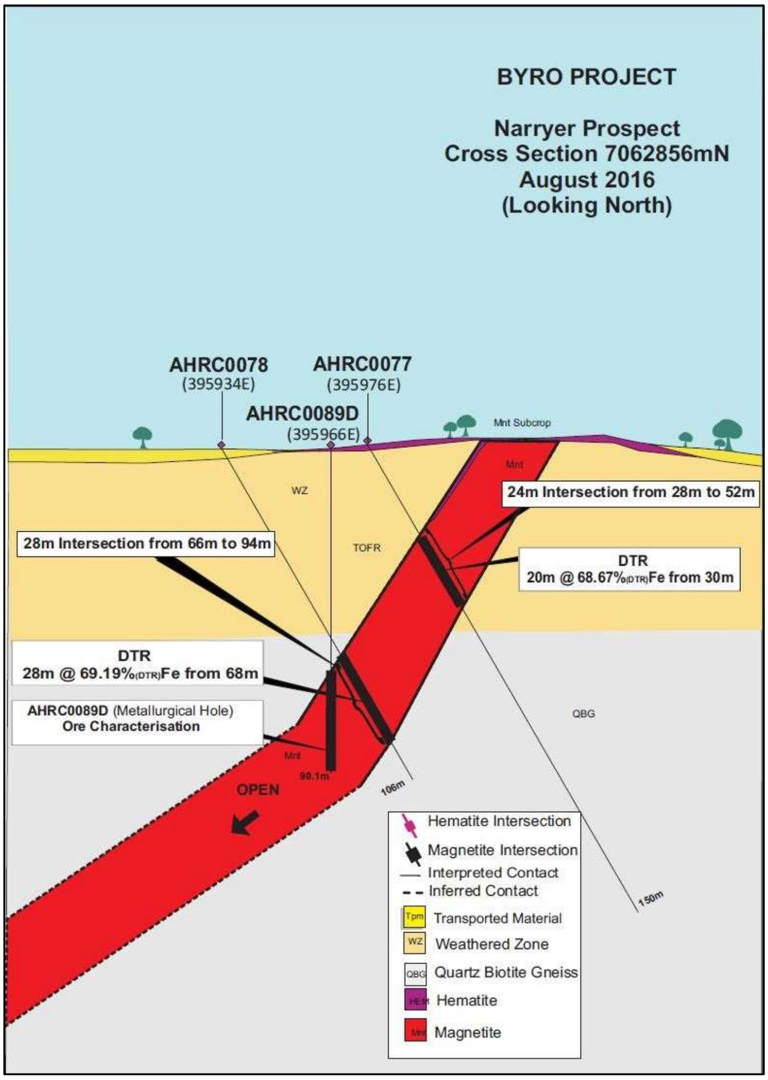


Figure 12: Cross section of Narryer BIFs

Some significant DTR and LIMS tests are summarised in Table 8. It is evident that a concentrate of 70% Fe can be obtained from a grind of 90µm.

Reference	Type	Grind size µm	Mass Pull %	Head grade Fe %	Concentrate grade Fe%	SiO_2 %	Al_2O_3 %	P %	S %
1	DTR	90	21.4	24.8	66.8	5.59	0.62	0.006	0.156
1	DTR	45	23.3	29.84	70.0	1.80	0.54	0.002	0.174
2	DTR	90	35.0	Na	70.0	1.52	0.34	0.001	0.115
3	DTR	90	21.3	Na	69.0	2.16	0.23	0.011	0.003
4	DTR	90	49.1	Na	70.4	1.74	0.28	0.002	0.012
AHD89	LIMS	90	na	20.3	70.2	2.33	na	0.004	0.004

Source: 1 AHRC0068; ASX release 15 Dec 2015
2 Composites from RC cuttings; ASX release 19 Jan 2017
3 AHD89 PQ metallurgical core hole; ASX release 19 Jan 2017

Table 8: DTR and LIMS results for Narryer orebody

6.8 Hematite deposits

In the course of magnetite exploration, Athena Resources also investigated some surficial pods of rich hematite on edges of BIF rafts. These are solid granular hematite, seemingly devoid of quartz grains and clay streaks. Initial assays (ASX release 6 Sep 2012) of grab samples indicated values in the range of 54% - 59% Fe which, with minimal beneficiation, would be considered direct shipping ore (DSO). On 11 Aug 2014 Athena Resources announced exploration targets for some of these occurrences, based on accurately determined surface areas, inferred thicknesses, and an assumed SG of 3.5 t/m^3. The potential quantity and grade for these Exploration Targets are conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

Deposit	Tonnage range	Grade Range
Think Big	0.6 – 4.0	54.0 – 58.6
Heppenstal	0.3 – 2.8	55.4 – 60.5
Olvidado	0.2 – 0.7	52.2 – 56.4

Table 9: Exploration targets for hematite deposits around Byro

All these hematite deposits occur north of Byro Homestead. The occurrence with the greatest size potential is Think Big on E9/1552, which is at least 500m long. A suite of 21 grab samples (ASX 1 Jul 2014) averaged 56.5%Fe, and initial tests show it can be easily beneficiated. Think Big has been drilled by only two holes (AHRC73 and 74).

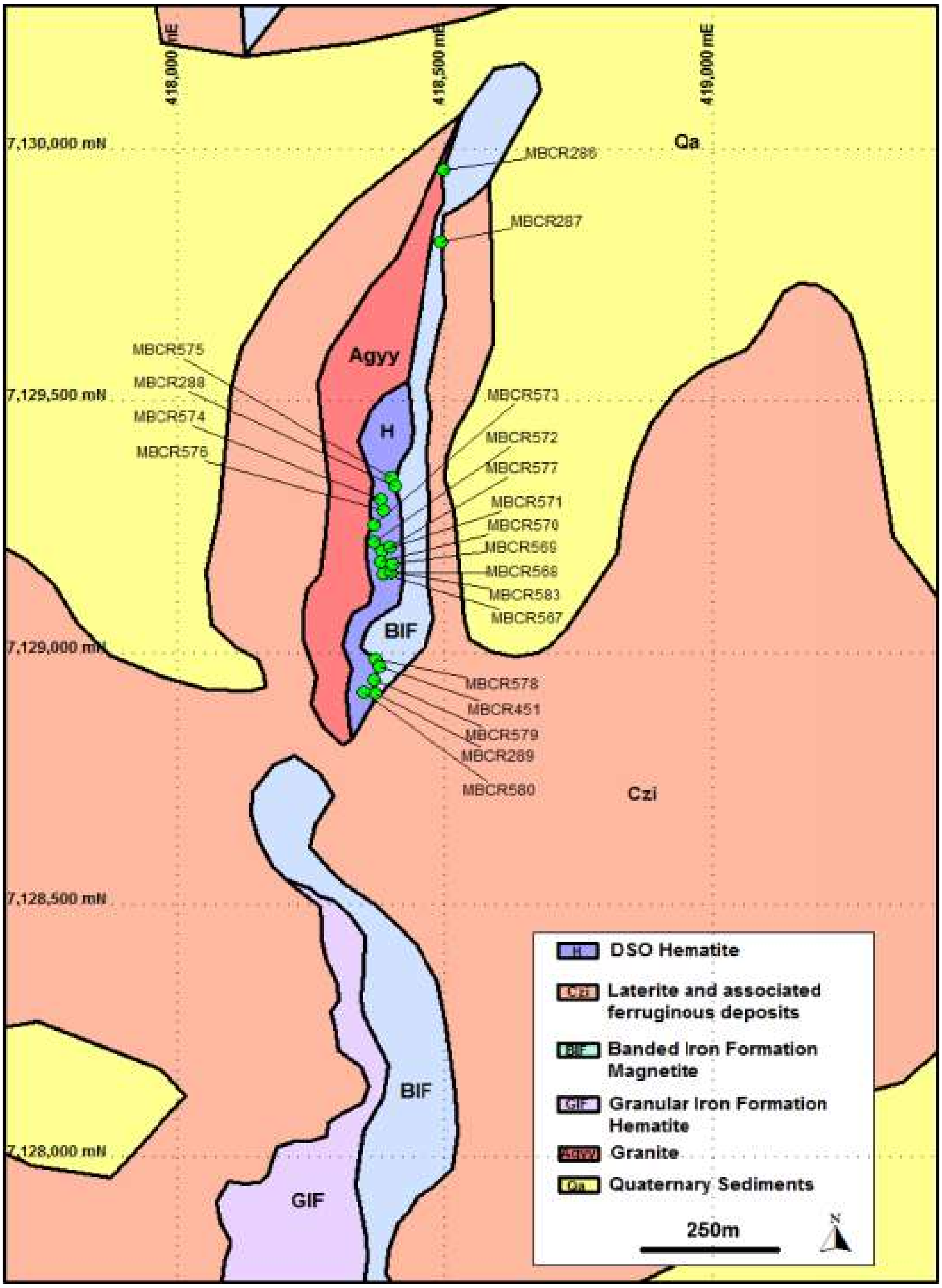


Figure 13: Geological map of Think Big hematite deposit after Athena Resources

Although these deposits are small by industry standards, they do present a potential initial cash flow opportunity within a greater project where transport to port is involved.

7. BYRO INDUSTRIAL MAGNETITE PROJECT

7.1 Background

In 2009, during the then-prevailing iron-ore boom, Athena commenced iron ore exploration on extensive ELs in the Byro area. At this stage hematite mining had commenced at Jack Hills 120km to the east, and Tallering Peak 150km to the south. Along with many other mineral exploration companies, Athena's focus quickly turned to the magnetite potential of the exposed banded iron formations (BIFs) that are common throughout the Yilgarn Craton.

BIFs are sedimentary rocks chemically precipitated on the ancient sea floor. With induration and metamorphic recrystallisation, they become extremely hard rocks and tend to outcrop positively in the form of hills. They consist of millimetre-thin laminations of very fine grained (20 - 40 µm) chert (quartz), equally fine magnetite grains, and other iron-silicate minerals.

For magnetite concentrate production, BIFs require multiple stages of grinding of the hard rock to achieve a fine p80 grind of 30-45 µm, in order to liberate the individual magnetite grains. Magnetite grains are then extracted by magnetic separators to produce a homogeneous concentrate of about 70%Fe – approaching the ultimate limit of Fe content for magnetite.

Magnetite iron ore has advantages over goethitic-hematitic ores because of their:

- exothermic reaction with oxygen in the blast furnace
- higher grade product
- much lower deleterious elements such as Si, Al, P
- consistency of specifications
- cheaper transport
- ability to pelletise
- compatibility with modern DRI blast furnaces

However, they require large amounts of energy for fine grinding and magnetic separation, and large amounts of water. This requires high throughputs into large processing plants that cannot easily be scaled down. New projects also require substantial infrastructures in terms of haulage, power, water and port outlets. This in turn requires very high capital for development. The economics of magnetite projects are still challenging, despite the enormous potential resources that occur in BIFs throughout Western Australia.

7.2 Developmental Study of 2011

On 12 Oct 2011 Athena announced a "pre-feasibility" study (what would now be called a concept study) based on the then-emerging FE1 deposit. It incorporated developmental concepts by GR Engineering Services which involved staged grinding to p80 of 125µm, two-stage wet LIMS, producing a concentrate (Table 10) of specifications consistent with the DTR results tabulated elsewhere in this report.

Grind size	Concentrate grade Fe%	SiO_2 %	Al_2O_3 %	S %	P %
P80 125µm	67.5	4.0	0.3	0.02	0.01

Table 10: Indicated composition of iron-ore concentrate from 2011 study

Athena emphasised at the time, that the coarse nature of the Byro magnetite deposits allowed a high degree of liberation at a relatively coarse grind, giving significant reduction in power and operating costs, compared to other aspiring magnetite projects in Western Australia at that time. With the current high price of iron ore, the opportunity to economically produce industry-standard concentrate for steel making should be revisited.

7.3 High Purity Industrial Magnetite

With the recognition that a magnetite concentrate can be produced from the Byro deposits with very low contaminants at a relatively coarse grind size, Athena Resources has turned its attention to high-purity industrial magnetite. When magnetite has more than 71.5% Fe it is known in the industry as *High Purity Iron* (HPFe). *Super High Purity Iron* (SPFe) is magnetite with more than 72% Fe. Stoichiometrically, absolutely pure magnetite contains a maximum of 72.36%Fe.

HPFe and SPFe powders find many industrial uses, including coal washing, as a catalyst in ammonia production, densification of aggregate, water filtration, metal powder coating, and speciality metal alloys for the automotive industry, 3D metal printing, brazing and welding, chemicals and pharmaceuticals (https://iron-powder.com/iron-powder-uses/).

Many of these applications also require strict specification of particle size distribution. Pilot testings indicated that quality HPFe product can be produced from the FE1 and Narryer orebodies of Athena.

Size µm	Concentrate grade %Fe	Magnetic Fe	SiO_2 %	Al_2O_3 %	CaO	MgO	TiO_2 %
75-25	71.55	70.72	0.55	0.34	0.16	0.09	0.1

Table 11: Composition of High-Purity industrial magnetite from Byro ores

Athena Resources (ASX releases of 24 and 28 Jan 2020) has identified promising global market opportunities for a product of this characterisation following thorough metallurgical and characterisation studies. Pilot test runs for various grindings sizes will enable it to deliver a product that is suitable for coal washing, and ammonia production.

7.4 Concept Plan for Production

Through 2016 – 2017 Xinhai Mining Research and Design Company together with GR Engineering Services (who completed the 2011 study) undertook a concept study to examine the parameters and processing routes for producing HPFe and SPFe from FE1 and Narryer ores. The announcement of 19 Jan 2017 gave useful ore characterisation parameters including density of 3.45 t/m^3, Crushing work index of 8.6 kWh/t, and Bond ball mill work index 14.2 kWh/t.

The processing route involved industry-proven circuits of crushing, classification, grinding, rougher and cleaner LIMS, followed by thickening, filtration and tailings disposal. HPFe concentrate would be trucked 380km to Geraldton Port. Provision would be made for a for a special add-on processing facility to produce SPFe. Depending on market conditions it is conceptualised that about 60% of the product would go into the speciality magnetite market, and the remainder to DRI steel making.

In order to bring these concepts to a formal pre-feasibility stage, it is a requirement that the Mineral Resource estimate be expanded and brought to the Measured classification, in accordance with the JORC Code 2012 Edition.

8. PROPOSED EXPLORATION PROGRAM AND BUDGET

Athena has proposed work programs and budgets for the Byro Basemetal Project and the Byro Industrial Magnetite Project, shown in the 'Near-term Costs' column of Table 12.

Athena Exploration Program - Near Term Costs		
Activity	**Program**	**$**
Metallurgy	Industrial Minerals Project further metallurgical test work	20,000
		20,000
Geophysical Ground Electromagnetic Survey	Ground Electromagnetic: Milly Milly Intrusion, (TDEM - SQUID)	35,000
	Ground Electromagnetic: Moonborough Intrusion, (TDEM - SQUID)	35,000
		70,000
Geophysical Ground Gravity Survey	Ground Bouguer Gravity: Milly Milly (Infill over conduit target)	6,000
	Ground Bouguer Gravity: Milly Milly (Infill over western contact with second Intrusion)	4,000
	Ground Bouguer Gravity: Moonborough (Infill to close space over main Bouguer anomaly)	8,000
		18,000
Target Generation	Data collation and Interpretation including target definition and drilling trajectories.	0
		0
Native Title	Ethnographic Clearance Surveys, Access and Drill Pads - if required	46,000
		46,000
Ground Preparation	Develop access and drill pads	7,000
		7,000
Drilling	Milly Milly Intrusion (3 Primary Targets)	251,000
	Moonborough Intrusion (3 Primary Targets)	214,000
		465,000
Total exploration expenditure pre-readmission		**626,000**

Table 12: Proposed exploration program and budget

Athena Exploration Program - Specific Base Metals activity - Mid Term Costs		
Activity	**Program**	**$**

Drilling	Milly Milly Intrusion (Discovery infill) Moonborough Intrusion (Discovery infill)	200,000 200,000
		400,000
Rehabilitation	Rehabilitation	7,000
		7,000
Geochemistry	Sample preparation and submission	5,000
	Geochemistry / sampling / mapping / interpration (Milly Milly intrusion)	125,000
	Geochemistry / sampling / mapping / interpration (Monnborough intrusion)	125,000
		255,000
Total exploration expenditure post-readmission		**662,000**
Athena Exploration Program - Industrial Magnetite - Mid Term Costs		
Activity	**Program**	**$**
Drilling - FE1	11 RC/DD holes direct costs	303,200
	RC/DD Drilling indirect costs	120,832
	SG, whole rock, DTR, composites	99,779
		523,811
Other exploration activities	Byro South - Resource estimation existing drill holes Whistlejack - RC/DD to define inferred resource Whitmarsh Find - 10 hole RC/DD to define inferred resource Byro North - Resource drilling Narryer - Drilling to Inferred Resource	460,400
		460,400
Total exploration expenditure Industrial Magnetite		**984,211**
		1,646,211

Table 13 (Continued): Proposed exploration program and budget

The Basemetal Project Review of 23 March 2021 by Athena Resources presents a valid case for new ground surveys using high-powered MLTEM with SQUID sensors. It is likely these surveys may deliver drill targets on both Milly Milly and Moonborough Bodies. This program is endorsed by the Independent

Geologist, however it is considered beneficial to undertake broad-grid drilling by air-core over the Moonborough Body to better understand its geological features. Expenditures beyond the near-term costs will be dependent on the results of the target drilling.

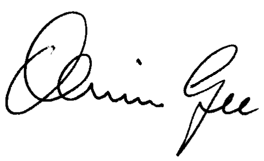
An 11-hole combined RC and DD program is planned at the FE1 orebody, which will enable an upgrade in classification from an Inferred to Indicated Mineral Resource, with a portion in the Measured classification, and estimated in accordance with the JORC 2012 Code guidelines.

The Byro South Orebody currently has sufficient drilling to complete the estimation of an Inferred Mineral Resource in accordance with the JORC 2012 Code guidelines. Together with the FE1 drilling, it is planned that this drilling may allow for the estimation of Mineral Resourceswhich may enable the development of a pre-feasibility study.

It is considered that the Whistlejack and Whitmarsh orebodies require 6-hole and 10-hole programs respectively, to enable the estimation of a Mineral Resource, but this is not necessarily a near-term imperative. Mid-term costs for drilling are extracted from the Byro Industrial Mineral review of Dec 2020, prepared by Athena Resources. Sufficient metallurgical test work, and environmental studies have been completed to enable the completion a pre-feasibility study. As the conceptual project requires 2.0GL/y of process water, it is recommended that test bores to estimate drawdown and production be included in planning.

Athena Resources has proposed a staged program of exploration for its two projects over what is likely to be a two-year period following its reinstatement from trading suspension on the ASX. The Independent Geologist considers the work programs are well conceived, and proposed expenditures are appropriate to further develop the Industrial Magnetite Project, and to effectively explore the Cu-Ni-PGE targets. The expenditures proposed surpass the minimum expenditure obligations of the tenements with respect to the statutory commitments by the Western Australian Department of Mines Industry Resources and Safety (DMIRS).

Signed by:



Dr Dennis Gee
BSc, PhD, MAIG
Date: 30 July 2021

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10. GLOSSARY OF TECHNICAL TERMS

Aeromagnetic	A geophysical survey undertaken by fixed-wing, helicopter, or drone for recording magnetic characteristics of rocks by measuring deviations of the magnetic field.
Alluvium	Accumulations of clay, silt, sand and gravel in defined water courses.
Amphibolite	Metamorphic rock composed mostly of amphibole mineral, generally derived by metamorphism of mafic rocks such as basalt and gabbro.
Anomaly	A feature where exploration has revealed results higher than background levels of geophysical or geochemical parameters.
Anorthosite	Coarse-grained igneous rock composed mostly of anorthite (calcium plagioclase) that crystallise in layered mafic complexes.
Archaean	Period in earth history older than 2500 million years before present.
Assay	Testing and quantification metals of interest within a representative sample.
Base metal	Usually refers to copper, nickel and zinc.
Basin	Extensive thick pile of predominantly sedimentary rocks accumulated in a downwarp of the crust.
Batholith	Large Intrusive body of granite, extending over a large area.
Bedding	Primary layering in sedimentary rocks, as seen in BIF, shale and chert.
Bedrock	Fresh rock underlying regolith.
BIF	Banded iron-formation; chemically precipitated sedimentary rock composed of laminations of fine magnetite, chert and other iron-silicate minerals.
Boudin	Bulbous sausage-like structure in deformed rock where extension in high strain zones produces pinch-and-swell and detachment features.
Calcrete	Cemented aggregates of calcium and magnesium carbonates in the upper regolith, formed during evaporation of near-surface groundwater.
Chalcopyrite	Sulphide mineral of copper - $CuFeS2$.
Chert	Fine-grained chemically precipitated sedimentary rock composed of cryptocrystalline silica.
Chonolith	Irregular shaped mafic igneous intrusion
Chromite	Mineral of formula $Fe.Cr2O4$, accessory mineral in mafic igneous rock and the only source of chrome metal.
Clastic	Pertaining to a sedimentary rock made up of rock or mineral fragments, deposited grain by grain.
Colluvium	Unconsolidated surficial sheet of soil, mineral grains and rock fragments accumulating on lower slopes.
Concentrate	Pertaining to metallurgy: the product of separation of ore minerals from constituent ores by physical or non-chemical methods.
Costean	Surface trench dug to examine and sample sub-surface material.
Craton	Large, ancient, stable mass of continental crust.
Diamond drilling	Using a diamond impregnated bit for retrieving a core of rock.
Dip	The angle of inclination from the horizontal of rock stratum or structure.
DTR	David Tube Recovery - an analytical method to quantify the amount of extractable magnetite grains from ground rocks and ores.

Exploration Target	Specific term to the JORC Code to semi-quantitatively express the exploration potential of a mineral deposit quoted as a range of tonnage and grade, for which there has been insufficient exploration to estimate a Mineral Resource.
Fault	Planar or curvi-planar fracture in rock along which there has been displacement, expressed as a linear feature on geological maps.
Feldspar	Group of rock-forming minerals comprises of Ca, K and Na aluminous silicates; major component of granite; the single most abundant mineral group in continental crust.
Felsic	Rock predominantly composed of feldspar and quartz, with minimal mafic components.
Ferruginous	Applied to weathered Fe-rich rocks, containing abundant goethite.
Foliation	Planar fabric in a deformed metamorphic rock expressed by alignment of constituent minerals.
Ga	Abbreviation for giga-year; applied to radiometrically dated rocks – thus 2.7Ga means 2,700,000 years before present.
Gabbro	Coarse-grained mafic rock, generally the intrusive equivalent of basalt.
GDA94	Geocentric Datum of Australia, adopted in 1994 to define geodetic coordinates.
Gneiss	Strongly foliated and banded coarse-grained quartzose-feldspathic rock of deep crustal metamorphic origin.
Goethite	Hydrous oxide mineral of iron Fe2O3.xH2O, a common oxidation product of iron-rich rock-forming minerals.
Greenstone	Collective term for the volcanic, intrusive and sedimentary rock sequences that occur in discrete structurally-defined belts surrounded by regional voluminous granites, thus making the granite-greenstone terranes characteristic of Archaean cratons.
Granite	General term for coarse-grained felsic intrusive igneous rocks consisting mainly of quartz, feldspar and mica; can be used synonymously with granitoid.
Granulite	Quartzose-feldspathic metamorphic rock with distinctive granular texture, formed in deep crustal conditions of very high temperature and pressure.
Granuloblastic	Texture of a high-grade metamorphic rock in which polygonal-shaped grains have smoothly curved non-sutured interfaces.
Hematite	Iron oxide mineral of formula Fe2O3, of either hydrothermal or regolithic origin.
Hydrothermal	Pertaining to hot aqueous fluids, driven by magmatic heat, which transport metals and minerals in solution.
Insitu	Referring to a rock or boulder that is in-place and not removed from outcrop.
Intrusion	A body of coarse-grained igneous rock resulting from emplacement of molten magma into host rocks below the surface of the earth.
Jasper	Ferruginous chalcedony, developed by weathering and forming caprock on ultramafic rock
JORC	An industry code for reporting exploration results, mineral resources and ore reserves.
Lateritic duricrust	Naturally cemented residuum of weathering, generally with high iron-oxide and alumina content.
LIMS	Acronym for Low Intensity Magnetic Separation - beneficiation method to produce a concentrate of strongly magnetic mineral like magnetite.
Mafic	Rock rich in magnesium and iron silicates – for example basalt, dolerite and gabbro.
Magnetite	Natural iron mineral of formula Fe3O4, with strong permanent magnetism.

Malachite	Blue-coloured copper carbonate produced at the weathering surface from copper sulphide minerals.
Metamorphism	The change in rock fabric and mineral assemblage as a result of high temperature and pressure associated with tectonic events.
Migmatite	Heterogeneous plutonic rock composed of closely co-mingled metamorphic gneiss and granitic phases which are partial melts of the gneiss.
Mineral resource	Specific term defined by JORC Code as a natural concentration of minerals in sufficient grade and quantity for which there is reasonable expectation of eventual economic extraction.
Norite	Gabbro containing ortho-amphibole
Orogen	Tectonic belt of deformed rocks, usually comprising metamorphic and intrusive igneous rocks, mostly occurring in collision zones within and between cratons.
Outcrop	Surface expression of underlying rocks.
Palaeodrainage	Old preserved, inactive river system, in-filled with partially consolidated fluvial sediments that may continue to carry water in the subsurface.
Pelite	Sedimentary rock composed of fine-grained mud and clay; when metamorphosed termed meta-pelite.
PGE	Collective term for the six platinum group elements, mainly platinum, palladium, and includes ruthenium, rhodium, iridium and osmium.
Peridotite	A magnesian-rich ultramafic rock composed of olivine and orthopyroxene
Pluton	Medium-size intrusive body of granite generally ovoid shaped in plan.
Pyrite	Sulphide mineral of iron – $FeS2$.
Pyroxenite	A magnesian-rich ultramafic rock composed mainly of pyroxenes
Pyrrhotite	Sulphide Mineral of iron – FeS.
Quartz	$SiO2$; after feldspar the second most abundant rock-forming mineral in continental crust.
Quartzite	Metamorphic rock composed mostly of quartz derived from sedimentary quartz sandstone.
RAB drilling	Rotary-air-blast drilling method in which cuttings are brought to the surface on the outside of the drill hole, thus risking mixing of drill intervals.
RC drilling	Reverse circulation drilling method in which rock cuttings from the face of the bit are brought to the surface inside the drill rods, thereby avoiding contamination.
Regolith	Layer of unconsolidated material and weathered rock which overlies *in situ* basement rock; includes weathered basement rock, transported alluvium and colluvium, and chemical cements and soil.
Residual	pertaining to regolith, that component remaining in place without significant lateral movement, expressed by lateritic scarps and uplands.
Saprolite	Deeply weathered bedrock with preserved textures, but changed mineralogy and chemistry by chemical leaching in the weathering profile.
Sedimentary rock	Stratified rock deposited in layers and consisting of clastic particles and chemical precipitates.
Schist	Medium-grained metamorphic rock, derived from sedimentary or volcanic rocks, chiefly notable for the preponderance of micaceous minerals.
Shear zone	Planar zone of strong deformation surrounded by rocks with a lower state of strain.

Silcrete	Fine-grained silica hardcap developed in the regolith by cementation of soil and regolithic material from dissolved silica.
Siliciclastic	Relating to a clastic (meta-sedimentary) rock consisting largely of quartz and silicate minerals.
Soil geochemistry	Chemical analysis of soil samples collected in the field on a regular grid pattern, to identify anomalously high areas of chemical elements.
Stratigraphic	Describing the position of a sedimentary or volcanic rock unit in a progressive sequence of deposition.
Strike	The trend of the line of intersection of a dipping planar structure or layer with the horizontal plane: thus the trend of the feature as seen in plan view.
Talc	Magnesium silicate rock-forming mineral, formed by metamorphism of magnesian minerals in ultramafic rock, or hydrothermal alteration of mafic rock.
Tectonic	Relating to stresses and displacements over large areas, related to crustal plate movements.
Thrust fault	Inclined or flat-lying fault in which a slab of rock over-rides adjacent rocks.
Ultramafic	Rock composed mostly of mafic minerals, rich in magnesium, low in silica representing melting of near-surface mantle rocks.
Vein	Fracture filled with mineral material, most commonly hydrothermal quartz.
Xenocryst	A crystal foreign to the rock in which it occurs
Xenolith	Inclusion of foreign rock in a granitic, gneissic or migmatitic rock.
Zircon	$ZrSiO_4$ – a common robust accessory mineral crystallising in granitic rocks and able to preserve radiogenic trace elements.

Appendix 1 JORC TABLE 1

Section 1 Sampling Techniques and Data

Criteria	Explanation
Sampling techniques	**Soil Sampling**: Historical soil surveys referred to in this report (A) were collected by Toyota-mounted power auger to depths of 1-2metres. Soil surveys taken by shovel scoops for the surface are not considered in this report. **Rock Chips**: No rock chips analyses used in this report have been previously released by Athena.
Drilling techniques	**RAB drilling**: No RAB drilling is referred to in this report. **RC drilling**: Previous RC drilling referred to in this report has been collated mostly from digital datasets submitted to GSWA. **Core drilling**: Some dedicated core holes have been drilled. Some RC holes have diamond tails for structural, mineralogical and metallurgical studies.
Drill sample recovery	The recoveries of RC and DD drilling have not been examined, as it is not necessary for the production of this report.
Logging	Lithological Log codes are available for all historic drill programs at Byro.
Sub-sampling techniques and sample preparation	For RC drilling, drill cuttings were passed through a rig-mounted cyclone, then cone splitter with in-line riffle splitter. Bulk cuttings were collected at one-meter intervals in bulk plastic bags, along with 3kg representative sample from the splitter, collected in small calico bags, and used for analysis.
Quality of assay data and laboratory tests	Historical assays as recorded in this report have been done by a variety of proprietary codes by commercial laboratories. These generally involve weigh, dry and pulverise to about 75µ, and elemental assay of a 50g charge by AAS and ICPMS. All analyses are total. Commercial laboratories used by previous explorers report their own internal standards, and approximately one-in-ten repeats for gold, and repeats of selected high-grade results. QA/QC procedures of the exploration companies are recorded in digital assay files for more recent analyses. Certificates of analyses issued by the analytical companies are present.
Verification of sampling and assaying	No verification of historical assays has been attempted. No twinned holes have been done. No adjustments of any historic analyses have been made.
Location of data points	DD and RC holes are located from statutory digital reports to DMIRS, and are on GDA94.
Data spacing and distribution	Data spacing is considered suitable for resource estimation. Sampling and analysis has been done on a meter-by-meter basis of zones of mineralisation.
Location of data points	No mineral resource estimation is done by the author of this report. Attributes and results for previous RC drilling are of sufficient quality for inclusion in any future resource estimation.
Orientation of data in relation to geological structure	Azimuths of all previous RC drilling are orthogonal to strike of the mineralised layer. Drill-hole inclination of 60^0 generally gives intersections at highest possible angle. Some true thicknesses are quoted in the report
Sample security	It is understood that all samples for Athena drilling have been personally delivered to laboratories by Athena personnel. The one-metre splits have been removed from site and stored in a locked yard No records of historic sampling security procedures exist.
Audits or reviews	Audit of sampling techniques of previous drilling is not possible.

Section 2 Reporting of Exploration Results

Criteria	
Mineral tenement and land tenure status	All tenements subject to this IGR are shown on DMIRS public spatial data sets. There are no overlapping nature reserves, or contested overlaps. All tenements are granted. It is understood two tenements are currently subject to plaint. .
Exploration done by other parties	All WAMEX open-files relating to Byro properties have been assessed and those directly relevant are summarized in the Report. Exploration results have been released on the ASX platform by Athena Board authority and citing Liam Kelly as the Competent person. The significant reports include: 28 Aug 2011 ALS AMMTEC Metallurgical results on Byroi magnetite 12 Oct 2011 Summary pre-feasibility of Byro Iron Ore Project 28 Nov 2011 Preliminary JORC Resource Byro FE1 Magnetite deposit 14 Dec 2011 Byro South drilling results 22 Dec 2011 Drilling results Whitmarsh and Whistlejack 2 Feb 2012 Byro Nickel-Copper-PGE Project 6 Aug 2012 High grade results at Byro 9 Apr 2013 Nickel sulphide project Byro 26 Aug 2013 Byro Hematite results 8 Apr 2014 Hematite assays define potential DSO 12 Sep 2014 Milly Milly gravity survey 16 Oct 2014 Drill intersects Ni sulphides at Milly Milly 16 Dec 2014 DTR results Narryer drill core 26 Aug 2016 DTR results Narryer magnetite body 18 Oct 2016 Update on Byro Iron Project 19 Jan 2017 Metallurgy results Narryer Magnetite 6 Nov 2017 Narryer drilling and Metallurgy results 16 Apr 2018 Narryer and FE1 Metallurgy results 28 Sep 2018 Byro Iron Ore Project Update 24 Jan 2020 Byro Industrial Magnetite Project 28 Jan 2020 Byro Magnetite Coal-wash specifications.
Geology	Athena's projects lie in Archaean gneiss of the Narryer Terrain of the Yilgarn Craton. BIFs and mafic complexes are the focus of exploration and development targets.
Drill hole Information	The details (including easting, northing, total depth, azimuth, dip and significant intersections) of material drilling data at Athena's prospects and deposits are given in the Report. Significant intersections are down-hole intersections. All intersections quotes have previously been released to ASX by Athena.
Data aggregation methods	Significant intercepts tabulated in the Report are arithmetic averages of uncut single metre values that exceed 20%Fe. Exploration drilling results quoted in this report are arithmetic averages of uncut meter-by meter analyses of Fe. .
Relationship between mineralisation widths and intercept lengths	All intercepts quoted in this report are down-hole widths and are not true widths.
Diagrams	Appropriate maps and cross-sections are included in the IG Report. All cross sections are from ASX releases by Athena
Balanced reporting	Only intercepts that are significant and relevant to iron are included in the IG Report.
Other substantive exploration data	All available exploration data, including aeromagnetic imagery, soil surveys and drilling have been considered in the production of this IG Report.
Further work	Further work will be as detailed in the Work Program and Budget of this Prospectus. It will mainly involve resource drilling and ore characterisation on the iron project, and target drilling for base metal.

Section 3 Estimation and reporting of Mineral Resources

Criteria	Explanation
Database integrity	The historical consultant report of 2011 does not disclose what measures were taken to ensure database integrity. All details of the resource estimation are given in report by AMC dated 28 November 2011 and released the same day on the ASX platform. The report is entitled Byro FE1 Magnetite deposit Mineral Resource statement AMC 211021. The competent persons were Jonathan Sharp and Sharron Sylvester - employees of AMC who gave their consent. The technical parameters are relevant, and there is no new information or data that materially affects the estimate.

Site visits	The historical consultant report of 2011 does not disclose whether a site visit was made
Geological Interpretation	The historical consultant report of 2011 indicates an understanding of the geology of the mineralised bodies.
Dimensions	The historical consultant report of 2011gives details of the dimensions of the orebody
Estimation and modelling technique	The 2011 Resource estimate was based on 29 RC drill holes on a 100m x 50m grid, to depths of 150m vertically. Modelling was done by Ordinary Kriging of 2m composites on cells 20m East, 50m North, 20m Elevation with sub-celling to ensure domain boundaries were honoured. Details are given in the above referenced report.
Moisture	No moisture content was taken into account in the historic resource report.
Cut-off parameters	The historic report indicates 20% Fe cut-off was used. Initial metallurgical information from DTR indicate this is appropriate.
Mining factors or assumptions	The consultant report of 2011 does not disclose any mining factors or assumptions
Environmental factors or assumptions	The historical consultant's report of 2011 does not disclose what environmental factors were considered in making the 2012 resource report.
Bulk density	The historic resource report indicated a bulk density was 3.5t/m^3
Classification	The historic consultant report classified the resource as Inferred
Audit or review	The historical consultant report 2011 does not disclose what audits or reviews were done.
Relative accuracy and confidence	The historic report classified the resource as inferred