

# ASX ANNOUNCEMENT

25 August 2021



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## PROPOSED ACQUISITION OF HIGHLY PROSPECTIVE QUEENSLAND PROJECTS & ASX RE-COMPLIANCE

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### HIGHLIGHTS

- ❖ Subject to conditions (including re-complying with the admission requirements of ASX), Ark Mines Ltd (**Ark** or the **Company**) has agreed to acquire from Bmax Holdings Pty Limited (**Bmax**), 100% of MIJ Holdings Pty Ltd (**MIJ**), which holds 3 highly prospective, yet underexplored Iron, Nickel/Cobalt, Copper and Gold projects in Northern Queensland (**Acquisition**).
  - ❖ Consideration for the Acquisition is \$1.8 million of Ark fully paid shares.
  - ❖ **Gunnawarra Nickel-Cobalt Project** (EPM 26560):
    - located ~40kms south from the town of Mount Garnet in far-north Queensland.
    - The project is close to existing infrastructure, including grid power, water and access to port facilities.
    - EPM 26560 surrounds the Bell Creek resource, a component of the Sconi cobalt project owned by Australian Mines Limited (ASX:AUZ).
    - Strong coincidental Geophysics and outcrop pervades the tenement from the Bell Creek Resource.
  - ❖ **Mt Jesse Iron Project** (EPM 26464):
    - located ~25km west of Mt Garnet and 176km from Cairns in far-north Queensland.
    - The project is centered on an Iron rich magnetite skarn with copper which potentially is associated with porphyry style copper mineralisation within a granodiorite. The iron is exposed as low-lying outcrops knobs in three locations surrounding the quaternary cover.
  - ❖ **Pluton Porphyry Gold Project** (EPM 26883):
    - Located ~ 90km Southwest of Cairns near Mareeba Queensland.
    - Identified gold target with other by-product credits (Ag, Cu, Mo)
    - Initial field inspection has located a porphyry outcrop, which coincides with regional scale geophysical interpretation.
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- ❖ The proposed Acquisition will constitute a change in nature and scale of the Company's activities, and necessitates re-compliance by the Company with Chapters 1 and 2 of the ASX Listing Rules.
- ❖ Ark intends to lodge a prospectus to raise up to \$5,000,000 (before costs) (**Capital Raising**).
- ❖ The Company is engaging with ASX and preparing a notice of general meeting and accompanying explanatory memorandum for the purposes of seeking, amongst other things, shareholder approval for the acquisition of MIJ and the Queensland projects, a consolidation of the Company's securities, and the Capital Raising.
- ❖ Following Completion, MIJ nominee, Benjamin Emery, will join the board as a director.

Ark is pleased to announce that it has signed a binding head of agreement (HOA) with Bmax to acquire 100% of the issued shares in MIJ (**Acquisition**). Bmax is an unrelated privately-owned Australian company which currently holds 3 granted Exploration Permits EPM26560 (Gunnawarra), EPM26464 (Mt. Jesse) and EPM26883 (Pluton) all located in the prolific Mt Garnet and Greenvale mineral field, northern Queensland (**Projects**). Details of the Projects are set out in **Annexure 1**.

Consideration for the Acquisition is \$1.8 million, to be satisfied through the issue of new fully paid ordinary shares in Ark at a deemed issue price of \$0.20 per share (post a 20 for 1 consolidation, see below) to Bmax, the vendor of MIJ, or its nominee (**Consideration Shares**). The material transaction terms are outlined below.

Commenting on the acquisition of MIJ, Arks' Executive Director Roger Jackson said:

*"This acquisition provides Ark with an opportunity to move into projects that provide early opportunities for production. Further, the projects provide the scope to build upon the existing surface exposed Ni and Fe deposits through additional low-level exploration. We are very pleased to have Ben Emery join our board and bring his wealth of expertise in Iron and Nickel to our team. The Board is looking forward to working with Ben and taking Ark forward to relisting"*

### **Proposed MIJ Acquisition**

Pursuant to the HoA, the consideration for purchasing all of the issued share capital in MIJ, Ark will (subject to shareholder approval) issue Bmax, the vendor of MIJ, with \$1.8 million worth of new fully paid ordinary shares in Ark.

Completion of the Acquisition is conditional upon, among other things:

- Ark obtaining all regulatory approvals (as required) in order to undertake the Acquisition, including re-complying with the admission requirements of ASX;
- each party to the HoA must be reasonably satisfied with the due diligence performed on any other party, and/or the Projects;
- obtaining all necessary shareholder approvals required by the Corporations Act and the Listing Rules in relation to the Acquisition prior to 25 September 2021, or such later date as agreed by the ASX (**Compliance Date**); and
- Ark raising at least \$4,500,000 in new working capital by the issue of new Ark shares (**Public Offer**).

## Projects

Details of the projects, including JORC table 1s, are annexed to this announcement.

## Background to the Re-compliance

Ark is currently suspended from trading on ASX following the Company entering administration on 25 September 2019.

Ark Mines Limited (ASX:AHK) listed on ASX on 9 May 2011. Prior to administration, the Company was primarily focused on advanced exploration and development of gold projects in the Pine Creek area in the Northern Territory. The Company was ready to commence mining at its Mt. Porter gold project when it received notice that the cost of its processing arrangements would be materially increased due the owner of the Union Reef mill suspending its mining operations at Cosmo. As a consequence, it became uneconomic for Ark to proceed with mining the Mt. Porter project.

Following suspension of its operations, Ark's secured creditor Chan Investments placing the Company into voluntary administration. After entering administration, the Company's administrators sold Ark's remaining assets to help fund the repayment of the Company's secured creditors, as well as the cost of administration. On 16 June 2021, following satisfaction of a deed of company arrangement (DOCA), which included an agreed contribution sum and other expenses being procured by the Directors and paid to the administrators, control of Ark was handed back to the Company's directors; this amount being raised through loans totalling ~\$706,000 (DOCA contributions). The DOCA contributions enabled the administrators to pay a dividend of 100c in the dollar to all unsecured creditors.

As Ark is suspended from trading and does not currently have any assets to satisfy Chapter 12 of the Listing Rules, the proposed Acquisition (which constitutes the acquisition of a new main undertaking) will necessitate the Company re-complying with Chapters 1 and 2 of the Listing Rules.

ASX policy is to remove a company that has been suspended for more than 2 years. ASX has a discretion to grant a short extension if the company is in the final stages of implementing a transaction that will lead to the company's shares

being reinstated to trading. Ark is currently working on those stages, including preparing a notice of meeting and prospectus. Any reinstatement to trading is at ASX's discretion.

## Proposed Share Consolidation

The Board proposes that, in conjunction with the proposed Acquisition of MIJ, the Company will seek shareholder approval at the upcoming general meeting, to approve the consolidation of the Company's securities. The Consolidation is proposed to be on a 20:1 basis (i.e., every 20 existing shares will consolidate into 1 share (**Consolidation**)).

Further details of the proposed Consolidation will be set out in the notice of meeting.

## Capital Raising

The Company has raised \$200,000 through loans that, subject to shareholder approval, will be repaid through the issue of ordinary shares at \$0.10 per share. These funds will be used to meet the costs of completing the transaction and re-complying with Chapters 1 and 2 of the Listing Rules.

As part of the Company re-complying with Chapters 1 and 2 of the Listing Rules, the Company will seek shareholder approval for the issue of up to 25 million new ordinary shares (on a post consolidation basis, see above), at an issue price of \$0.20 per share to raise up to \$5 million (**Capital Raising**).

The Company will also seek shareholder approval to satisfy the following debts through the issue of shares at \$0.10 per share (on a post consolidation basis), with two attaching options (\$0.20, expiring 2 years from issue) for every share issued:

Debt	Amount	Number of shares to be issued
Shares to be issued in reimbursement of Company and DOCA expenses paid by directors at an issue price of \$0.10	\$42,000	420,000
Loans to Ark to fund completion of the DOCA (with a total value of \$706,623), to be repaid through the issue of shares at a conversion price of \$0.10 per share <sup>1</sup>	\$706,623	7,066,230

1 The Directors currently hold loans with a total value of \$159,123. The remaining loans are held by unrelated third parties.

## Director Appointment

Conditional on completing the proposed Acquisition and the Company re-complying with Chapters 1 and 2 of the Listing Rules, the Company will appoint a nominee of Bmax, Mr Benjamin Emery, to the board of Ark. The appointment will take effect from completion of the acquisition of MIJ.

Mr Emery has been primarily involved in the mining sector for over a decade accumulating extensive experience and skill in locating, developing and monetising varied and diversified mining projects. He has successfully developed several green-field exploration projects into financially successful producing mines, including the Tablelands Iron project, at Mt Garnet.

Mr Emery has been appointed to numerous board positions over the years and is currently Chairman of Franklin Exchange Pty Ltd, a dynamic and growing commodity trading house operating across various global markets whilst assisting international companies develop new strategic partners for growth.

Mr Emery has not been a director of a public company in the last 3 years.

Other than the appointment of Mr Emery, no changes are proposed to the Company's board, with Messrs Antony Corel, Roger Jackson and Ian Mitchell having been directors since prior to the Company's administration in 2019.

### Notice of Meeting

The Company is currently preparing a notice of general meeting and accompanying explanatory memorandum for the purposes of seeking the requisite approvals from shareholders, including the issue of the Consideration Shares, the issue of shares under the Capital Raising, the Consolidation, issue of shares and attaching options to directors and unrelated parties in repayment of loans to the Company to fund completion of the DOCA and other expenses.

### Capital Structure

The indicative capital structure of the Company on re-admission to the ASX is, subject to shareholder approval, expected to be as follows:

	<b>Minimum Subscription \$4.5m</b>	<b>Maximum Subscription \$5m</b>
<b>Existing shares on issue (post 20:1 consolidation)</b>	2,616,058	2,616,058
<b>Shares to be issued in reimbursement of Company and DOCA expenses paid by directors at an issue price of \$0.10</b>	420,000	420,000
<b>Repayment of loans (with a total value of \$706,623) through the issue of shares at an issue price of \$0.10 per share</b>	7,066,230	7,066,230
<b>Pre-IPO loan of \$200,000 to be repaid through the issue of shares at an issue price of \$0.10 per share</b>	2,000,000	2,000,000

<b>IPO shares</b>	22,500,000	25,000,000
<b>Shares to be issued to vendors of MIJ Holding Co Pty Ltd (or their nominees)</b>	9,000,000	9,000,000
<b>Total Shares post IPO</b>	43,602,288	46,102,288
<b>Market capitalisation (at \$0.20)</b>	\$8,720,458	\$9,220,458
<b>Options (\$0.20 expiring 2 years from issue)</b>	14,972,460	14,972,460

## Use of Funds

The Company intends to use funds raised from the Capital Raising over the first two years following re-admission of the Company to the Official List of the ASX as follows:

<b>Funds available (\$'000)</b>	<b>Minimum Subscription</b>		<b>Maximum Subscription</b>	
Pre-IPO loans	200		200	
Funds raised from the offer	4,500		5,000	
<b>Allocation of Funds</b>				
Cost of the offer	450		450	
	Year 1	Year 2	Year 1	Year 2
Exploration at the Gunnawarra project: geophysics acquisition & interpretation, drilling & assays	350	550	400	600
Exploration at the Mount Jesse project: geophysics acquisition & interpretation, drilling & assays	325	475	350	525
Exploration at the Pluton project: geophysics acquisition & interpretation, drilling & assays	175	225	200	275
New project assessment/review	125	125	150	150
General administration costs	450	400	475	450
Surplus working capital	1,050		1,145	

## Indicative Timetable

The indicative timetable for completion of the Acquisition, Capital Raising and re-compliance with the ASX Listing Rules is as follows:

<b>Event</b>	<b>Date</b>
Dispatch Notice of Meeting	25 August 2021
Shareholder Meeting to approve Acquisition & Capital Raising	24 September 2021
Prospectus lodged with ASIC and Public Offer opens	Prior to 24 September 2021
Prospectus Offer closes	October 2021
Completion of Acquisition of MIJ Expected date of reinstatement to trading (subject to Company re-complying with Chapters 1 & 2 of the Listing Rules)	November 2021

The above timetable is indicative and may change, subject to the Corporations Act and Listing Rules. The timetable also assumes that ASX grants an extension of 2-year deadline for automatic removal as a result of Ark's suspension (which on 25 September 2021). ASX may grant an extension if an entity can demonstrate to ASX's satisfaction that it is in the final stages of implementing a transaction that will lead to the resumption of trading in its securities. For these purposes, being in the "final stages" of implementing a transaction means that the entity has:

1. announced the transaction to the market (this has been done);
2. signed definitive legal agreements for the transaction (this has been done);
3. if the transaction requires a prospectus or product disclosure statement to be lodged with the Australian Securities and Investments Commission ("ASIC"), lodged that document with ASIC and it is not the subject of a stop order or other regulatory action by ASIC (Ark is currently preparing a prospectus which it intends to lodge with ASIC shortly); and
4. if the transaction requires approval by security holders or from a governmental agency or financier, obtained all such approvals (the notice of meeting for a shareholder meeting to be held on 24 September 2021 accompanies this announcement).

This announcement has been approved by the Board of Ark Mines Limited.

#### **Further Information:**

Roger Jackson  
Director  
+61 400408550

Antony Corel  
Chairman  
+44 7833578088

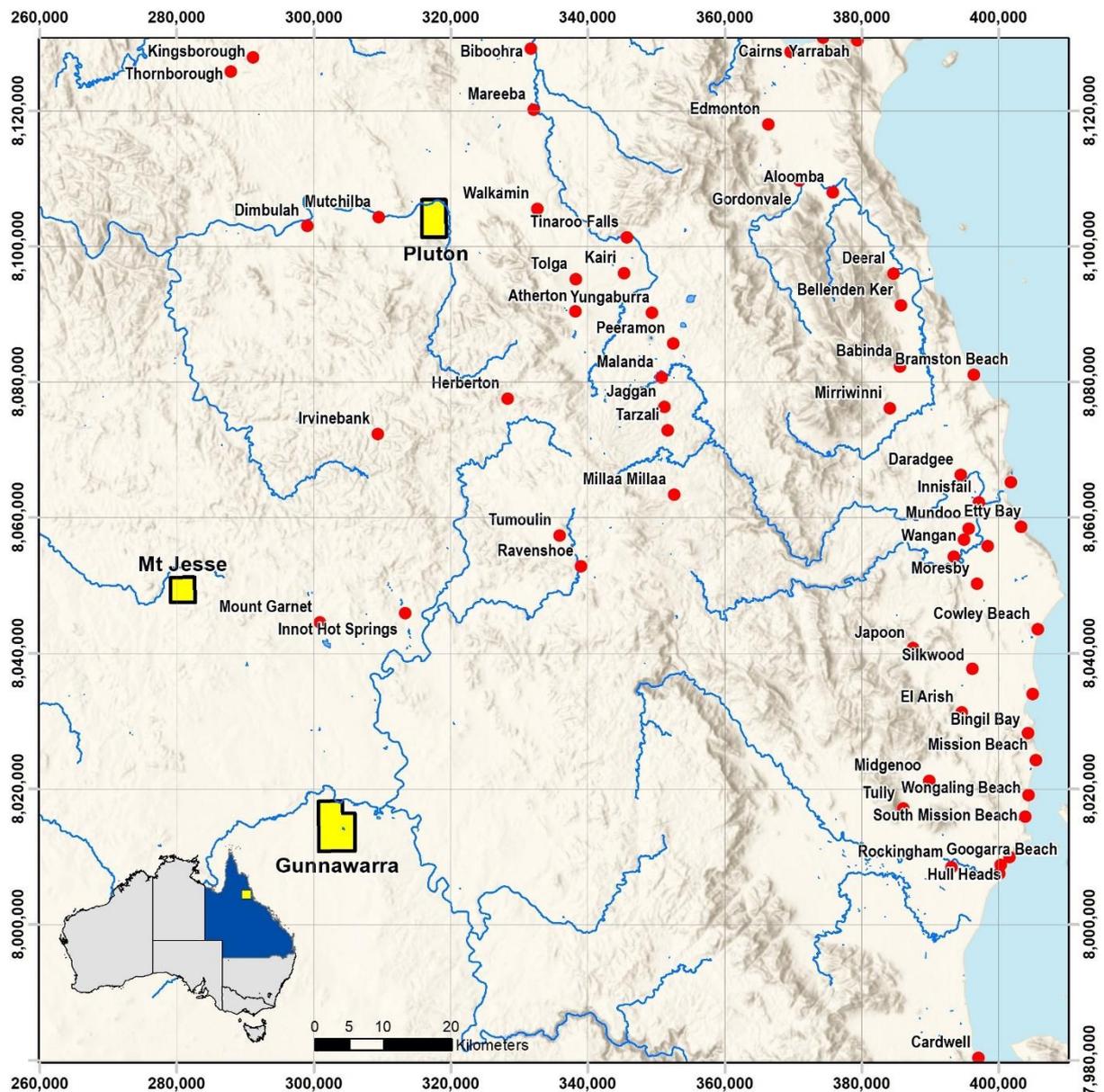
#### **Competent Persons Statement**

The Information in this report that relates to exploration results, mineral resources or ore reserves is based on information compiled by Mr Roger Jackson, who is a Fellow of the Australian Institute of Mining and Metallurgy. Mr Jackson is a director of the Company. Mr Jackson has sufficient experience which is relevant to the style of mineralisation and type

of deposits under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code). Mr Jackson consents to the inclusion of this information in the form and context in which it appears in this report.

## Annexure 1 - Background to the MIJ Queensland Projects

MIJ, through three wholly-owned subsidiaries, has a 100% interest in three Projects in Queensland (**Figure 1**), made up of three exploration permits (**Table 1**).



**Figure 1: Location of MIJ Projects**

The Projects appear to contain a number of historical results which demonstrate potentially high-grade/highly anomalous mineralised occurrences, however the Company has determined that additional due diligence is required to be undertaken to confirm data quality and detail.

**Table 1: Tenement Details**

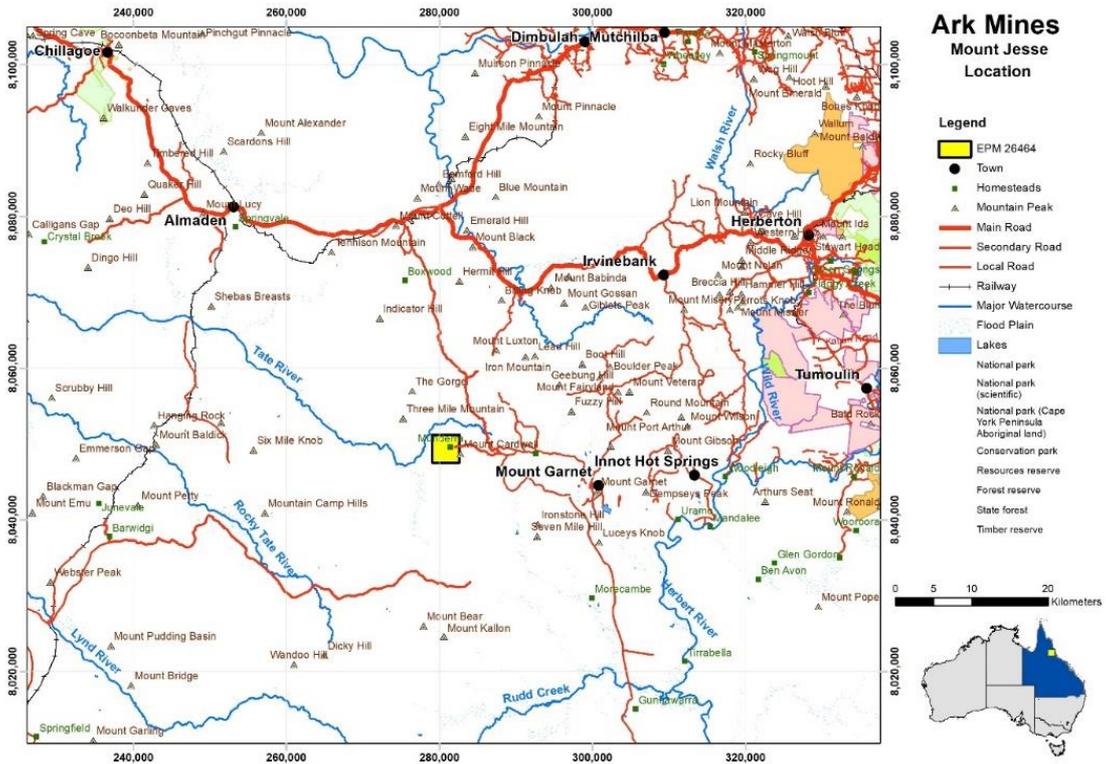
Permit	Project	Grant	Expiry	Area (ha)	Area (km <sup>2</sup> )
<b>EPM26464</b>	Mt Jesse	6/10/2019	6/10/2021	1,240	12.4
<b>EPM26560</b>	Gunnawarra	24/11/2019	24/11/2021	3,410	34.1
<b>EPM26883</b>	Pluton	8/3/2021	8/3/2023	1,860	18.6
Total				<b>6,510</b>	<b>65.1</b>

**Mt Jesse Iron with Copper project***Project Overview*

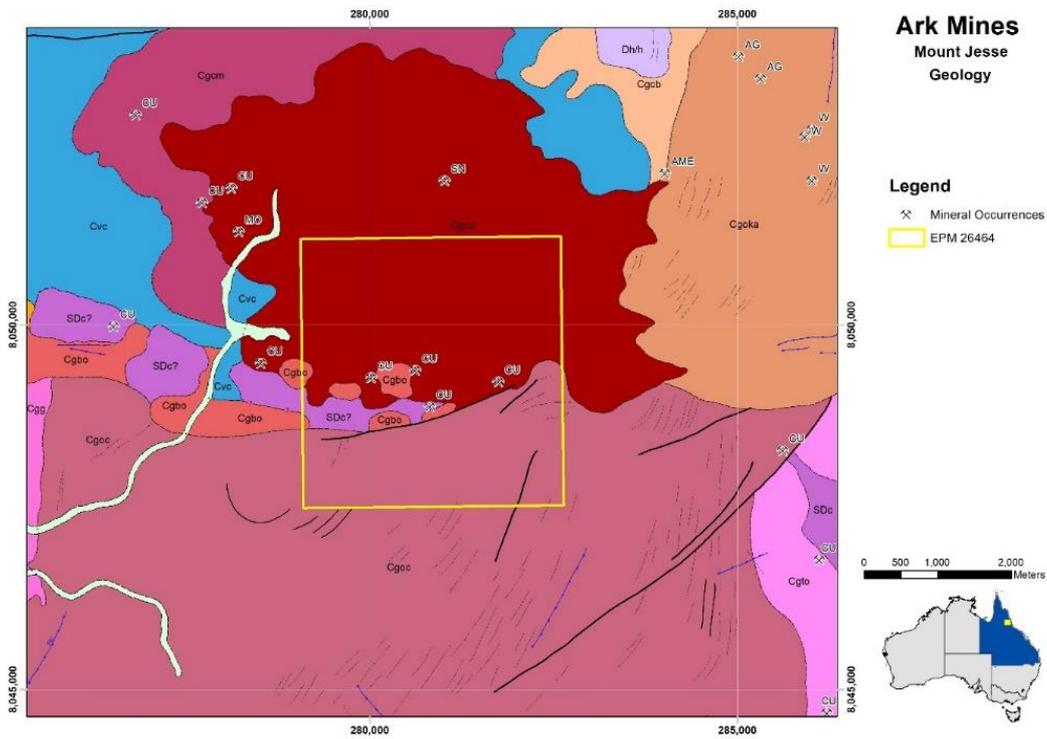
The Mount Jesse Iron with Copper project consists of one exploration permit (EPM 26464), which is located ~176km from Cairns in far-north Queensland (**Figure 2**).

The project covers three exposed iron formation occurrences, the main one of these occurs layered over fractured granodiorite. The iron formations are massive and homogenous, composed of hematite and magnetite, with strong magnetism. Associated with the Iron is a copper carbonate occurrence (malachite and bornite), in fractured plains.

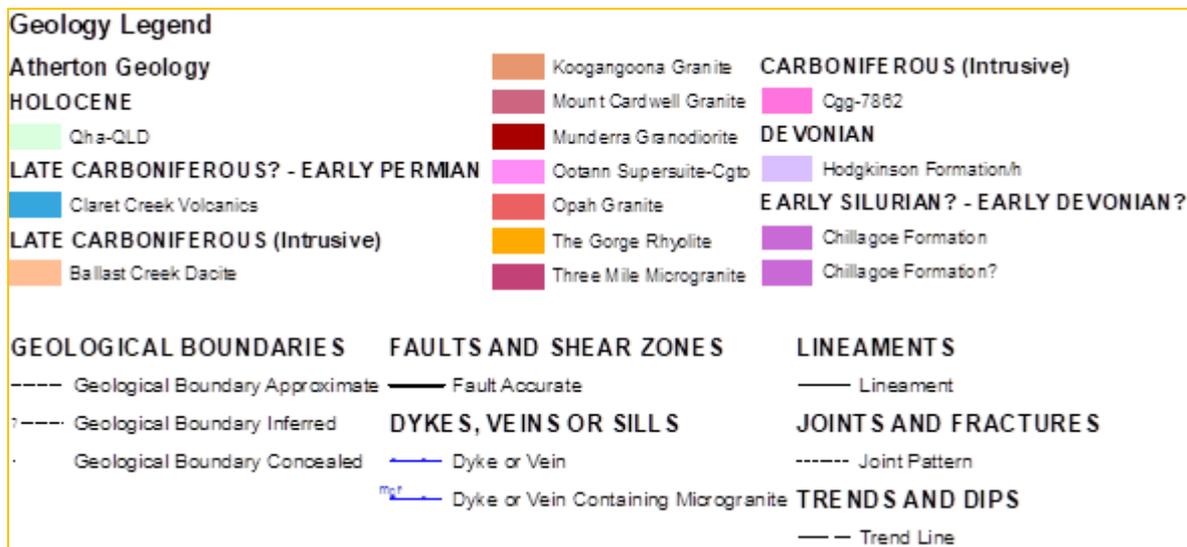
The project is centered on a copper rich magnetite skarn which potentially is associated with porphyry style mineralisation within a granodiorite. The mineralisation appears to sit above the granite and hug the contacts between the granite and Chillagoe formation as seen at the nearby Mt Lucy deposit. The main area of mineralisation (Mount Cardwell mine) is situated on a small hill and contains zones of strong magnetite (which has been oxidised in places to hematite) with associated copper to a lesser extent. The copper occurs as malachite however it would have originally been a sulphide species that has been oxidised as the malachite predominantly occurs in fractures in the mineralised zones.



**Figure 2: Mt Jesse Project Location**



**Figure 3: Mt Jesse Project Geological Map Location**



### Local Geology

The local geology is centred on the “Claret Creek ring Structure” which caps the permo – Carboniferous granite which underlies the Jesse project. The ring structures are surrounded by younger late carboniferous granites. (**Figure 3**).

Slivers of Silurian sediments are representative of the remnant country rock, make up a minor portion of the exposed outcrop, the majority of the project is masked by quaternary cover. Hydrothermal fluids have reacted with Silurian limestone / limey sediments to produce magnetite skarn +/- base metal deposits in a number of localities (e.g. Mt Cardwell workings & Jean Prospect).

### Mineralisation Style

The mineralisation encountered at Jesse consists of iron and copper and occurs in the Chillagoe formation as seen at Mt Lucy and Mt Paddy. The mineralisation is hosted in a skarn deposit with an intrusive granite intruding a sedimentary body (Chillagoe formation) and causing contact metamorphism and depositing iron and in places copper where conditions/ lithology is favourable.

The mineralisation appears to sit above the granite and hug the contacts between the granite and Chillagoe formation as seen at the Mt Lucy deposit. The main area of mineralisation (Mount Cardwell mine) is situated on a small hill and contains zones of strong magnetite (which has been oxidised in places to haematite) with associated copper to a lesser extent. The copper occurs as malachite however it would have originally been a sulphide species that has been oxidised as the malachite predominantly occurs in fractures in the mineralised zones.

Lam et al 1988 lists the Mount Cardwell mine (the main area of mineralisation at Jesse) as producing 1500t of skarn ore at 1% Cu and 10g/t Ag from 1904 to 1908. Company report 64480 by Intermet lists the ore minerals for Mount Cardwell as chalcopyrite and bornite with minor galena, sphalerite and silver ores.

The mineralisation at the Mount Cardwell mine is constrained by granite which is visible on all sides of the small hill. Several other small lenses of mineralisation can be seen to the west of Mount Cardwell where the Chillagoe formation has not been eroded or completely destroyed by the granite intrusives. There is a strong correlation between the copper and the iron mineralisation, however, they do not

always occur together, and it is likely that the copper is only seen in zones that endured higher temperatures.

Multiple pits (of various sizes and depths), diggings and workings exist on the EPM. The pits and workings west of the Mount Cardwell mine would have most likely been searching for further zones of copper enrichment within the Chillagoe formation. The Chillagoe formation can be seen further to the west of the Mount Cardwell mineralisation however the mineralisation was found to dissipate on the surface after approximately 800m of non-continuous small poddy outcrops.

### ***Previous Exploration***

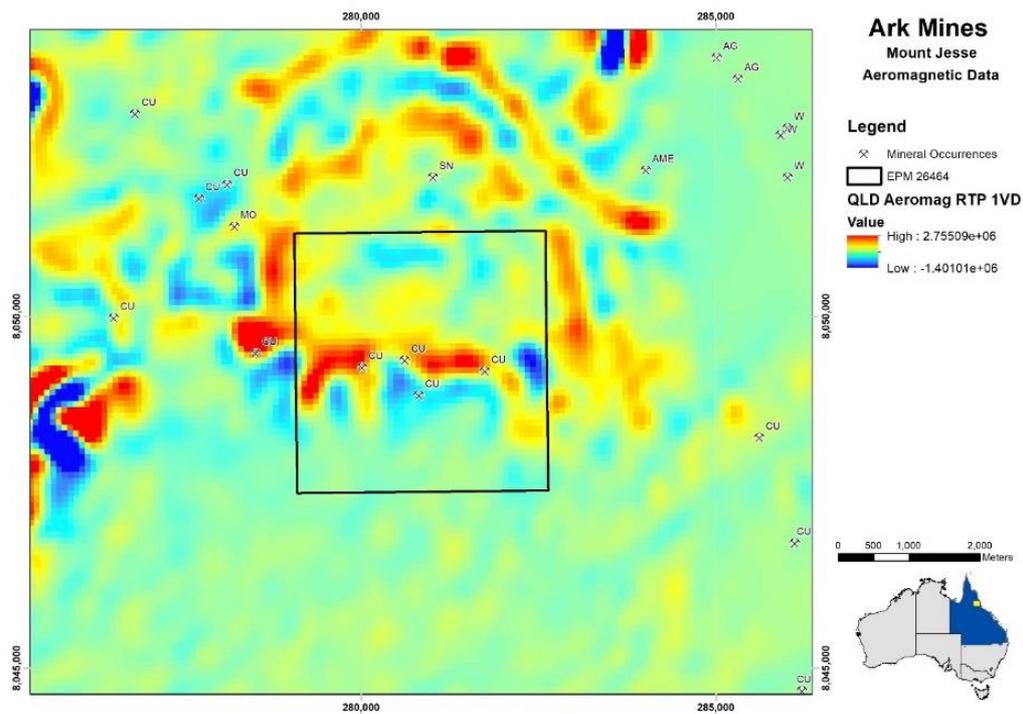
The Cardwell copper deposit, which was mined in the late 19th Century comprises small open cuts, two shafts and an adit. These provided access to a skarn style deposit rich in chalcopyrite and bornite with minor galena, sphalerite and silver ores. Work at the mine was relatively short lived, with closure of the mine in the early 20th century due to carriage costs and low metal prices.

The Mt. Cardwell Copper Deposit contains a 90m long magnetite-hematite copper-stained gossan averaging nine metres in width sited above the old workings. Copper has been observed on ground surface in stockwork fracturing and sheeted quartz veins within skarn altered metasediments and fractionated acidic intrusives, as well as on the iron rich gossan. Additional iron +/- copper gossan outcrop has been mapped for some 380m along strike to the west from the old workings.

Historical soil and rock-chip sampling undertaken by InterMet Resources in 2007 encountered copper value up to 20.9%, with an anomalous copper zone identified over an area of 170m by 40m across the summit of a hill within the permit. Additionally, InterMet uncovered gold grades up to 3g/t.

InterMet carried out geophysical surveys at Mount Jesse (including ground-based magnetic and gravity surveys), which highlighted a north-east striking magnetic high which was used to target first pass drilling at the project. InterMet drilled 10 reverse circulation holes between 2008 and 2011, with drilling identifying areas of elevated iron ore (up to 22.65%) and copper (up to 2.11%).

Coincidentally circa 3.5 km to the Southeast of Mt Jesse, Tableland Mining Group are now in the final stages of a significant drill program targeting 8-9MT of iron ore. TMG plan to mine and produce a high-grade iron ore concentrate targeting 66-68% Fe grade.



**Figure 4: Aeromagnetics, Mt Jesse Project.**

### ***Exploration Potential***

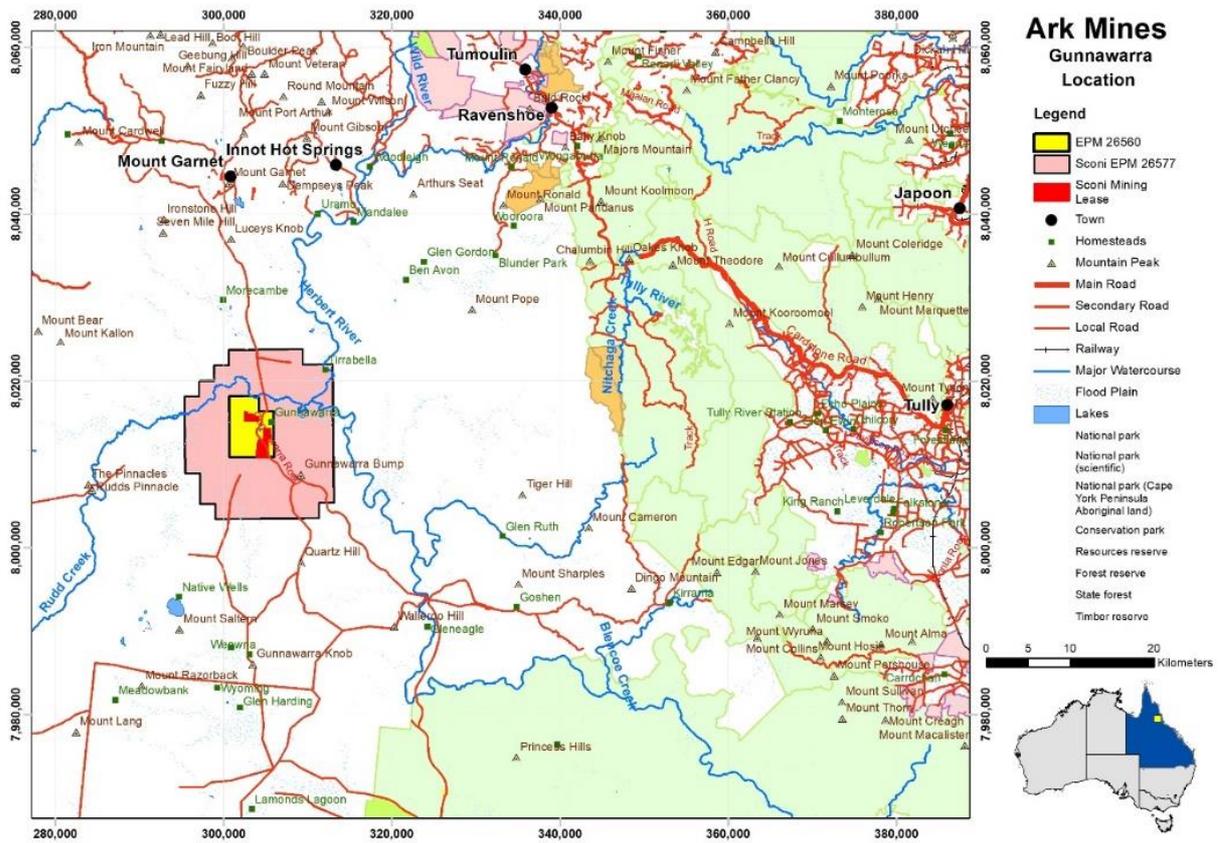
Following completion of the Acquisition, Ark Mines plans to carry out shallow drilling targeting the Southwest trending magnetic anomaly targeting the Jesse Iron Formation. Further to this Ark will undertake some infill sampling around anomalous copper zones, detailed geophysical interpretation, and undertake a first-pass drilling program across the copper target.

### **Gunnawarra cobalt-nickel project**

#### ***Project Overview***

The Gunnawarra cobalt-nickel project sits in exploration permit EPM 26560 and is located ~10kms from the town of Greenvale in far-north Queensland (**Figure 5**). The project is close to existing infrastructure, including grid power, water and access to port facilities.

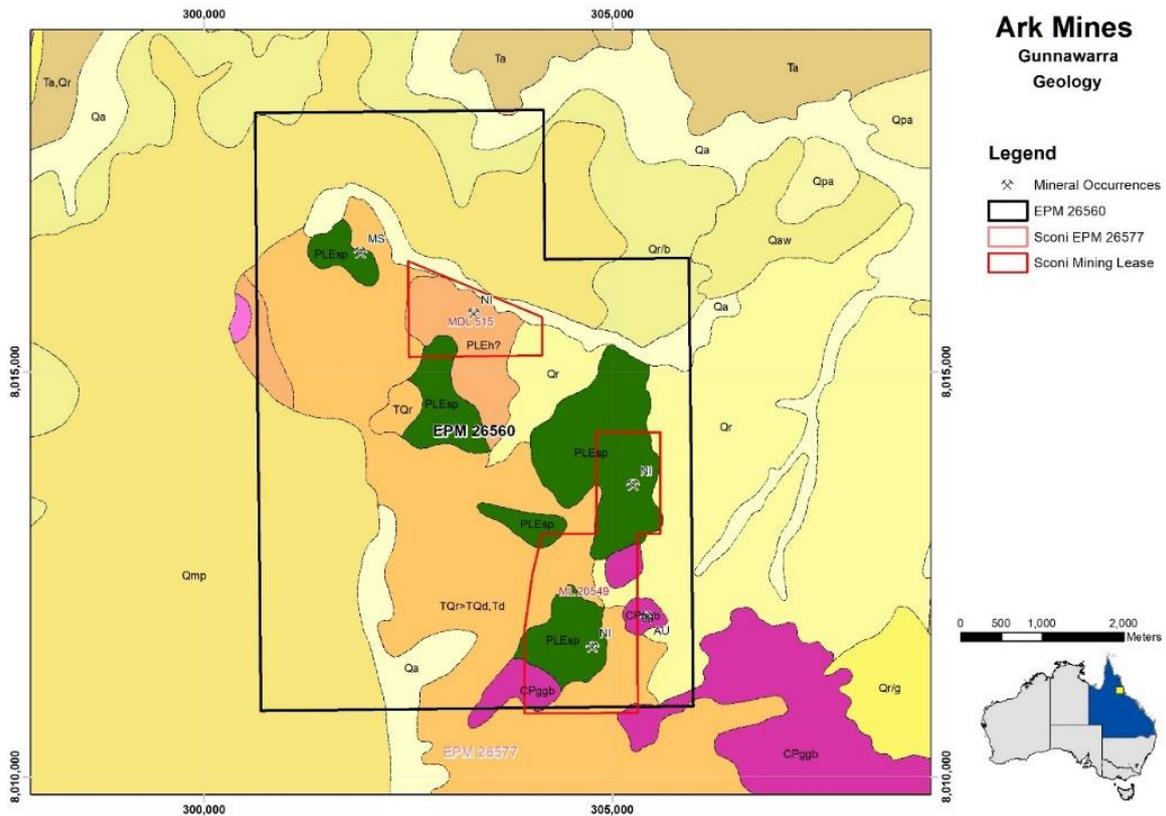
The region around Greenvale has a long mining history, predominately for nickel, cobalt, gold, tin and zinc, and forms part of the Greenvale nickel province, which has produced ~\$7bn of nickel and cobalt between 1974 and 1992.



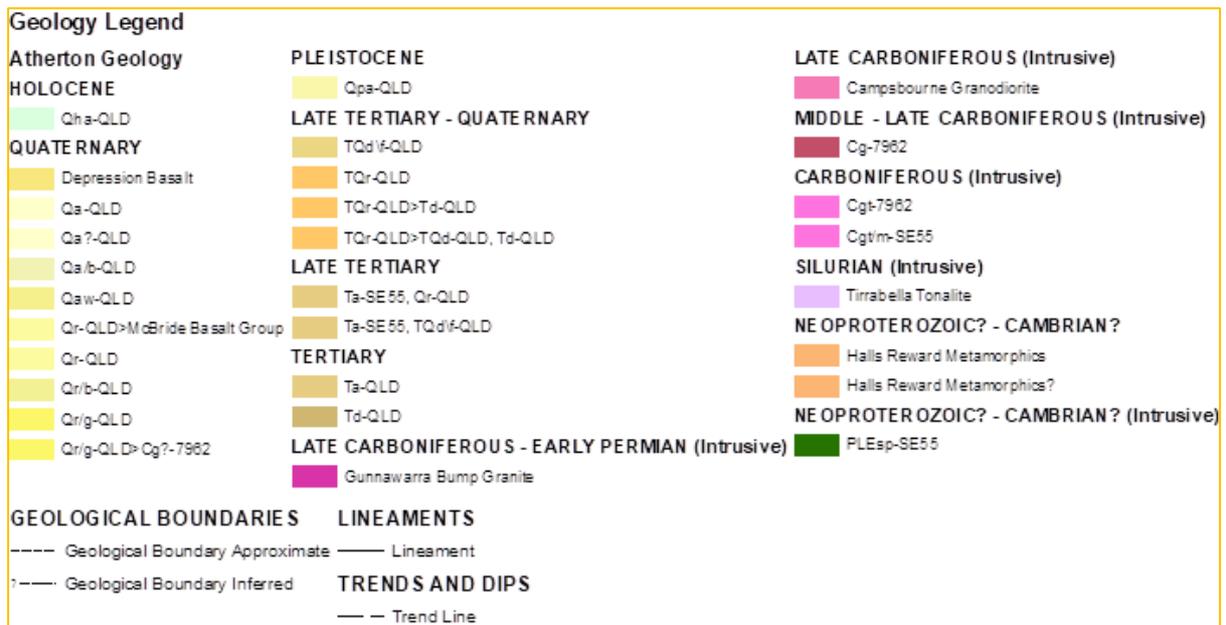
**Figure 5: Gunnawarra project location, northern Queensland.**

### **Local Geology**

The Gunnawarra nickel – cobalt laterite deposits have formed on ultramafic rocks that include serpentinites, meta gabbro’s and pyroxenites (**Figure 6**). These occur as fragments of lower crust material rich in iron, magnesium and nickel and are likely to be emplaced by shears and faults. This tectonic activity has conveyed the ultramafic fragments into the Proterozoic Shield and the Tasman Orogenic Belt, comprising Proterozoic meta – sedimentary schists and meta gabbro’s. Ordovician volcanogenic sediments and granitoids, and Devonian limestone are overlain by basalts.



**Figure 6: Gunnawarra interpreted geology.**



### Mineralisation Style

The Gunnawarra project is centred on a lateritic Ni cobalt mineralisation. Capped by surface expressed Ni Gossans. EPM 26560 surrounds the Bell Creek resource a component of the Sconi cobalt project owned by Australian Mines Limited (ASX:AUZ). The two Bell Creek MLs sitting within 26560 have a resource of 25.8m tonne of Nickel equivalent 0.86% Ni (21 October 2019 Australian Mines

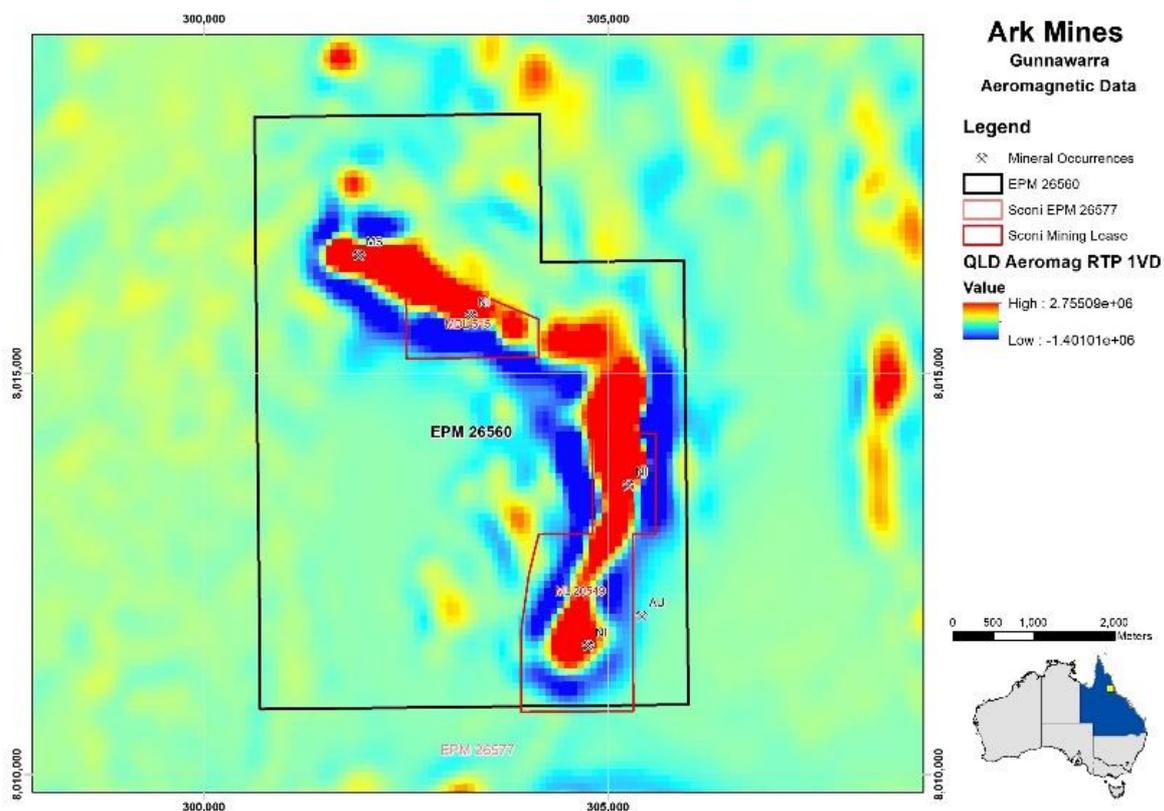
announcement – prepared by CSA Global to 2012 JORC Code). The permit has areas of laterites which have formed on ultramafic rocks that include serpentinites, meta gabbro's and pyroxenites (**Figure 6**). Diagnostic features of the Ni – Co – Cu gossans found on Gunnawarra include high Ni- Co Cu along with high Pd - Pt with low Cr- Mn – Zn and Pb.

### **Previous Exploration**

Historical exploration within the permit includes soil and rock chip sampling, geological mapping and regional airborne magnetics.

### **Exploration Potential**

Following completion of the Acquisition, Ark Mines plans to carry out follow-up sampling, detailed geophysical interpretation, and undertake Shallow RC drilling along strike of the Bell Creek resource, and on other targets within the lease. A component of the drilling will focus on the basement rocks for sulphide mineralisation.

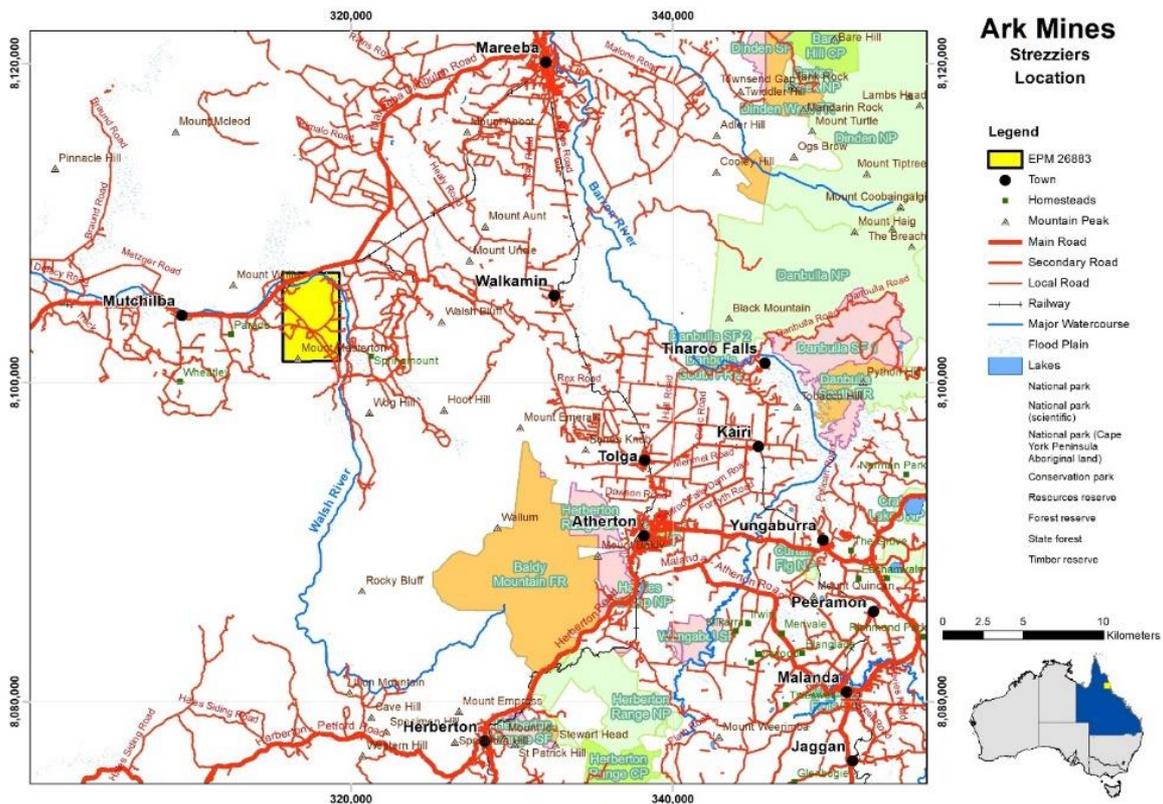


**Figure 7: Aeromag over the Gunnawarra project shows strong continuity from the Bell Resource Mining Licences into EPM 26560**

### ***Pluton porphyry gold project***

#### **Project Overview**

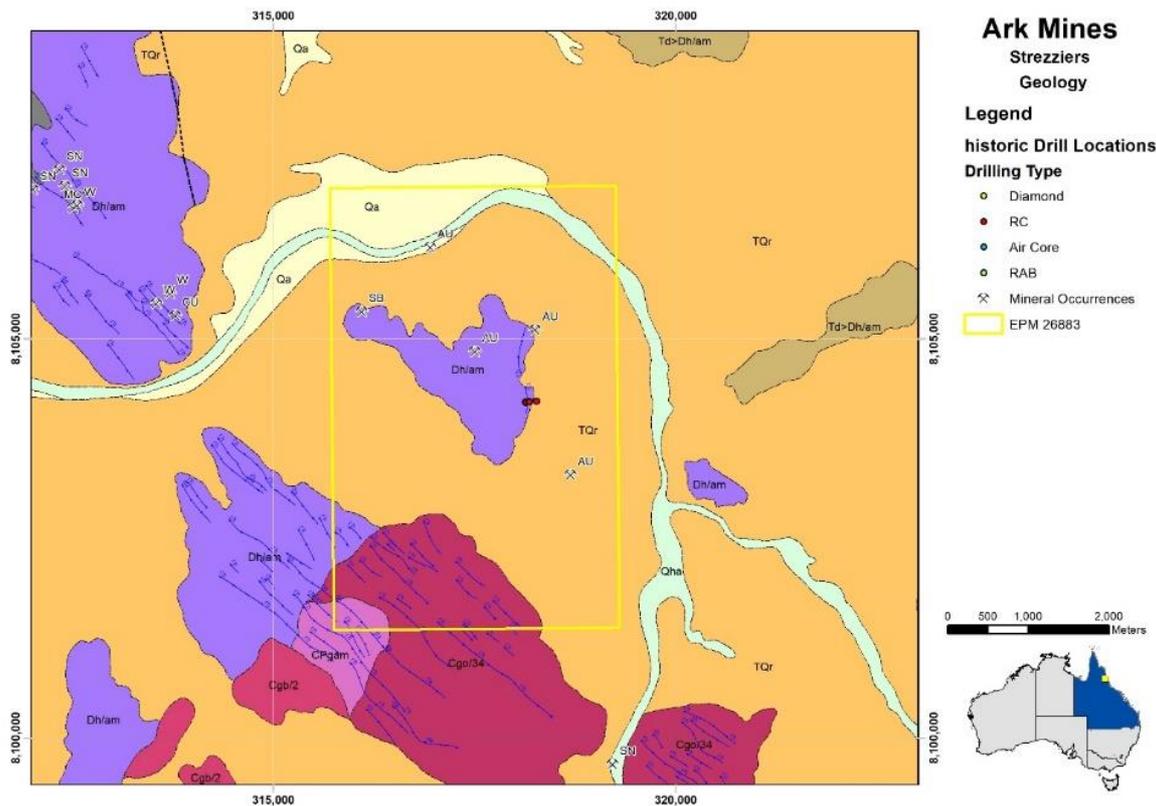
The Pluton Gold and Gold porphyry project consists of a granted EPM 2688, which is located near the town of Dimbulah in far-northern Queensland (**Figure 8**). The project is prospective for gold and associated base metals.



**Figure 8: Pluton project Location, northern Queensland.**

### **Local Geology**

The geology of the Pluton project is shown in (Figure 9). Stratigraphic units within the basement rocks can be differentiated only locally, owing to metamorphic effects and the intensity of deformation. Tertiary rocks are locally present at the western application boundary and in the southeast. The contact between basement and Tertiary sediments is frequently characterised by an irregular zone of deep weathering and leaching of the basement rocks beneath the contact. Tertiary outliers, comprising fluvial and lacustrine deposits of the Eocene Highburn Formation and the Oligocene-Miocene Wedderburn Formation are locally capped by basalt flow remnants belonging to the Pliocene Waipiata volcanics (Murfit, 1997).



**Figure 9: Geological map of the Pluton project.**

### ***Previous Exploration***

CRAE undertook significant work during the late 1980's including detailed mapping, geochemistry and geophysics of the breccia zone of the Pluton Prospect. An IP survey was carried out to define drill targets. CRAE also identified the Pluton prospective porphyritic dacite dykes and associated annular collapsed breccia as the best remaining target.

The Pluton project has had some drilling undertaken, with an intersection of 48m at 0.26g/t Au from 30m downhole. (Malachite May 2006 ASX: MAL)

Exploration work by Malachite Resources on Pluton targeted the breccia zone. Most of the breccia consists of angular sandstone fragments with a finer matrix.

15 surface rock chip samples were taken from breccia, quartz veined breccia, sulphide breccia and quartz veined sandstone. The test results were highly anomalous particularly for gold (9.94 g/t), Bismuth (730ppm) and lead (1230 ppm).

### ***Exploration Potential***

Following completion of the Acquisition, Ark Mines plans to carry out infill soil sampling and detailed soil sampling over some targeted locations, detailed geophysical interpretation, and further step out drilling from the previous drilling.

## APPENDIX 1.

The following Tables are provided to ensure compliance with the JORC Code (2012 Edition) requirements for the reporting of Exploration Results at the **Mt Jesse Project**.

### Section 1: Sampling Techniques and Data

(Criteria in this section applies to all succeeding sections)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i>	<i>Sampling includes 1225 soil samples were taken 975m of RC drill chips were collected from 11 collars. Intermet Resources Muderra Annual Report 2009 to 2010</i>
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	<i>Various grid sizes and orientations were used so as to best cover the variable ground conditions Intermet Resources Muderra Annual Report 2009 to 2010</i>
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i>	<i>RC drilling was used to take 1m samples, historic sample mass unknown. Samples were pulverised and a 30g aliquot taken for fire assay. 250g soil samples were collected in B horizon, pulverized and a 30g aliquot was taken for screen fire assay. Gold analysis using fire assay (ppb), and a 28 element ICP scan were undertaken on all samples.  Intermet Resources Muderra Annual Report 2009 to 2010</i>
<b>Drilling techniques</b>	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic etc) and details (e.g. core diameter, triple of standard tube, depth of diamond tails, face-sampling bit or other type, whether core is orientated and if so, by what method, etc).</i>	<i>RC drilling using 5.5 inch face sampling hammer was used for 975m over 11 holes Intermet Resources Muderra Annual Report 2009 to 2010</i>
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	<i>A total of 1225 soil samples were taken during the reporting period on the EPM. Gold analysis using fire assay (ppb), and a 28 element ICP scan were undertaken on all samples. Intermet Resources Muderra Annual Report 2009 to 2010</i>
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	NA
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	NA

<b>Logging</b>	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	Historic chip logs not yet reviewed
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	

<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
	<i>The total length and percentage of the relevant intersections logged.</i>	Intermet Resources drilled eleven exploration reverse circulation drill holes for a total of 975m on the Munderra Project during the reporting period 02/03/2009 to 01/03/2010. <i>Intermet Resources Muderra Annual Report 2009 to 2010</i>
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	It is believed that samples were riffle split using a rig mounted riffle splitter, full details yet to be confirmed
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	QAQC data yet to be reviewed
	<i>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second- half sampling.</i>	QAQC data yet to be reviewed
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	QAQC data yet to be reviewed
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	Gold analysis using fire assay (ppb), and a 28 element ICP scan were undertaken on all samples.  <i>Intermet Resources Muderra Annual Report 2009 to 2010</i>
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	NA
	<i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	Control procedures are not detailed
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	NA
	<i>The use of twinned holes.</i>	NA
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	NA
	<i>Discuss any adjustment to assay data.</i>	NA
<b>Location of data points</b>	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	Surveying method unknown

Criteria	JORC Code explanation	Commentary
	<i>Specification of the grid system used.</i>	GDA94
	<i>Quality and adequacy of topographic control.</i>	Not known

Criteria	JORC Code explanation	Commentary
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	<i>Prospect scale soil sampling was undertaken over the Mt Cardwell areas. Prospect scale soil sampling used grid spacing down to 50m x 50m separation.</i> <i>Intermet Resources Muderra Annual Report 2009 to 2010</i>
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	Please refer to Figure 6. Soil Sample Sites, <i>Intermet Resources Muderra Annual Report 2009 to 2010</i>
	<i>Whether sample compositing has been applied.</i>	NA
<b>Orientation of data in relation to geological structure</b>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	NA
	<i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	NA
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	NA
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	NA

## Section 2: Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	<i>EPM 26464 Mount Jesse is located Approximately 176Km from Cairns (164Km from Cairns to Mt Garnet and a further 12Km from Mt Garnet to Cardwell Station).</i> <i>EPM26464 contains 4 sub blocks is held 100% by Bmax Holdings Pty Ltd, the lease was renewed on the 5/10/2019 for a period of two years.</i> <i>A cultural heritage survey was conducted over a number of areas to identify areas of cultural heritage significance. Fortunately, no significant sites were found within the EPM.</i>
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	No Known impediments to obtain a licence to operate in the area.
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Please refer to Intermet Resources Annual Report 2009 to 2010

Criteria	JORC Code explanation	Commentary
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	The region is prospective for base metal skarns, intrusion-related gold deposits, hydrothermal copper - base metal - gold systems and hard rock and alluvial tin - tungsten deposits. The EPM overlies a number of significant geological units including the Chillagoe Limestone Formation and Ootann Super Suite Granites. The Chillagoe Formation is known to host several regionally significant economic deposits including Mt Garnet Zn-Cu, Mungana Cu-Au and Red Dome Au  <i>Intermet Resources Muderra Annual Report 2009 to 2010</i>
<b>Drill hole Information</b>	<i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i>	
	<ul style="list-style-type: none"> <li>• easting and northing of the drill hole collar</li> <li>• elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>• dip and azimuth of the hole</li> <li>• down hole length and interception depth</li> <li>• hole length.</li> </ul>	Refer to Table 1 Appendices 2
	<i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i>	
<b>Data aggregation methods</b>	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg. cutting of high grades) and cut-off grades are usually Material and should be stated.</i>	No top cut is applied. No cut-off grade has yet been applied No weighting or averaging has been applied
	<i>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i>	NA
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	NA
<b>Relationship between mineralisation widths and intercept lengths</b>	<i>These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i>	All intercepts are given as down hole widths
<b>Diagrams</b>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	Refer to attached maps in Appendices 2 Figure 10 And Figure 11
<b>Balanced reporting</b>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	NA

Criteria	JORC Code explanation	Commentary
<b>Other substantive exploration data</b>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	<i>Exploration in the area of the EPM has provided evidence of the existence of a number of styles of mineralization including skarn base metal, porphyry gold, porphyry copper, tin-tungsten greisen, granite hosted gold and hydrothermal gold-base metal. Further to this, the existence of a number of significant economic deposits in the region provides additional impetus for continuing and expanding the exploration program.</i> <i>Intermet Resources Muderra Annual Report 2009 to 2010</i>
<b>Further work</b>	<i>The nature and scale of planned further work (eg. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	<i>Following completion of the Acquisition, Ark Mines plans to carry out shallow drilling targeting the Southwest trending magnetic anomaly targeting the Jesse Iron Formation. Further to this Ark will undertake some infill sampling around anomalous copper zones, detailed geophysical interpretation, and undertake a first-pass drilling program across the copper target.</i>

The following Tables are provided to ensure compliance with the JORC Code (2012 Edition) requirements for the reporting of Exploration Results at the **Gunnawarra Project**.

## Section 1: Sampling Techniques and Data

(Criteria in this section applies to all succeeding sections)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i>	<i>Reported mineralisation appears to be confirmed by the first pass sampling regime carried out by BMAX Holdings Ltd in 2018. Random surface rock chip samples were taken from sites in the north-west of EPM 26560  Hughes Consulting - Independent Geologist Report Gunnawarra &amp; Greenvale Projects 2019</i>
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	<i>The location of each rock chip sample taken by BMAX Holdings within the EPM were logged using a hand held GPS, samples were then analysed by ALS Australia.</i>
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i>	<i>The tenement Mineralisation is an extension of the Norninco Tenements. These tenements have had considerable sampling and metallurgical testwork to support a feasibility study. Bell Creek was operated for most of the 2008/09 year.  Metallica Minerals Annual Report 2009</i>
<b>Drilling techniques</b>	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic etc) and details (e.g. core diameter, triple of standard tube, depth of diamond tails, face-sampling bit or other type, whether core is orientated and if so, by what method, etc).</i>	<i>No drilling is reported for Gunnawarra in this announcement</i>
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	<i>No drilling is reported for Gunnawarra in this announcement</i>
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	<i>No drilling is reported for Gunnawarra in this announcement</i>
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	<i>No drilling is reported for Gunnawarra in this announcement</i>
<b>Logging</b>	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	<i>No drilling is reported for Gunnawarra in this announcement</i>
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	<i>No drilling is reported for Gunnawarra in this announcement</i>

Criteria	JORC Code explanation	Commentary
	<i>The total length and percentage of the relevant intersections logged.</i>	<i>No drilling is reported for Gunnawarra in this announcement</i>
<b>Sub-sampling techniques and</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	<i>No drilling is reported for Gunnawarra in this announcement</i>

<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
<b>sample preparation</b>	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	<i>No drilling is reported for Gunnawarra in this announcement</i>
	<i>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second- half sampling.</i>	<i>No drilling is reported for Gunnawarra in this announcement</i>
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	<i>No drilling is reported for Gunnawarra in this announcement</i>
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	No samples are reported in this announcement
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	NA
	<i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	NA
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	NA
	<i>The use of twinned holes.</i>	NA
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	NA
	<i>Discuss any adjustment to assay data.</i>	NA
<b>Location of data points</b>	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	<i>Hand held GPS is acceptable for initial rock chip sampling with accuracy ±8m in x and y typical</i>
	<i>Specification of the grid system used.</i>	Grid GDA94 No topographic control applied.
	<i>Quality and adequacy of topographic control.</i>	

<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	NA
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	NA
	<i>Whether sample compositing has been applied.</i>	NA

Criteria	JORC Code explanation	Commentary
<b>Orientation of data in relation to geological structure</b>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	No drilling is reported for Gunnawarra in this announcement
	<i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	No drilling is reported for Gunnawarra in this announcement
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	NA
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	NA

## Section 2: Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	<i>The Gunnawarra Project consists of EPM 26560 located 30km south of Mt Garnet in Far North Queensland and EPM 26599, 17 km south of Greenvale both of which are held by BMAX Holdings Pty Ltd. EPM 26560 was granted on 24<sup>th</sup> November 2017 for a period of two years and a renewal for two years was granted 24<sup>th</sup> November 2019, the EPM covers 11 sub blocks</i> <i>Hughes Consulting - Independent Geologist Report Gunnawarra &amp; Greenvale Projects 2019</i>
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	No Known impediments to operate in the area
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	A.O. Australia Pty Ltd, CRA Ltd, Renison Ltd and Metallica Minerals Ltd have all carried out exploration within and around the EPM <i>Hughes Consulting - Independent Geologist Report Gunnawarra &amp; Greenvale Projects 2019</i>
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	<i>Previous exploration has established the existence of potentially economically viable high-grade Nickel and Cobalt deposits within the EPMS and surrounding area</i> <i>The project lies in the eastern most part of the Georgetown inlier in the Greenvale sub province close to the Palmerville Fault Zone. Carboniferous to Upper Permian post tectonic granite emplacement and acid volcanism is associated with the major regional structural feature.</i> <i>Hughes Consulting - Independent Geologist Report Gunnawarra &amp; Greenvale Projects 2019</i>
<b>Drill hole Information</b>	<i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i>	No drilling is reported for Gunnawarra in this announcement

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul>	
	<i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i>	No drilling is reported for Gunnawarra in this announcement
<b>Data aggregation methods</b>	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg. cutting of high grades) and cut-off grades are usually Material and should be stated.</i>	No samples are reported in this announcement
	<i>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i>	No samples are reported in this announcement
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	
<b>Relationship between mineralisation widths and intercept lengths</b>	<i>These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i>	No drilling is reported for Gunnawarra in this announcement
<b>Diagrams</b>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	No samples are reported in this announcement
<b>Balanced reporting</b>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	No samples are reported in this announcement
<b>Other substantive exploration data</b>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	No samples are reported in this announcement
<b>Further work</b>	<p><i>The nature and scale of planned further work (eg. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></p> <p><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></p>	<i>Following completion of the Acquisition, Ark Mines plans to carry out follow-up sampling, detailed geophysical interpretation, and undertake Shallow RC drilling along strike of the Bell Creek resource, and on other targets within the lease. A component of the drilling will focus on the basement rocks for sulphide mineralisation.</i>

The following Tables are provided to ensure compliance with the JORC Code (2012 Edition) requirements for the reporting of Exploration Results at the **Pluton Project**.

## Section 1: Sampling Techniques and Data

(Criteria in this section applies to all succeeding sections)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i>	<i>In April and June 2005, two separate rock chip sampling programs targeted three of the five prospects and confirmed the presence of localised high grade Au mineralisation at surface, and that the best targets exist in the central parts of the Pluton EPM. This area was tested with RC drilling in November 2005 (Pluton Prospect).</i> <i>Malachite Resources Annual Report May 2006</i>
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	<i>Representative samples weighing between 1 and 3 kg were collected with a G-pick or sledge hammer and placed in calico sample bags with unique sample numbers. Sample locations were recorded with a GPS and geological details of each sample were logged on standard rock chip sheets</i> <i>Malachite Resources Annual Report May 2006</i>
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i>	<i>Detailed Exploration Work - Pluton Prospect</i> <i>First-pass prospecting and mapping;</i> <i>Rock chip sampling (15 samples);</i> <i>RC Drilling (5 holes) for a total advance of 443 m.</i> <i>Malachite Resources Annual Report May 2006</i>
<b>Drilling techniques</b>	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic etc) and details (e.g. core diameter, triple of standard tube, depth of diamond tails, face-sampling bit or other type, whether core is orientated and if so, by what method, etc).</i>	<i>The first field program consisted of drilling five RC holes to test the subsurface expression of brecciation and mineralisation at Pluton. A total of 443m was drilled to test the breccia and a nearby quartz-phyric porphyritic intrusive body. The drilling intersected only minor zones of pyrite-arsenopyrite mineralisation within weakly altered sandstone and intrusive</i> <i>Malachite Resources Annual Report May 2006</i>
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	<i>The samples were assayed by ALS Chemex Labs in Townsville. The rocks were assayed for Au (50 g Fire Assay method AA26) and up to 34 other trace/major elements (ME-ICP41).</i> <i>Malachite Resources Annual Report May 2006</i>
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	NA
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	NA
<b>Logging</b>	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	NA

	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	NA
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<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
	<i>The total length and percentage of the relevant intersections logged.</i>	NA
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	NA
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	<p><i>All samples were taken with a tapered PVC spear by spearing each 1-m bag 1-2 times within the composite interval. Wet samples were also speared regardless of the sample interval, but these form a very small population of samples. About 2 to 3-kg was speared from each sample interval</i></p> <p><i>Malachite Resources Annual Report May 2006</i></p>
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	<p><i>As part of Malachite's Quality Control (QC) protocol, a system of duplicate sampling was implemented for the RCP drilling to measure the sampling variance. Duplicate 1-m and 3-m samples were taken by the same method as the corresponding sample being duplicated, at a frequency of about one duplicate for every 20 samples submitted to the laboratory</i></p> <p><i>Malachite Resources Annual Report May 2006</i></p>
	<i>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second- half sampling.</i>	NA
<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	NA	
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	NA
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	NA
	<i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	<p><i>A total of 189 samples (including 10 duplicates, 6 standards and 5 blanks) were submitted to ALS Townsville laboratory for analysis</i></p> <p><i>Malachite Resources Annual Report May 2006</i></p>
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	<p><i>All standards and duplicates were within acceptable ranges. Sampling of a selected interval in PLRC03 by 3 m composites and 1 m samples was utilized as a way of checking reproducibility of sample results. This also allowed some confidence to be attributed to the compositing technique that it did not adversely decrease elevated gold values in 1 m sample intervals by dilution into a 3 m composite sample.</i></p> <p><i>Malachite Resources Annual Report May 2006</i></p>
	<i>The use of twinned holes.</i>	NA
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	NA

Criteria	JORC Code explanation	Commentary
	<i>Discuss any adjustment to assay data.</i>	NA
<b>Location of data points</b>	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	NA
	<i>Specification of the grid system used.</i>	
	<i>Quality and adequacy of topographic control.</i>	

Criteria	JORC Code explanation	Commentary
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	NA
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	NA
	<i>Whether sample compositing has been applied.</i>	<i>All standards and duplicates were within acceptable ranges. Sampling of a selected interval in PLRC03 by 3 m composites and 1 m samples was utilized as a way of checking reproducibility of sample results. This also allowed some confidence to be attributed to the compositing technique that it did not adversely decrease elevated gold values in 1 m sample intervals by dilution into a 3 m composite sample.</i> <i>Malachite Resources Annual Report May 2006</i>
<b>Orientation of data in relation to geological structure</b>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	NA
	<i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	NA
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	NA
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	NA

## Section 2: Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	EPM 26883 The Pluton – Strezziars The tenements contain 6 sub blocks and is held 100% by Bmax Holdings Pty Ltd.

Criteria	JORC Code explanation	Commentary
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	No known impediments to obtain a licence to operate.
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Malachite Resources and Internet Resources
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	The Pluton Project is located within the Palaeozoic Hodgkinson Province of north Queensland. The area is dominated by sedimentary rocks of Devonian age belonging to the Hodgkinson Formation (1;250,000 Atherton Geology Sheet – Bultitude et al. 1986).  <i>Malachite Resources Annual Report May 2006</i>
<b>Drill hole Information</b>	<i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i>	
	<ul style="list-style-type: none"> <li>• easting and northing of the drill hole collar</li> <li>• elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>• dip and azimuth of the hole</li> <li>• down hole length and interception depth</li> <li>• hole length.</li> </ul>	Refer to Table 2 in Appendices 3
	<i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i>	
<b>Data aggregation methods</b>	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg. cutting of high grades) and cut-off grades are usually Material and should be stated.</i>	NA
	<i>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i>	NA
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	NA
<b>Relationship between mineralisation widths and intercept lengths</b>	<i>These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i>	Please reference Malachite Resources <i>PLUTON PROJECT – Drill cross section for EPM14648</i> <i>Drill Hole Section</i> <i>PLRC01, PLRC02, PLRC03 &amp; PLRC05</i>  File name cr_42792_5
<b>Diagrams</b>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	Refer to Appendices 3

<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
<b>Balanced reporting</b>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	NA
<b>Other substantive exploration data</b>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	NA
<b>Further work</b>	<p><i>The nature and scale of planned further work (eg. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></p> <p><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></p>	<i>Following completion of the Acquisition, Ark Mines plans to carry out infill soil sampling and detailed soil sampling over some targeted locations, detailed geophysical interpretation, and further step out drilling from the previous drilling.</i>

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## APPENDIX 2.

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### INTERNET DRILL COLLAR LOCATIONS

Table 1 Internet Drill collar locations

Hole_ID	GDA_East	GDA_North	RL	Actual Depth	Hole Type	Azimuth	Dip	Start_Date	Completion_Date
JRC004	281736	8049279	609	156	RC	140	-60	25.11.09	27.11.09
JRC005	281775	8049198	630	84	RC	311	-60	27.11.09	28.11.09
JRC006	281740	8049166	645	125	RC	320	-60	29.11.09	30.11.09
JRC007	281741	8049164	645	18	RC	320	-75	30.11.09	30.11.09
JRC008	281694	8049149	635	90	RC	320	-60	30.11.09	1.12.09
JRC009	281695	8049147	635	90	RC	320	-82	1.12.09	2.12.09
JRC010	281034	8048977	610	66	RC	342	-70	2.12.09	2.12.09
PRC016	287152	8045238	774	130	RC	35	-60	3.12.09	3.12.09
PRC017	287417	8044738	719	71	RC	230	-60	4.12.09	5.12.09
PRC018	287444	8044770	724	65	RC	50	-65	5.12.09	5.12.09
PRC019	287493	8044834	724	80	RC	50	-60	6.12.09	6.12.09

# MT JESSE DRILL SAMPLE AND ROCK SAMPLE LOCATIONS

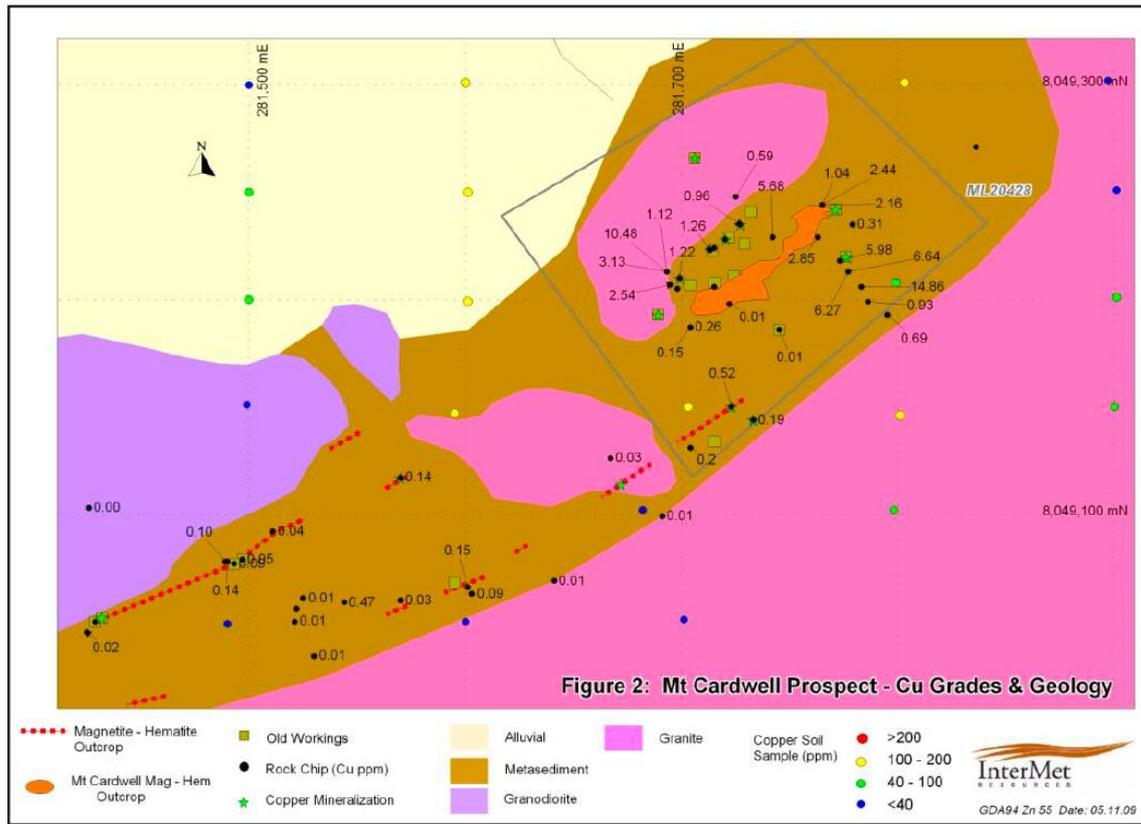


Figure 10. Geology and Rock Chip sample locations at Mt Jesse

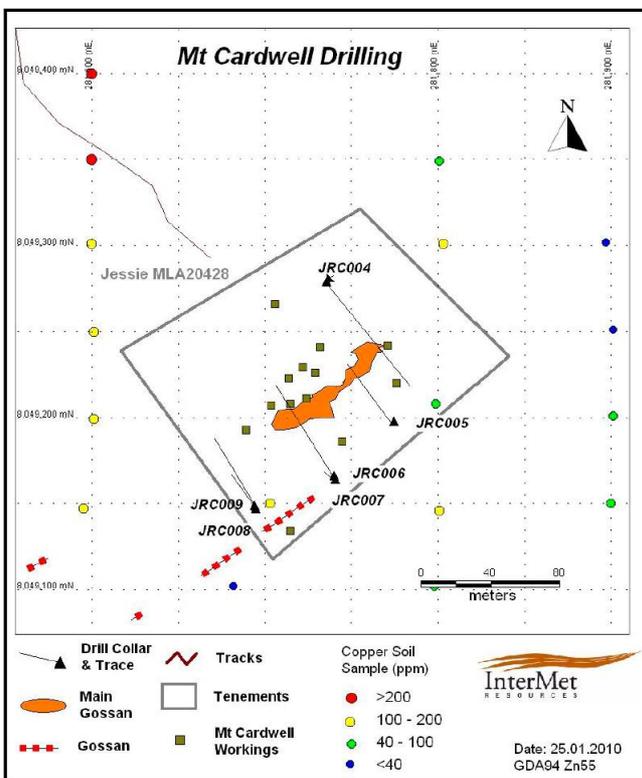


Figure 11. Drilling collar locations at Mt Jesse

## APPENDIX 3.

### PLUTON MALACHITE DRILLING COLLAR LOCATIONS

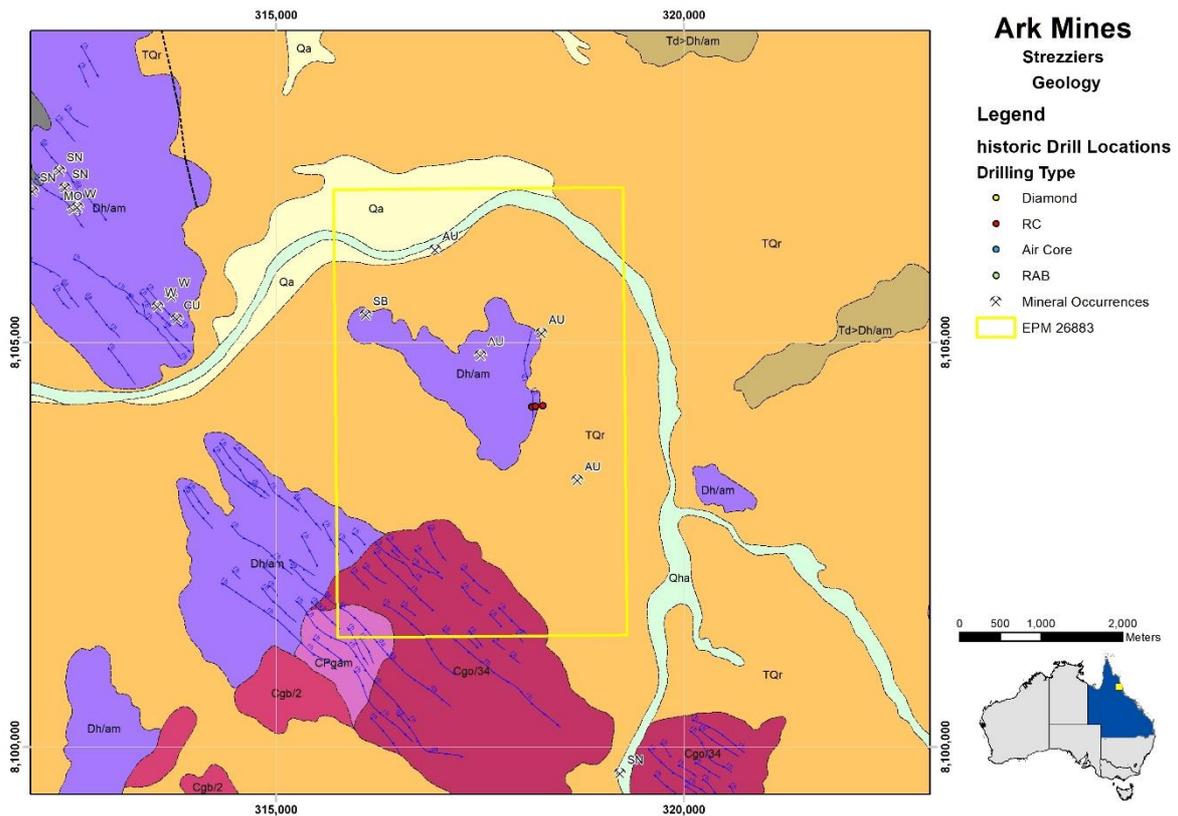


Figure 12 Pluton Locations of the collars of the RC drilling collars undertaken by Malachite

Table 2 Malachite Drill collar details

Hole	East GDA	North GDA	Dip	Azimuth (mag)	Total Depth	Depth Oxidation	Date Finish	Target Comments
PLRC01	318017	8104038	-50°	264°	88m	52m	18/11/2005	Hole into centre of breccia
PLRC02	318024	8104034	-60°	83°	88m	31m	17/11/2005	Hole testing inferred western contact of breccia
PLRC03	318152	8104052	-60°	263.5°	91m	38m	20/11/2005	Hole testing inferred eastern contact of breccia.
PLRC04	318058	8104042	-60°	324°	88m	37m	19/11/2005	Hole directly underneath breccia outcrop with As-rich matrix.
PLRC05	318063	8104043	-50°	243°	88m	34m	21/11/2005	Hole to test newly discovered quartz porphyry below base of oxidation.

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## APPENDIX 4.

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### REFERENCES

*Intermet resources, EMP15481 (Munderra) Annual Report 02/03/2009 to 01/03/2010, Author: Andrew Harwood*

*Intermet resources, Iron Ore Exploration Update 22 April 2008*

*Intermet resources, Developing a Queensland Based Iron Company, July 2008, Author: Gary Ferris*

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*Metallica Minerals Annual Report 2009*

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*Malachite Resources NL, EPM14648 – Pluton Project (Queensland) First Annual and Final Report for the Period Ended 1 May 2006*