



18 July 2016

#### **ASX ANNOUNCEMENT**

By Electronic Lodgement

# MRV METALS PTY LTD IDENTIFIES EXPLORATION POTENTIAL AT GRANITE BELT PROJECT - HARRIER PROSPECT

It is with great pleasure the board of Moreton Resources Limited announces **its second Copper-Silver Exploration Target** for the Granite Belt Project at the Harrier Prospect (**Harrier**). As per previous announcements, the Granite Belt Project was acquired through a sales arrangement agreed in January of 2016 and finalised in late May 2016.

The Exploration Target at Harrier is in the range of **500,000 to 1,500,000 t at 1.5% to 2.5% copper, and 80 g/t to 120 g/t silver.** The potential quantity and grade of the Harrier Exploration Target is conceptual in nature, as there has been insufficient exploration to estimate a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource.

Details of the data and geological investigation supporting the Exploration Target at Harrier are contained within the following report. In summary, Harrier represents a shallow target that may support recommencement of operations at the Granite Belt Project, given continued exploration success. The **Harrier prospect sits some 6-8km to the North-West** of the already released **Hawker** Prospect, which was released by the company earlier today.

Of note, is that despite the limited drilling undertaken at the prospect to date, encouraging grades and tonnage potential have been identified. MRV has designed an 18 hole RC drill programme to 150 m depth to follow up untested potential mineralisation and believes this is a diligent next step in further determining the prospectively of this deposit.

It is important to note that until the company undertakes further drilling and investigation into this prospect, the potential quality and grade of the Harrier Exploration Target is conceptual in nature, as there has been insufficient exploration to date to estimate a Mineral Resource.

Moreton Resources Limited continues to work through historical data, supported by field checking and updating geological interpretations and will keep the market up to date, with the advancement activities of our subsidiary company and as material issues arise. Measured Group being our independent consultants, continue to review other potential targets and we expect to make a further announcement within the coming days.

Jason Elks Managing Director Moreton Resources Limited

W: www.moretonresources.com.au

T: +61 (7) 3831 6088





#### **COMPETENT PERSON STATEMENT**

The information in this report that relates to Exploration Targets is based on information compiled by Mr. Trevor Ellice, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. Mr. Ellice is an employee of Measured Group Ltd, who has been commissioned by Moreton Resources Ltd to conduct a review of the project on fee for service basis.

Mr. Ellice has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

Mr. Ellice consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

END -

T: +61 (7) 3831 6088

E: enquiries@moretonresources.com.au

W: www.moretonresources.com.au



# Harrier **Exploration Target Report**

Granite Belt Project MRV Metals Pty Limited

Report No: MG140\_Harrier\_01

**July 2016** 



# **Document Issue and Approvals**

### **Document Information**

Project:	Granite Belt Project
Document Number:	MG140_Harrier_01
Title:	Harrier Exploration Target, July 2016
Client:	MRV Metals Pty Limited
Date:	13 July 2016

### **Contributors**

	Name	Position	Signature
Prepared by:	Trevor Ellice	Principal Geologist	fingling
Reviewed by:	James Knowles	Director	Mumily
Approved by:	James Knowles	Director	Mulle

## **Distribution**

Company	Attention	Hard Copy	Electronic Copy
MRV Metals Pty Limited	Jason Elks	No	Yes

i



#### **PURPOSE OF REPORT**

Measured Group Pty Ltd (**Measured**) has prepared this report on the Harrier Prospect Exploration Target contained within the Granite Belt Project. This is held by MRV Metals Pty Ltd (**MRV Metals**), a wholly owned subsidiary of Moreton Resources Ltd.

The purpose of the report is to provide MRV Metals with an objective assessment of exploration potential and provide an estimated range of potential tonnages and grades of mineralization contained within the Harrier Prospect.

Throughout this report there are references to tonnages and grades, which must not be interpreted as an estimate of a Mineral Resource.

At this stage there has been insufficient exploration to estimate a Mineral Resource and the potential tonnages and grades quoted in this report are conceptual in nature. The completion of any planned exploration activities does not guarantee an eventual Mineral Resource being declared.

This report has been completed so as to comply with principles of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 edition (**JORC**).



#### COMPETENT PERSON STATEMENT

The information in this report that relates to Exploration Targets is based on information compiled by Mr. Trevor Ellice, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. Mr. Ellice is an employee of Measured Group Ltd, who has been commissioned by Moreton Resources Ltd to conduct a review of the project on fee for service basis.

Mr. Ellice has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

Mr. Ellice consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

.....

Trevor Ellice, BSc(Hons), MAusIMM (CP Geol)

12 July 2016

The estimate of an Exploration Target for the Harrier Prospect presented in this report has been carried out in accordance with the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (2012 Edition) prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia.



#### **EXECUTIVE SUMMARY**

Measured Group Pty Ltd (**Measured**) has prepared this report on the Harrier Prospect (**Harrier**) Exploration Target contained within the Granite Belt Project. Harrier is contained within Exploration Permit for Minerals (**EPM**) 8854, which is held by MRV Metals Pty Ltd, a wholly owned subsidiary of Moreton Resources Limited.

The purpose of the report is to provide MRV Metals with an objective assessment of exploration potential and provide a range of potential tonnages and grades of mineralisation as an Exploration Target to be investigated by future exploration.

Harrier is located in the western extent of the Arcot State Forrest, approximately 12 km north east of the town of Texas in Southern Queensland and approximately 320 km south-southwest of Brisbane. Harrier is also located approximately 4 km north east of the Twin Hills mine.

Historically known as Tuliamba or Toolambi, elevated copper in surface soils samples originally identified the prospect in an area adjacent to remnant old mine workings. Historical production between 1920 and 1922 is reported at 81 tonnes at 11% copper and 1273 g/t silver via exploration shafts, with very limited lateral development along the line of lode.

Recent exploration commenced in 2004 when Macmin Silver Ltd (**Macmin**) recorded elevated copper and silver in regional RAB drilling, which was followed up by a programme of diamond drilling. Several high grade intersections of polymetallic mineralisation were reported – the highlight being TUD002 which reported 5m at 6.0% Cu, 3.4% Zn, and 328ppm Ag from 93m.

Alcyone Resources Ltd (**Alcyone**) competed further drilling in 2010, completing 6 diamond drill holes for 704 m, albeit with disappointing results. However, drill hole ACHRD006 provided an encouraging intercept of 1.5 m at 3.2% copper, 2.7% zinc, 129g/t silver and 0.6% lead from 89.2 m. Importantly, some of the holes drilled by Alcyone show discontinuous sampling intervals downhole, which require follow-up.

Previous results, historical mine workings and geological interpretations and investigations support an Exploration Target at Harrier in the range of **500,000 to 1,500,000 t at 1.5% to 2.5% copper, and 80 g/t to 120 g/t silver.** 

The potential quantity and grade of the Harrier Exploration Target is conceptual in nature, as there has been insufficient exploration to estimate a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource.

Harrier represents an attractive prospect for further exploration and an exploration programme is proposed to identify additional mineralisation along strike to the north and south, as well as to confirm continuity of mineralisation at depth.

The exploration programme includes field mapping and checking of surface workings and outcrops, re-logging and sampling of Alcyone core holes, initially drilling 18 RC holes to a depth of up to 150 m to follow up untested potential mineralisation.



## **Contents**

1.	Introduction	1
2.	Location	1
3.	Tenure	1
4.	Basis for Exploration Target	4
5.	Exploration Target – Harrier	8
5.1	Harrier Style of Mineralisation	8
5.2	Supporting Work for Exploration Targeting	9
5.3	Harrier Exploration Target	10
6.	Planned Exploration Works	1
7.	Bibliography	1
List o	of Figures:	
Figure	e 3.1: Granite Belt Project Location and Tenure Plan	3
Figure	e 4.1: Soil Sampling Anomaly (Note: Magenta Polygon is 350 m Long)	4
Figure	e 4.2: Historical Workings – Tuliamba	5
Figure	4.3: Section Showing NS3 and Wireframe of Harrier Mineralisation	6
Figure	4.4: Location of Drilling and Remnant Workings	7
Figure	4.5: Cross Section Adjacent to Main Zone of Historical Workings	8
Figure	5.1: Examples of Harrier Mineralisation	9
Figure	5.2: Wireframe Model of Harrier Mineralisation Present in Current Drilling	LO
List o	of Tables	
	3.1: Summary of Tenements for the Granite Belt Project	1



#### 1. Introduction

Moreton Resources Limited through its fully owned subsidiary MRV Metals Pty Ltd (**MRV Metals or the Company**) acquired and finalised the transfers of a tenement portfolio surrounding the Twin Hills and Silver Spur silver mines located near Texas, southern Queensland. The portfolio includes a number of silver prospects, several of which are polymetallic containing base metals like copper, zinc and lead present in concentrations above economic thresholds.

Following a geological review of the project to ascertain the areas prospectivity for hosting economic precious and base metal mineralisation, the Company confirms a number of prospects have geological information, both historical and recent, sufficient to support Exploration Targets, including potential ranges of tonnage and grade.

This report provides technical support for the Exploration Target located at the prospect known as Harrier.

#### 2. Location

The Harrier Prospect (**Harrier**) is located in the western extent of the Arcot State Forrest, approximately 12 km north east of the town of Texas in Southern Queensland and approximately 320 km south-southwest of Brisbane. Harrier is also located approximately 4 km north east of the Twin Hills mine. Access to Harrier is via the Oaky Creek – Arcot Road that runs east-west, approximately 4 km to the north of Harrier.

#### 3. Tenure

Harrier is contained within Exploration Permit for Minerals (**EPM**) 8854, which is held by MRV Metals, a wholly owned subsidiary of Moreton Resources Limited. The following table (Table 3.1) provides a summary of the tenements held by the Company that form part of the Granite Belt Project. EPM 8854 is currently under renewal and there is a reasonable expectation that the tenement will be renewed.

**Table 3.1: Summary of Tenements for the Granite Belt Project** 

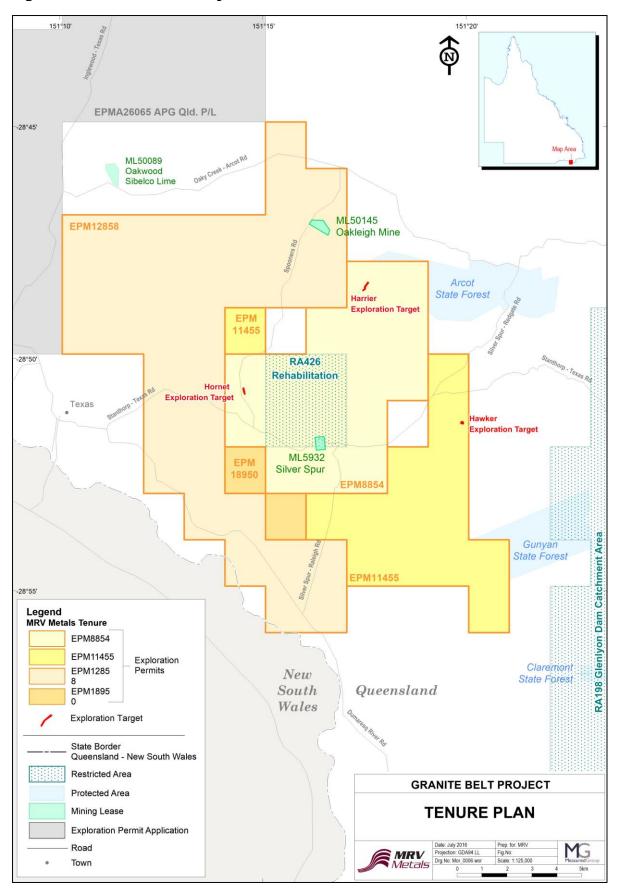
Tenement	Grant Date	Expiry Date	Minerals	Sub-blocks
EPM8854	8/7/1992	7/7/2016	All minerals except coal	17
EPM11455	1/4/1998	31/8/2018	All minerals except coal	14
EPM12858	10/8/2000	9 /8/2016	All minerals except coal	34
EPM18950	31/5/2011	3/5/2016	All minerals except coal	2



Figure 3.1 shows the location of tenements with the Harrier Prospect indicated by red annotation (note several other prospects Hawker and Hornet are also annotated but not the subject of this report).



Figure 3.1: Granite Belt Project Location and Tenure Plan





## 4. Basis for Exploration Target

The Harrier Prospect is defined by elevated copper, silver, zinc and lead in soil samples (see Figure 4.1), ore-grade intersections reported in RAB and diamond drilling and historical mine workings (small collapsed pits and shafts) over a 500 m strike length (known as Tuliamba, or Toolambi).

Figure 4.1: Soil Sampling Anomaly (Note: Magenta Polygon is 350 m Long)



Discovered by Edwin Delvin in 1918, historical production between 1920 and 1922 is reported at 81 tonnes at 11% copper and 1273 g/t silver via exploration shafts, with very limited lateral development along the line of lode. The mine workings were formally known as Tuliamba. Figure 4.2 shows a photograph of remnant workings located at Harrier.

The majority of the old mine workings at Tuliamba have been recently (post 2010) rehabilitated, which unfortunately limits the ability to geologically map the workings. The rehabilitation works were confirmed by Measured during a site visit to the Granite Belt Project in July 2016 and the only workings present are those shown in Figure 4.2.



Figure 4.2: Historical Workings – Tuliamba



The Geological Survey of Queensland conducted a seven diamond drill programme in 1971 for 2,149 feet and 6 inches and concluded 'no intersection of economic significance were obtained and no further exploration is warranted...' as per economic consideration in 1971.

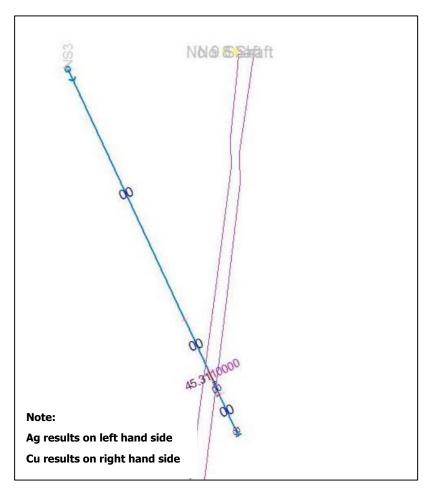
However, several 'ore grade' intersections with a peak value in NS5 of 1 foot 8 inches at 3.1% copper, 0.35% lead, 1.1% zinc and 4.28 oz/t silver. Only 4 of the seven drill holes were assayed at the time. Details of the drilling and assay values are well detailed in a Queensland Government Mining Journal published December 1972 Vol LXXIII No. 854.

The 1971 drill hole information was not part of the modern digital dataset and appears not to have been considered previously. To correlate the 1971 drilling with later programmes Measured digitised the information from hard copy records in journal report. Accurate collar locations for the 1971 holes are not available and as such these holes cannot be used for future modelling, however, they provide additional validation supporting exploration targeting and a mineralised intersection in a 1971 drill hole named NS3, correlates well with recent geology modelling. Figure 4.3 shows a cross-section illustrating the recent modelling (majenta outline) correlating with historical 1971 drill hole NS3.

Recent exploration commenced in 2004 when Macmin Silver Ltd (**Macmin**) recorded elevated copper and silver in regional RAB drilling conducted along road lines in Arcot State Forest. This was followed up by a programme of diamond drilling which reported several high grade intersections of polymetallic mineralisation, with the highlight being TUD002 which reported 5m at 6.0% Cu, 3.4% Zn, and 328ppm Ag from 93m.



Figure 4.3: Section Showing NS3 and Wireframe of Harrier Mineralisation



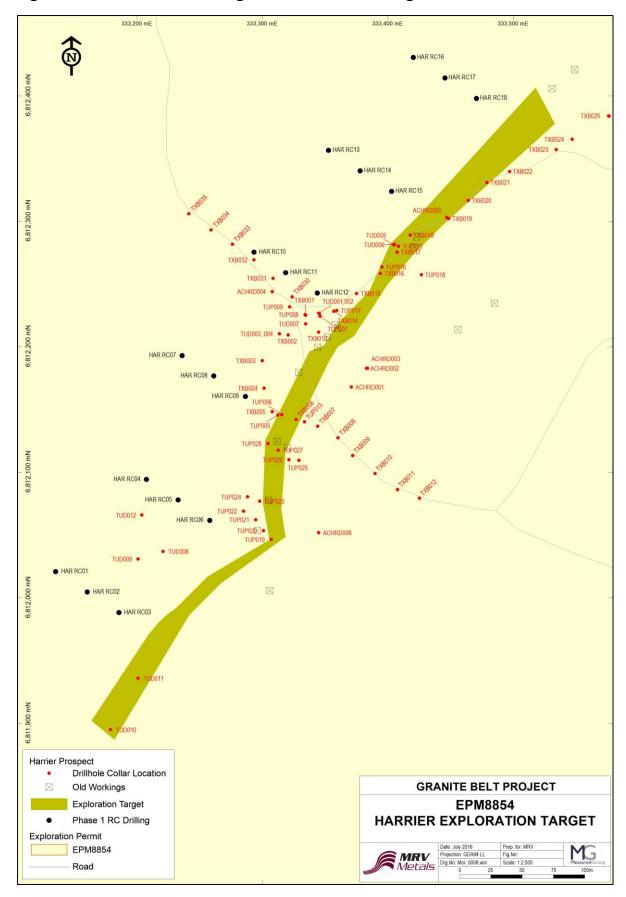
The drilling completed by Macmin was followed up by Alcyone Resources Ltd in 2010, who completed 6 diamond drill holes for 704 m, albeit with disappointing results. However, drill hole ACHRD006 provided an encouraging intercept of 1.5 m at 3.2% Cu, 2.7% Zn, 129g/t Ag and 0.6% Pb from 89.2 m.

Importantly some of the holes drilled by Alcyone show discontinuous sampling intervals downhole and subsequent gaps in down hole assay results. Whilst the gaps in the sampling record are material in progressing exploration at Harrier they have little impact on the Exploration Target as drill testing is at an early stage. The company is, however, in the process of locating the relevant drill core to reconcile the issue and, if warranted, will complete relogging and re-sampling as a cost effective way to advance geological understanding in the area.

Geological modelling of the drilling and sampling information as it exists currently, indicate at least one discreet sub-vertical lens of mineralisation. The position is likely structurally controlled and can be targeted by drilling. The prospect has the upside of being potentially contiguous with elevated copper in surface soil samples at the Apache prospect located 600m south (see Figure 4.1) and mineralisation intersected by historical drilling is open to the north and south extents and at depth.



Figure 4.4: Location of Drilling and Remnant Workings





500 Elev 500 Elev -- 400 Elev 400 Elev Legend Cu\_ppm [ABSENT] [FLOOR,500] [500,1000] [1000,2500] [2500,5000] [5000,10000] [10000,30000] [30000,50000] [50000,CEILING]

Figure 4.5: Cross Section Adjacent to Main Zone of Historical Workings

## 5. Exploration Target – Harrier

#### 5.1 Harrier Style of Mineralisation

As part of the report concerning the departmental drilling programme in 1971 the Geological Survey of Queensland describe the mineralisation at Harrier as structurally controlled, sub vertical zones containing stringers and veins of pyrite, chalcopyrite, sphalerite and galena



hosted within Permian meta mudstones, greywacke and conglomerates with well-developed slaty cleavage. Figure 5.1 provides examples of the mineralisation found at Harrier.

Figure 5.1: Examples of Harrier Mineralisation





#### 5.2 Supporting Work for Exploration Targeting

Measured completed geological modelling at Harrier by outlining mineralisation present above threshold values. A total of 6 diamond drill holes and 2 percussion holes have encountered copper and silver mineralisation with grades greater than 0.5% Cu and 25 g/t Ag.

The target is supported by geological modelling based on recent historical drilling completed in 2004 and 2010, consisting of approximately 63 RAB holes and 13 diamond drill holes located on section lines spaced approximately 25 to 50m apart along a strike length of about 350m.

A drill hole collar location map of the drill holes relied exploration target is provided in Figure 4.4 with mineralised outline shown in green shading.

The geological interpretation and modelling completed for Harrier included:

- Import of drilling and sampling information and surface soil sampling results into Datamine mine planning software from original Micromine format;
- Thematic mapping of Ag, Cu, Zn, Au and serial section review of drilling data and assay results;



- Develop conceptual geological models by outlining mineralisation present above threshold values to build wireframe solids around mineralised zones;
- Gain an indication of the grade of metals present by simple weighted average across sample intervals within the wireframe solid using the polygonal technique;
- Gain an indicative quantum of tonnages by applying a default dry bulk density of 2.6 to the volume of the wireframe solids.

The following Figure 5.2 shows the wireframe model which provided an input when considering the Harrier Exploration Target.

Figure 5.2: Wireframe Model of Harrier Mineralisation Present in Current Drilling.

#### **5.3** Harrier Exploration Target

Historical and recent drilling results, historical mine workings and geological interpretations and investigations at Harrier support an Exploration Target in the range of:

#### 500,000 to 1,500,000 t at 1.5 to 2.5% copper, and 80 to 120 g/t silver.

The potential quantity and grade of the Harrier Exploration Target is conceptual in nature, as there has been insufficient exploration to estimate a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource.



## 6. Planned Exploration Works

Harrier represents an attractive prospect for further exploration and the following programme is proposed to identify additional mineralisation along strike to the north and south, as well as to confirm continuity of mineralisation at depth:

- Field mapping and checking of surface workings and outcrops;
- Locate ACHRD001, 002, 003, 005 to resolve sample intervals and if warranted complete and programme of re-logging and re-sampling;
- Infill soil sampling along strike, south to the Apache Prospect followed up RAB/Air drilling to better define and extent the strike length of the area to be targeted by drilling
- To better constrain and confirm the mineralisation present, plan and execute a phase 1 drilling programme of RC drill holes on 100 m spaced sections for approximately 18 drill holes.
- Plan and execute a follow up infill and step-out RC and diamond drilling programme at and spacing appropriate to support for the purpose supporting a Mineral Resource Estimate and Public Report.

## 7. Bibliography

Krosch N.J., 1972, Departmental Diamond Drilling Programme Tooliambi Copper Mine-Silver Spur, Stanthorpe Mining Field. *Queensland Government Mining Journal, Vol LXXIII, December 1972 No854*.



## **APPENDIX F: JORC CODE, 2012 EDITION – TABLE 1**

## **Section 1 Sampling Techniques and Data**

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Sampling has occurred at irregular intervals on the diamond drill half core. It is assumed the sampling intervals where chosen according to logged geology however at this time the sample methodology cannot be confirmed.</li> <li>Several critical intervals have not been sampled. It is intended the check these intervals and re-log and resample the drill hole if warranted when access to core is granted.</li> <li>Core was cut with diamond saw and one half sampled with one half retained.</li> <li>RAB sampling generally occurred on 1 m intervals, however procedures of splitting and sub sampling are not known.</li> </ul>
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>About 63 RAB holes for approximately 1500m and 13 diamond drill holes for 1424.2m has been completed at Harrier. In addition, The Geological Survey of Queensland competed and drilling programme for 2149 feet and 6 inches.</li> <li>Drilling has occurred in the three main campaigns first by the Queensland Geological Survey in 1971, the second by Macmin in</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>2004 and third by Alcyone in 2010.</li> <li>Details given below refer to the Macmin and Alcyone programmes only and not Drilling programme conducted by the Geological Survey of Queensland.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>Details of sample recovery have not been retained for RAB and drilling however the majority of intersections are from diamond core.</li> <li>Details of core recovery have not been retained however core photography indicate very competent ground and adverse core recovery is not expected from ground conditions. However, there may be some lost core from the intersection of voids and old workings. It is intended the verify these issues once access to the core is granted.</li> </ul>
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>The core has been geologically logged and the log is retained in the drill hole database.</li> <li>No record of geotechnical logging has been retained.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> </ul>	<ul> <li>Samples were not continuous down hole for the Alcyone campaign drill holes. The selective sampling has not been resolved and further inspection to be completed. The earlier Macmin drill holes are more continuously sampled downhole.</li> <li>Core was cut with diamond saw and one half sampled with one half retained.</li> <li>The core size is appropriate at NQ and NQ2 sized core</li> <li>There is evidence of check and repeat sampling for the drilling and sampling conducted by Alcyone however detail record for the Harrier prospect have not been sighted or analysed.</li> </ul>



Criteria	JORC Code explanation	Commentary
	Whether sample sizes are appropriate to the grain size of the material being sampled.	
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>The following refers to Macmin and Alcyone drill programmes only:</li> <li>Details of laboratory analysis, quality assurance and quality control are not known, however the work was conducted in the 2010 a respected ASX listed company under the supervision of competent persons.</li> <li>There is evidence of a QAQC regime involving reference standards, blanks and repeat sampling being in place at the time of the Alcyone drilling campaign however detailed records of the results of QAQC that refer specifically to the Harrier prospect have not been sighted or analysed.</li> <li>Analysis was conducted and a commercial external commercial laboratory accredited to Australian standard.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>No sample verification has occurred.</li> <li>A field inspection indicated several twin drill holes are present and review of the results show of twin are well reproduced.</li> <li>Documentation of data was sufficient to provide an exploration target level of reporting as details of collar positions and were retained in the drilling database.</li> <li>Collar positions have been partially checked in the field visit conducted by the m=competent person.</li> <li>No adjustments were made to assay data.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Drilling completed in 1971 does not have accurate surveys and has not been used in evaluation.</li> <li>Collars have been sighted in the field by the competent person and checked against and no issues have been found.</li> <li>Collars were located using GPS and Survey.</li> <li>Down hole surveys were conducted by down hole camera at regular intervals (30m down-hole) for the Alcyone and Macmin campaigns. Details for down hole surveys are not know for the Qld Geological Survey are not known.</li> </ul>



Criteria	JORC Code explanation	Commentary
		Grid system was AGD66/Zone 56J and AGD84/Zone 56J.
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Drill hole data ranges along section lines between 25 – 50m apart along a strike length of 350m. The data spacing and distribution is sufficient to provide an exploration target level and some continuity of mineralisation is displayed between section line at this spacing.</li> <li>Sample compositing was applied around geological boundaries to the nominal 1m length that most sample lengths were applied.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>Drill holes have generally been across the dip of the mineralisation which is sub vertical and drilling has generally intersection mineralisation at a high angle. The samples have been taken down hole limiting to geological structure and has no apparent bias.</li> <li>Drill testing is insufficient at this stage to determine the orientation of the mineralisation with high confidence</li> </ul>
Sample security	The measures taken to ensure sample security.	No sample security has been reviewed.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	The data provided has been reviewed and provisionally modelled to complete an exploration target volume and grade.

## **Section 2 Reporting of Exploration Results**

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

Criteria	JORC Code explanation	Commentary
Mineral	Type, reference name/number, location and ownership including	The underlying tenure is granted EPM status, has been
tenement and	agreements or material issues with third parties such as joint	transferred to MRV and is in good standing.
	ventures, partnerships, overriding royalties, native title interests,	This prospect lies outside to a Rehabilitation Area (RA) current
	historical sites, wilderness or national park and environmental	over the Twin Hills mine area and s such there is no impediment



Criteria	JORC Code explanation	Commentary
land tenure status	settings.  • 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.	to further exploration of the prospect.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>The current holders have not conducted any exploration apart from a geological review and a site visit by the Competent Person</li> <li>The three main phases of exploration and historical mine production is detailed in the body of Report No:         MG140_Harrier_01.</li> <li>Historical mine production is low (30t) and the mine was only worked for two years prior to the 1st world war. Lateral development along the line of load is described as very limited.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	Structurally controlled low sulphidation, epithermal.
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	The exploration results presented here are recent historical and have been previously reported by the previous owners who conducted the exploration. As such the listing of details collar coordinates provides no purpose. However, a map showing collar locations has been provided in the main body of Report No: MG140_Harrier_01.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the</li> </ul>	<ul> <li>According to previous announcements no recent aggregation of sample results has not been conducted.</li> <li>Metal equivalents not reported</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul> <li>procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	The mineralised lode is sub vertical and true widths will be lower than the down hole interval. Drill holes are angled 60 to 70 degrees and have been drilled from both the eastern and westerns sides.
Diagrams	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.	Included in the body of Report No: MG140_Harrier_01.
Balanced reporting	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.	Reporting is based on previous announcements. Checking and reclogging of core at this stage is not possible.
Other substantive exploration data	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.	All exploration has been detailed in the four campaigns – historical mining, Qld government drilling, Macmin drilling and Alcyone drilling.
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>A key next step is to locate, relog and if warranted resample core drilling by Alcyone once access to the core is granted Queensland government.</li> <li>Planning and execution of infill and step out drilling, geological modelling, resource estimation and public reporting of a maiden inferred Mineral Resource according the guidelines of the JORC Code 2012 edition.</li> </ul>

Granite Belt Project Harrier Exploration Target, July 2016

