Jadar Resources

ASX RELEASE: 24 August 2020

Granite Belt, Queensland Silver Mine Acquistion Update - portfolio includes 20+Moz of contained silver

Highlights

- **Jadar to acquire Moreton Resources Limited's (In Liquidation) (ASX:MRV) metals portfolio comprising 5 exploration tenements (EPM's), 1 mining lease (ML) and in-situ crushing, screening, stacking, treatment and refining facilities, located in the highly prospective Silver Spur Basin of Southern Queensland.**
- **Granite Belt tenement portfolio includes the Granite Belt silver project which contains an estimated total JORC Mineral Resources of 12.1Mt at 53g/t Ag for 20.3 million ounces of contained silver[1].**
- **The tenement portfolio also includes three (3) copper and silver JORC exploration targets:**
  - **Hornet prospect – exploration target is in the range of 500,000 to 1,500,000t at 1-2% Copper[2];**
  - **Harrier prospect – exploration target is in the range of 500,000 to 1,500,000t at 1.5% to 2.5% Copper, and 80 g/t to 120 g/t Silver[3];**
  - **Hawker prospect – exploration target is in the range of 100,000 to 500,000t at 1.0-1.5% Copper and 30g/t to 60g/t Silver[4];**

  The potential quantity and grade of the above Exploration Targets are 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.

  together with ~16 areas of interest on 190km^2 tenure containing indications of high grade silver and copper, with additional indications of zinc, lead and gold (including Hornet, Harrier and Hawker mentioned above) with walk up targets ready for testing with little recent exploration completed.

- **Transaction subject to Jadar completing satisfactory due diligence, together with necessary consents and approvals.**

Jadar Resources Limited (ASX:JDR) ("**Jadar**", the "**Company**") is pleased to provide the following update regarding the acquisition of MRV Metals Pty Ltd's (In Liquidation) ("MRV Metals") Southern Queensland Granite Belt tenement portfolio, including MRV Metal's Granite Belt Silver mining operations which is currently on care and maintenance (including all permits, plant and equipment and inventory). Jadar is continuing its due diligence and will announce further information with regard to the proposed acquisition in

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[1] See MRV ASX announcement "AGM Presentation" dated 20 November 2019 (https://www.asx.com.au/asxpdf/20191120/pdf/44bs2678ddl1w7.pdf); MRV Mineral Resource Estimate (JORC 2012) reproduced from the original announcements 19 September 2016 (https://www.asx.com.au/asxpdf/20160919/pdf/43b8x0ch0pz4py.pdf) and 5 October 2016 (https://www.asx.com.au/asxpdf/20161005/pdf/43bqzcky6cpl5w.pdf).

[2] See MRV ASX announcement "MRV Metals confirms Significant Target at Hornet" dated 19 July 2016 (https://www.asx.com.au/asxpdf/20160719/pdf/438ncyfdlt0tpp.pdf).

[3] See MRV ASX announcement "MRV Metals confirms Harrier Prospect potential" dated 18 July 2016 (https://www.asx.com.au/asxpdf/20160718/pdf/438mmwblmffbkg.pdf).

[4] See MRV ASX announcement "Hawker Prospect" dated 18 July 2016 (https://www.asx.com.au/asxpdf/20160718/pdf/438mcr29bxdwys.pdf).

due course. Please refer to the Company's announcement dated 3 August 2020 for further details regarding the proposed transaction and acquisition terms and conditions.

As part of its due diligence completed to date, Jadar has carried out a review of Morton Resources Limited (in Liquidation) (ASX: MRV) ("Morton Resources") previously released JORC 2012 Resources and Exploration Targets and provides the following additional information regarding the tenement portofolio and resources subject of the abovementioned transaction.

Granite Belt Tenement Portfolio

Located approximately 3 hours south-west of Brisbane in South East Queensland, the Granite Belt tenement portfolio is comprised of 5 exploration permits and 1 mining lease located approximately 7km east of the town of Texas. Previously owned by MRV Metals (a subsidiary of Moreton Resources) and prior to that Alcyone Resources Ltd and others, work originally commenced on the site in early July 2011, when the former owner commenced silver production[5].

The project, previously known as Texas Silver, encompasses the Twin Hills Silver Mine, as well as a wider portfolio of advanced silver and polymetallic base metal exploration targets, including amongst others the Mount Gunyan, Hawker, Harrier, and Hornet deposits. Extensive historical drill data and associated information derived from past exploration programs within the Granite Belt Project have delivered significant Silver prospects and is of potential for Copper, Zinc and Lead deposits. However, due to ongoing focus of the startup of mining operations by the previous owners, the majority of the prospects identified over the years have had only minimal exploration completed.

Through this potential acquisition, Jadar is also acquiring an extensive historical drill data and associated analysis data package covering a large and highly prospective project area. This data package will be reviewed, as part of the due diligence and exploration prospects advanced as a matter of priority.

History & Setting

The Texas-Stanthorpe region hosted a number of mining operations in the 1890s. The region is dominated by the Texas Beds, a series of sediments and volcanics accumulated in the Carboniferous during continental accretion. Later local rifting in the Texas area in the Permian gave rise to a sub-basin and the accumulation of the Silver Spur Beds. The Silver Spur Beds are highly mineralised compared to the surrounding Texas Beds (Halloran, 2015) and displayed in blue in Figure 1 compared to the Texas Beds in grey.

Styles of mineralisation in the area include both epithermal/meso-thermal Ag-Au and sedimentary related base metals with volcanic affinity. The Silver Spur Basin trends NW which can influence stratigraphy and structure. Fracturing is generally vertical and also often north-south. The low-sulphidation epithermal mineralisation is associated with potasic alteration providing a useful exploration signature. The Silver Spur Beds display an unusually high Ag-Au ratio for epithermal mineralisation resulting in silver dominated deposits.

Significant exploration in the area commenced in 1994 with Macmin Ltd undertaking exploration and resource definition drilling predominantly at the Twin Hills and Mt Gunyan (3 km to the northeast) with some minor drilling at the historic Silver Spur Mine (2 km to the southeast). These led to the definition of Mineral

[5] See MRV ASX announcement "MRV Metals Pty Ltd acquires highly prospective tenements" dated 5 February 2016 (https://www.asx.com.au/asxpdf/20160205/pdf/434w262n7cfwns.pdf).

Resources at Twin Hills and Mt Gunyan. Macmin obtained a Mining Lease for Twin Hills and developed a heap leach operation from 2000 and commenced production in 2008 to 2009. The operation was re-commissioned by Alcyone in 2011 and production continued until early 2014 when operations ceased due to funding and production issues. The operation was then restarted by Moreton Resources from 2016 until early late 2019 until operations ceased due to funding and production issues.

The region has hosted a number of mining operations in the 1890's with the most significant being the Silver Spur mine which produced 100 kt at 800 g/t Ag, 25% Zn and 13% Pb (see Alcyone announcement 18/10/2012, reported under JORC 2004) and the Twin Hills silver mine that produced 1.4Moz recoverable silver from 2008 to 2014. In quarterly report ending 31 December 2019, Moreton Resources Ltd reported that it had produced 13,177 troy ounces of silver, with half-year sales totalling 32,582 troy ounces.[6]

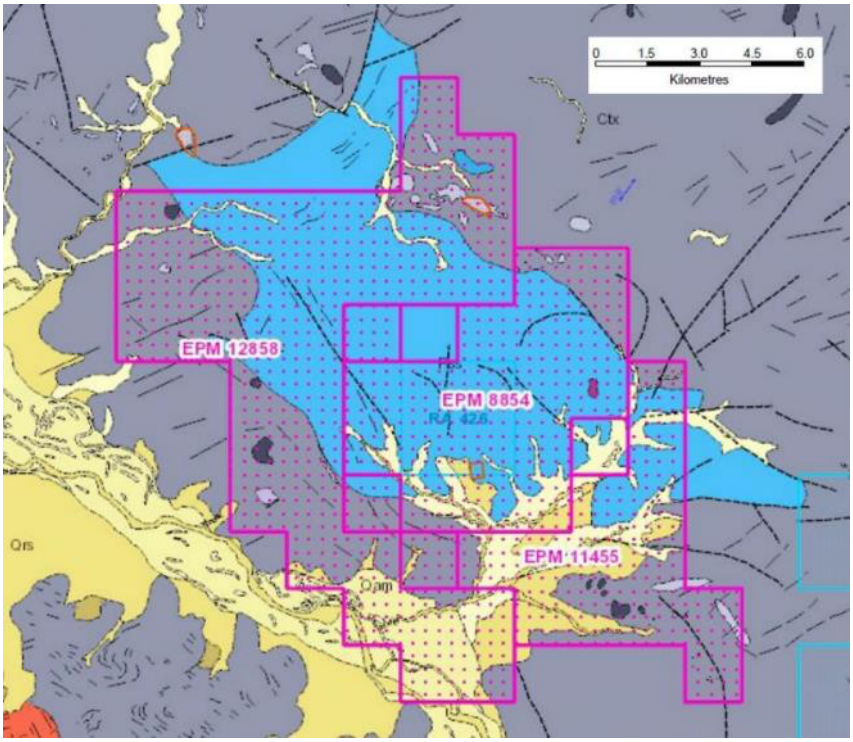

Figure 1: Geology and tenements of the Texas area, Queensland, (Source: Queensland State Government web service MinesOnlineMaps; website accessed 06 January 2016)

Granite Belt Silver Project JORC Resources

The Granite Belt Project area consists of a mining precinct which contains multiple potential resources covering a range of metals from Copper, Silver, Lead, Zinc and Gold, and a central processing facility that currently has in-situ crushing, screening, stacking, treatment and refining facilities. The status of these facilities will be determined from the planned due diligence.

Past exploration within the Granite Belt Project has historically been successful in defining a 2012 JORC Mineral Resource Estimate of silver mineralisation at the Twin Hills Deposit, and silver/gold mineralisation at

[6] See MRV ASX announcement "MRV Metals Pty Ltd 31 December 2019 quarterly report" dated 3 February 2020 (https://www.asx.com.au/asxpdf/20200203/pdf/44drtzcxrj28jl.pdf)

the Mt Gunyan Deposit ("Grantite Belt Silver Project") for a total of 12,062,000 tonnes at a grade of 53g/t for a total of 20.3 million ounces of contained silver;

Twin Hills in situ Mineral Resource above 26.5g/t Ag remaining at end of Feb 2014			
Class	**Tonnes**	**Ag (g/t)**	**Au (g/t)**
Measured	1,640,000	75.8	0.10
Indicated	5,586,000	44.1	0.08
Inferred	1,147,000	48.8	0.06
Total	**8,373,000**	**51.0**	**0.08**

Mt Gunyan Mineral Resource above 26.5 g/t Ag			
Class	Tonnes	Ag (g/t)	Au (g/t)
Measured	160,000	61.0	0.11
Indicated	3,130,000	56.1	0.06
Inferred	399,000	44.7	0.03
Total	**3,689,000**	**55.1**	**0.06**

*Mineral Resource Estimate (JORC, 2012) reproduced from the original report announced: 19th Sept and 4th Oct 2016 (ASX:MRV, http://www.asx.com.au)

The Granite Belt Silver Project is an open-cut poly-metalliferous mining and processing operation located ~10km east along the Stanthorpe-Texas Road from the township of Texas in Southern Queensland. Geologically the Granite Belt Project occurs in the northern part of the New England Orogeny which consists of a highly deformed package of Ordovician to Permian sediments and volcanics. Deformation within the fold belt is complex and ranges in age from Lower Carboniferous to Middle Permian in age.

Before its closure in 2014, the Twin Hills Mine was an operating and producing mine, which as per the prior operators aspirations, sought to produce 1.1 Moz of Silver. Post its acquisition in 2016, MRV Metals commenced heap leach silver operations in 2016 until temporarily suspending operations in late 2019 as a consequence of operational difficulties, largely the result of water quality issues leading to a working capital deficiency.

The accuracy of the tonnage depletion is difficult to support but considered appropriate given the information provided by Moreton Resources Ltd and Jadar's knowledge that little mining occurred in the later stages of the previous owners operation and it is immaterial in volume.

It is understood that the total ore currently stacked ready for irrigationis is approximately 550,000 tonnes. There is a further 1,000,000 tonnes of existing ore that is planned to be restacked, and PH corrected to allow for further leaching operations.[7]

Since acquiring the project in 2016, Moreton Resources had carried out a significant amount of work developing the project in accordance with its "2017 re-start strategy"[8]. Jadar is currently continuing its due

[7] See MRV ASX announcement "MRV Metals Pty Ltd 31 December 2019 quarterly report" dated 3 February 2020 (https://www.asx.com.au/asxpdf/20200203/pdf/44drtzcxrj28jl.pdf)

diligence on the current status of the operations and will look to release additional information upon completion.

Figure 2: images of the re-commissioned site, source See MRV ASX announcement "AGM Presentation" dated 20th Nov 2019 *(https://www.asx.com.au/asxpdf/20191120/pdf/44bs2678ddl1w7.pdf).*

Granite Belt Silver Mineral Resource Estimate – Summary of Material Information

Geology and Mineralisation

The Grantite Belt Project area occurs in the northern part of the New England Orogeny which consists of a highly deformed package of Ordovician to Permian sediments and volcanics. Deformation within the fold belt is complex and ranges in age from Lower Carboniferous to Middle Permian in age.

The lithologies associated with the Twin Hills deposit and Mt Gunyan are referred to as the Silver Spur beds (Pearson 1976); this sequence is divided into three units:

Unit 1: Conglomerates and breccias. Thickness 100m.
Unit 2: Tuffaceous sandstones, mudstones and carbonaceous shales. Thickness 350-600 m.
Unit 3: Basal conglomerates. Thickness 50-100m.

[8] See MRV ASX announcements, "Progress Report - Moreton Resources Granite Belt Update" dated 30 August 2019 (https://www.asx.com.au/asxpdf/20190830/pdf/4482j2ykv145rx.pdf).

Geological Interpretation

Pervasive silicification is common throughout the deposit and undoubtedly responsible for the preservation of the topographic high. The hydrothermal fluids associated with the alteration are rich in metals in particular silver and together with quartz (in some cases) are deposited/infused in epithermal environments. The silver mineralisation occurs mostly as fine-grained argentite and polybasite and can be associated with pyrite and other sulphides. Structurally it seems that the mineralisation is likely localised along faults and within shear zones. Regionally the Silver Spur beds describe a broad syncline, but in the immediate Twin Hills deposit the bedding varies in dip from sub-vertical to 60-70 degrees to the east. NW-SE faults dominate the structural pattern with North/South trending variable shear systems seen in the current pit. The eastern part of the deposit has well-developed mineralisation associated with North-South shear/fault systems which appears to be the favourable fluid pathways. At Twin Hills resources occurs over a 700-metre strike length with widths varying between 20 metres and 200 metres and with model constrained depth of around 200 metres vertically. The silver anomaly is much longer being over 1,000 metres in length, up to 300 metres wide and some 300 metres in vertical depth. The Mt Gunyan deposit consists of steeply to moderately east-dipping roughly north-south trending mineralisation hosted by altered sediments and displaying anomalous silver content. The main mineralisation occurs over a strike length of 650m, depth of 170m to 200m and a width which varies between 20 and 350m.

Sampling and Sub-sampling techniques

Both Twin Hills and Mt Gunyan deposits have been drilled from the surface using diamond coring, reverse circulation and open hole percussion techniques. The core recovery is generally very good, greater than 95% whilst the quantity of material returned by the other two methods is unknown. The diamond drilling and sample collection techniques consist of returned core stored in core boxes labelled with the hole number and length contained. The core is transported to the core storage area where it is logged geologically, and intervals for analysis are marked up by the site geologist. The intervals selected for analysis had the core either quartered (pre Alcyone) or halved (Alcyone) at the site to be sent for preparation and analysis. Standards and blanks were included in Alcyone programs only. Reverse Circulation holes had collected samples at every 1m from the cyclone. Two adjacent samples were combined, and riffle split to approximately 3Kg. These sub-samples were stored in numbered calico bags. The open hole percussion samples were also collected at 1m downhole intervals from the cyclone into large numbered plastic bags from which sub-sample was selected by spearing and combined with the adjacent sample into 2m composites.

Drilling method

Open hole percussion, reverse circulation percussion and HQ and NQ diamond coring have been employed at both Twin Hills and Mt Gunyan.

The total drilled metres at Twin Hills is 37,108 metres. 533 out of 658 exploration holes were open-hole percussion using a downhole hammer, 96 reverse circulation holes and 29 diamond holes. Approximately 650 drill holes totalling 35,782.2m were used for resources estimation.

The total drilled metres at Mt Gunyan is 21,575 from 306 holes within the immediate vicinity of the deposit. A subset of 296 holes totalling 20,900m was selected as appropriate for resource estimation. Within this

subset, 38 holes were diamond drilling with variable orientation, 39 were RC holes mostly oriented to the west, and 219 were PC holes primarily vertical.

Sample analyses methods

The chip and core samples were dispatched via commercial transport services from Texas to either Analabs or ALS Chemex both located in Brisbane.

Prior to Alcyone Limited's work, the samples were analysed using GA201 AnaLabs method, an aqua regia digest with AAS finish for Ag, Cu, Pb and Zn which had detection limits of 2 ppm, 4 ppm, 5 ppm and 4 ppm respectively. Method GG309 was used for Au analysis with a detection limit 0.008ppm.

Beside AnaLabs pre-Alcyone work samples were analysed at ALS Chemex using PM203 and IC203 methods for gold and silver respectively. The methods used aqua regia digestion followed by AAS measurement with detection limits for Au of 0.02 ppm and for Ag of 0.2 ppm. All the samples with Ag values greater than 20 g/t were resubmitted and analysed using method A101, an aqua regia digestion with ICP-AES finish.

Alcyone Resources prepared and analysed at ALS Chemex in Brisbane. The samples were analysed using ME-ICP41 method a conventional ICP-AES Analysis after aqua regia digest. This is a tool for first pass exploration geochemistry, and an aqua regia leach should be considered as representing only the leachable portion of the particular analyte. The samples with over 40ppm Ag were analysed using AlS´s ME-OG46 ore grade method - Aqua regia digestion with ICP-AES or AAS finish. Prior to Alcyone Limited's work QAQC (blanks) were not used and instead of standard sample duplication for the reverse circulation and open hole percussion drilling employed. Only Alcyone Limited instigated the use of standards and blanks which were included with the samples at a rate of approximately 1 in 20 with the samples submitted for analysis.

Mineral Resource Estimates

The interpretation of Twinn Hills and Mt Gunyan was carried out using a systematic approach to ensure continuity Mand estimated mineral Resources using Vulcan software.

For Twin Hills deposit the large size of the domains and the large number of included composites plus the availability of a continuity model supported the use of ordinary kriging techniques by Alcyone Limited. The composites were created within each domain and input to the grade estimation was restricted to those composites which were within the domain being estimated. Top cuts were applied to the composites based on statistical analysis. Estimated blocks were formed in a three-step methodology with orientation set to the orientation of the domain being estimated. The initial (primary search) was 30 metres x 15 metres x 10 metres in strike, dip and across the dip – strike plane. This search range was expanded by double the length for blocks not informed in the primary search and again in the final search strategy. This strategy informed on average, 70% of the blocks in the primary and secondary search. Comparison of the estimate in global terms to production figures was generally considered fair by Alcyone Limited with some indications however that the exploration model was slightly overstating in tonnes and grade above cut-off compared to the blast hole defined grade control information. The silver mineralisation contained within the resource contains gold which is estimated within the model. The block model was constructed using blocks of 5mE x 20mN x 5m RL. Sub-celling to half the block size in each direction was adopted to ensure accurate volume representation. Grade estimation was to the parent block size. The block size was a compromise given the variation in drill spacing with the position in the resources. Hard boundaries were applied to the Domains. The grade was

estimated within these boundaries. Statistical analysis of the silver indicated that it was fairly normally distributed according to the coefficients of variation; thus, only the extreme outliers were controlled by top cutting. For gold, the populations were positively skewed and thus to minimise the influence of higher grade composites, their influence was restricted to the primary search distances. Volume validation was carried out by comparison of the solids representing the mineralisation to the block model. Grade validation was carried by both global comparison of the average estimated grade to the average input grade and spatially by comparison of the estimated grades to the input grades by position. Alcyone Limited reported that visual comparison was also used. Comparison to production information was fairly supportive of the model.

For Mt Gunyan the modest size of most zones/domains and the subsequent number of included composites plus the good statistical composite behaviour supported the use of inverse distance to the power of 2 as the estimation technique. The composites were created within each zone/domain and input to the grade estimation was restricted to those composites which were within the zone/domain being estimated. Top cuts were applied to the composites based on statistical analysis. Estimated blocks were informed a three step strategy with orientation set to the orientation of the zone/domain being estimated. The initial (primary) search was 35m x 25m x 5m in strike, dip and across the dip-strike plane. This search range was expanded by double the length for blocks not informed in the primary search and again in the final search strategy. This strategy informed on average, 78% of the blocks in the primary and secondary search. For gold inverse distance to the power of 3 was used with domaining and topcutting strategies applied to the composites. Comparison of the estimate in global terms to the previous model is generally within expectations. The silver "ore" contains gold which is estimated within the model. No assessment of deleterious elements has been made, it is noted that the "ore" contains some base metals which could interfere with the recovery process. The block model was constructed using blocks which were 5mE x 20mN x 5mRL. Sub-celling to 1/2 the block size in each direction was adopted to ensure accurate volume representation. Statistical analysis of the silver indicated that it was fairly normally distributed according to the coefficients of variation; thus only the extreme outliers were controlled by top-cutting. For gold, the populations were positively skewed and thus to minimise the influence of higher-grade composites they were top-cut, and their influence was restricted to the primary search distances. Volume validation was carried out by comparison of the solids representing the mineralisation to the block model. Grade validation was carried by both global comparison of the average estimated grade to the average input grade and spatially by comparison of the estimated grades to the input grades by position. Also, visual comparison was used.

Classification

The resource classification is primarily based on the geological and grade continuity, although some cross-checking was carried out with mining data. Measured, Indicated, and Inferred categories have been assigned to the mineral resource estimate.

For Twin Hills, the classifications are based on the quality and amount of input data, the grade continuity model and the physical domaining, which is supported by mining and drilling observation of the mineral system. Shortcomings in QAQC have been offset by the amount of drilling data and the apparent lack of bias between sample types. Higher confidence areas have more supporting data and mining history; areas of lower geological support reflect a lower classification. The input data, particularly in the more recent data, is consistent and closely spaced enough to support the projection of the geological interpretation at depth. Later drilling programmes have successfully in-filled earlier programmes in mineralised locations predicted by the initial programme. The estimated grade correlates reasonably well with the input data given the nature of the mineralisation.

Similar as for Twin Hills, for Mt Gunyan the classification is based on the quality and amount of input data and the physical domaining which is supported by drilling observation of the mineral system. Shortcomings in QAQC have been offset by the amount of drilling data. Higher confidence areas have more supporting data; areas of lower geological support reflect a lower classification. The input data particularly the more recent, is consistent and closely spaced enough to support the projection of the geological interpretation at depth. Later drilling programs have successfully infilled earlier programs in mineralised locations predicted by the initial program. The estimated grade correlates reasonably well with the input data given the nature of the mineralisation.

Cut-off Grades and other parameters

For Twin Hills, a 40g/t silver boundary appears to define statistically and geologically the margins of the more continuous higher grade mineralisation whilst 20g/t silver provides the extent of the mineralisation. The optimisation process indicated a reporting cut-off of 26.5g/t.

For Mt Gunyan, a 30g/t Ag boundary appears to define statistically, and geologically the margins of the more continuous higher-grade mineralisation whilst 10g/t Ag provides the extent of the mineralisation. Gold zones were defined using a 0.1g/t boundary given there was gold outside the silver zones. An optimisation based on owner operated open pit mining, crushing, stacking and processing (as per Twin Hills) indicated that the economic cut-off could be set at 26.5g/t Ag.

Historically specific gravity has been assigned as a default of 2.64 t/m^3. This determination was based on specific gravity from the core from holes THD009, 010, 011, 013, 015 and 31 which were weighed in air and then weighed in water. Note the actual measurements cannot be found; however, it is reported in the Twin Hills Feasibility Study that the average density is 2.63 t/m^3 based on approximately 170 samples, readings ranged from 2.26 to 2.77 t/m^3. Average density varied slightly with depth from the surface as follows:

- <30m = 2.65
- 30 to 60m = 2.64, and
- >60m = 2.65

Alcyone undertook a series of SG tests on the existing core at a commercial laboratory facility to confirm these numbers. In total, 63 samples were taken along the strike of the ore body. From the core for these holes 0.5m long piece (or pieces) of ¼ core were selected every 10m downhole with the first sample should be taken at 5m. The results provided the following average values by weathering position:

- Oxide – 6 samples, 2.51 t/m^3
- Transition – 5 samples, 2.6 t/m^3
- Fresh – 52 samples, 2.68 t/m^3

No specific measurements have been made at Mt Gunyan. The density has been assumed based on results achieved at the nearby Twin Hills Deposit. The assumptions are applied to the model by weathering position. The material is generally fairly uniform as evidenced from the core and the geological setting. Application of weathering position is felt appropriate but direct measurement is required to confirm the defaults.

Copper & Silver JORC Exploration Targets

As referred to in the Compnay's announcement of 3 August 2020, the MRV Metals tenement portfolio includes a number of silver and copper prospectus, several of which are belived to be polymetallic containing base metals including zinc and lead, which had been identified by previous owners of the tenements.

In July 2016, Morton Resources announced the results of three (3) silver and copper JORC 2012 Exploration Targets, all of which are proximal to the existing Twin Hills and Mr Gunyan operations and resources.

Following the successful completion of the proposed Transaction, the Company will continue to work through the historical exploration data to further evaluate these and other potential targets for follow up work.

In particular, Morton Resources previous exploration works defined three copper and silver JORC exploration targets, referred to as :

(a) Hornet prospect;

(b) Harrier prospect; and

(c) Hawker prospect

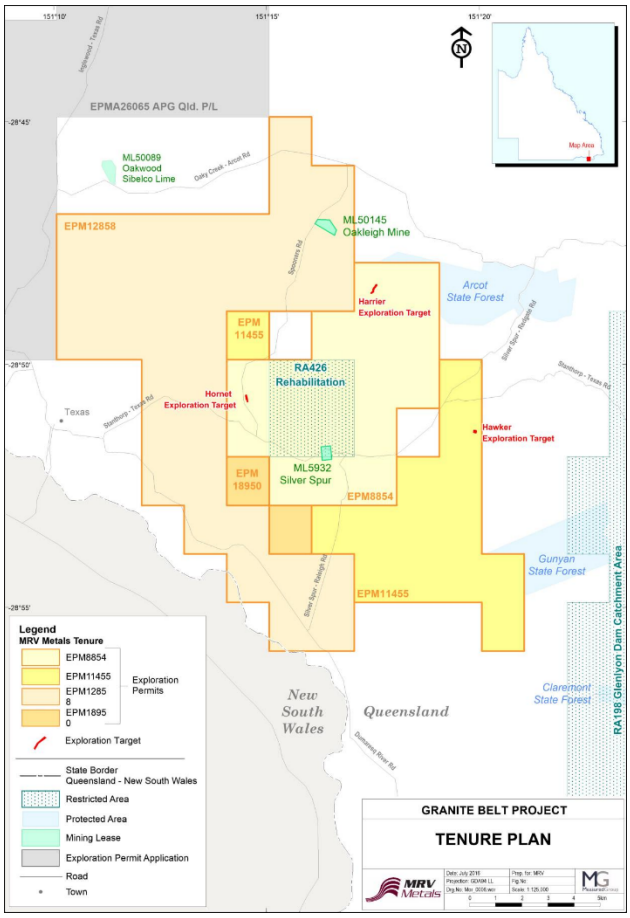

Figure 3: Exploration target locations over tenure plan

Hornet prospect

Hornet is located 1.5 to 2km west of Twin Hills Mine. Hornet was formerly known as the Old Texas Copper Mine and is defined by elevated copper in soil samples, historical mine workings (small collapsed pits and shafts) and ore-grade intersections reported in RAB, RC and diamond drilling over 1.6 km of strike length. Hawker is contained within Exploration Permit for Minerals (EPM) 8854, which is held by MRV Metals .

The Hornet prospect is located within the Western Tectonic Corridor (WTC). The interpretation of the WTC has been reported as a series of NNW-SSE trending shear zones intersected by north-south orientated structures, with the potential for precious and base metals mineralisation to exist along and at the intersections of these features.

Moreton Resources reported an Exploration Target[9] at Hornet in the range 500,000 to 1,500,000 tonnes at 1 to 2% Copper. The potential quantity and grade of the Hornet 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.

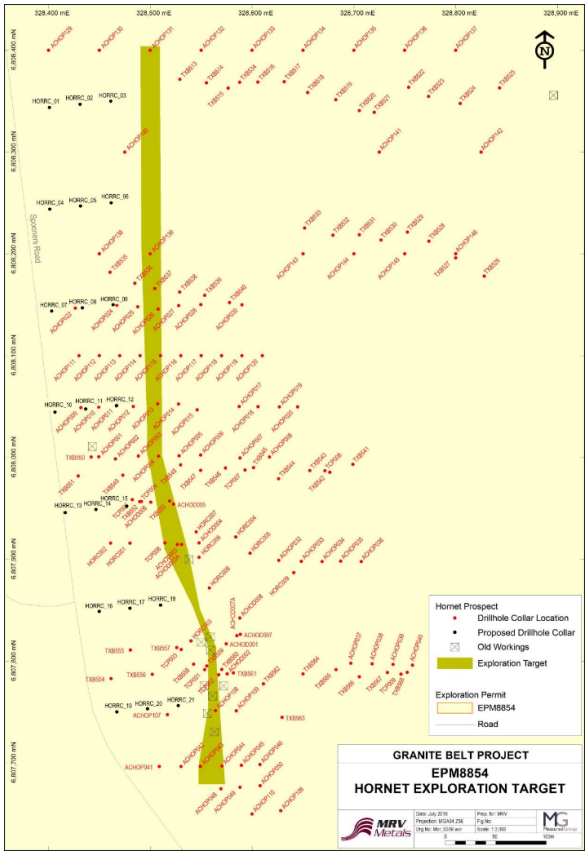

Figure 4: Location of drilling and remnant workings at Hornet

[9] See MRV ASX announcement "MRV Metals Pty Ltd Identifies Exploration Potential at Granite Belt Project – Hawker Prospect" dated 19 July 2016 (https://www.asx.com.au/asxpdf/20160719/pdf/438ncyfdlt0tpp.pdf)

Previous owner drilling results reported in January of 2012[10] (Alcyone) delivered down-dip extensions of the copper mineralisation that had been previously identified from past exploration. The Hornet mineralised zone exceeds 140m in strike and has been extended 200m down dip, consisting of five interpreted copper shoots, up to 5m in true width. Base metal mineralisation has also been identified in the north-east corner known as 'Hornet North'. Reported intersections included:

- HORC001: 38 metres @ 0.68% Cu and 7.2 g/t Ag from 64m including 4 metres @ 2.37% Cu and 27.3 g/t Ag and 1 metre @ 2.59% Cu and 16.2 g/t Ag
- HORC001: 14 metres @ 0.99% Cu and 8.2 g/t Ag from 110m including 2 metres @ 2.26% Cu and 16.1 g/t Ag and 1 metre @ 5.19% Cu and 36.8 g/t Ag
- HORC002: 16 metres @ 0.31% Cu and 4.2 g/t Ag from 12m including 4 metres @ 1.06% Cu and 11.9 g/t Ag and 1 metre @ 1.25% Cu and 13.1 g/t Ag
- HORC005: 2 metres @ 4.3% Cu from 124m within a broader intercept of 6 metres @ 1.75% Cu from 120 metres
- HORC009: 2 metres @ 4.9% Cu from 154m within a broader intercept of 10 metres @ 1.75% Cu from 154m

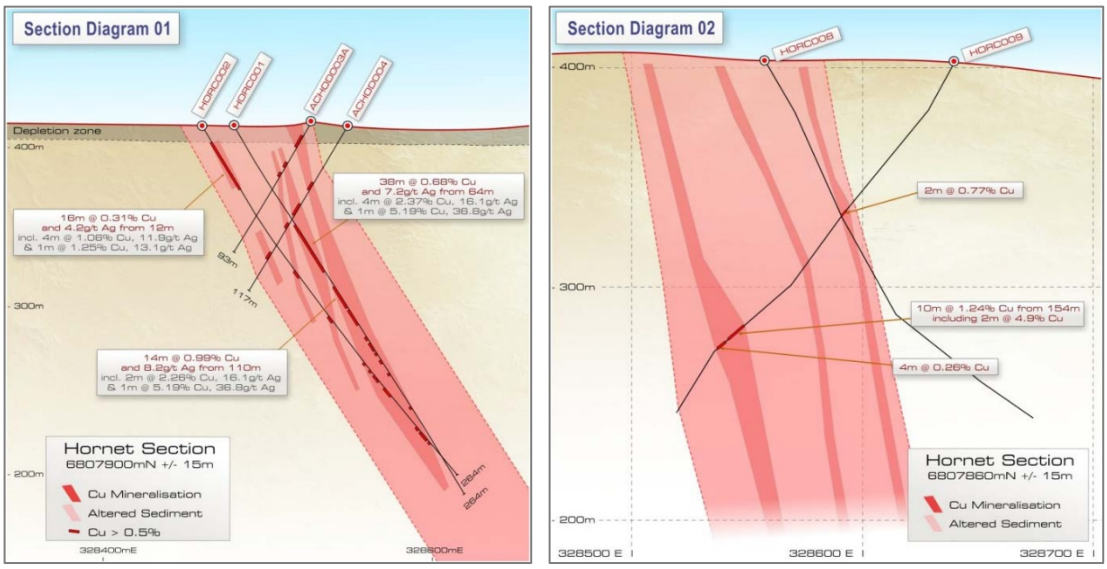

Figure 5: Hornet cross-sections

[10] See Alcyone Ltd ASX announcement "High – Grade Silver and Copper Hits at Silver Spure Hornet " dated 24 January 2012 (https://www.asx.com.au/asxpdf/20120124/pdf/423x48dptb1718.pdf)

See Alcyone Ltd ASX announcement "High – Grade Copper interception at Hornet Pave Way for Maiden JORC Resources " dated 1 October 2012 (https://www.asx.com.au/asxpdf/20121001/pdf/4292xlb805g80v.pdf)

Previous exploration and mining activity at Hornet project area

Morton Resources reported that details of past production history are limited; however, it is reported that between 1906 and 1907, 22t of ore grading 22% Copper were produced.

In 1966 Minad reported the occurrence as a 'line of collapsed shafts surrounded by dumps of limonitic gossan, dark coloured cleaved slate and a slag heap representing some 5,000t of smelted ore. There are no outcrops near the mine but to the north and south there are patches of gossanous siliceous ironstone which presumably mark a line of fracturing and mineralisation.' Minad noted that to the east of the mine significant amounts of copper, lead and zinc ore minerals were observed on the dumps of two shallow shafts - Egglestons Prospect (Falcon).

Figure 6: Historic workings – Old Texas copper mine

Longreach surveyed a grid over the area in 1970 and carried out geological mapping and geochemical soil sampling. No geochemical anomaly was found to be associated with the mine, although a number of Pb-Zn geochemical anomalies were located to the east of the mine.

In 1970, a Queensland Department of Mines drilling program was carried out on behalf of Tooliambi Mines Pty Ltd. Three diamond holes were drilled to a total depth of 185m to investigate the potential of the lode beneath the old workings and locate parallel lodes. Minor copper mineralisation was found to occur as joint and fissure fillings up to 0.25m in width in a mudstone-siltstone sequence. The drilling did not intersect any significant mineralisation.

Harrier prospect

The Harrier prospect sits some 6-8 km north-west of the Hawker prospect, north of Mt Gunyan and ~ 4km north-east of the Twin Hills mine. Harrier is contained within Exploration Permit for Minerals (EPM) 8854, which is held by MRV Metals.

The prospect is defined by elevated copper, silver, zinc and lead in soil samples, ore-grade intersections reported in RAB and diamond drilling and historical mine workings (small collapsed pits and shafts) over a 500 metre strike length. The mine workings were previously known as the Tuliamba Mine, with historic production of 81 tonnes at 11% Cu and 1,273 g/t silver, mined via exploration shafts from 1920 to 1922 with very limited lateral development along the line of lode.

Recent exploration commenced in 2004 when Macmin Silver Ltd (Macmin)[11] 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.

Moreton Resources reported an Exploration Target[12] at Harrier prospect in the range of 500,000 to 1,500,000t 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. This 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.

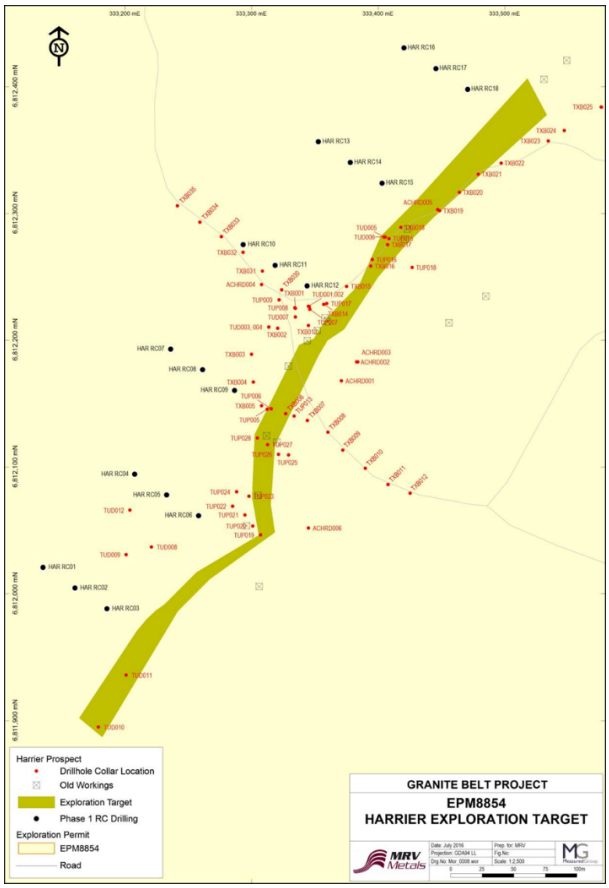

Figure 7: Location of drilling and remnant workings at Harrier

[11] See Macmin Silver Ltd ASX announcement "Macmin Silver Intersect High-Grade Copper-Silver Mineralisation at Its Texsas Silver Project" dated 30 September 2004 (https://www.asx.com.au/asxpdf/20040930/pdf/3n1nct8w7zk05.pdf)

[12] See MRV ASX announcement "MRV Metals Pty Ltd Identifies Exploration Potential at Granite Belt Project – Harrie8 Prospect" dated 19 July 2016 (https://www.asx.com.au/asxpdf/20160718/pdf/438mmwblmffbkg.pdf)

The drilling completed by Macmin was followed up by Alcyone Resources Ltd in 2010[13], 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 downhole assay results which require follow-up. 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 re-logging 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 8), and mineralisation intersected by historical drilling is open to the north and south extents and at depth.

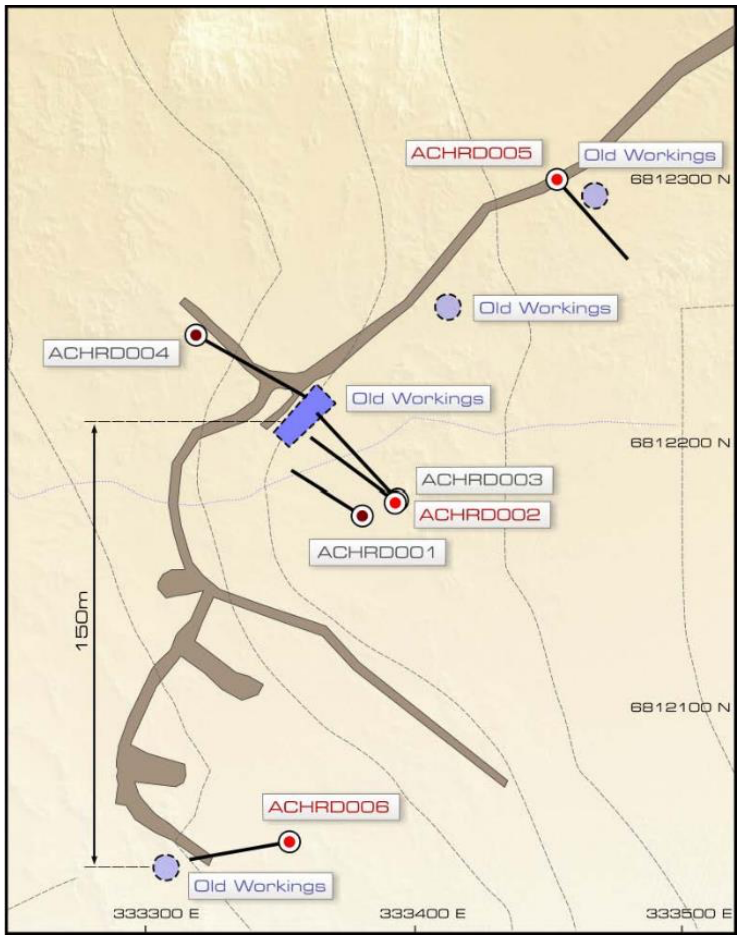

Figure 8: Harrier prospect plan view

[13] See Alcyone Ltd ASX announcement "Drilling and Explortion Update – Texas Project" dated 15 September 2010 (https://www.asx.com.au/asxpdf/20100915/pdf/31sj0kxyyymspw.pdf)

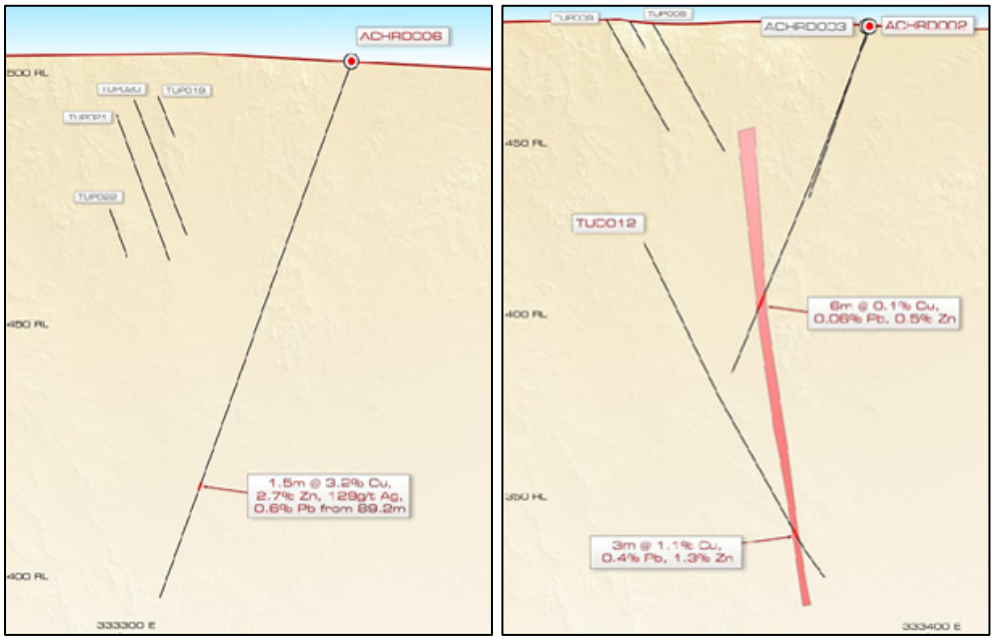

Figure 9: Harrier Prospect – Section showing hole ACHRD006 and ACHRD002

Hawker prospect

The Hawker prospect is located ~ 15km east of the town of Texas, Southern Queensland and ~6.5km east of the Twin Hills mine. Historically known as Silver Crown, elevated copper and silver values in surface soil samples originally identified the prospect in an area adjacent to remnant old mine workings. Hawker is contained within Exploration Permit for Minerals (EPM) 11455, which is held by MRV Metals.

This prospect was tested by previous owners in 2012[14] by drilling eight (8) RC holes for 558m. Significant drilling results included the following (note intervals reported greater than 0.1% Cu):

- HWRC001: 1 metre @ 3.4% Cu, 100 g/t Ag from 15m and 2 metres @ 1.5% Cu, 54 g/t Ag from 21m
- HWRC002: 4 metres @ 0.8% Cu, 22 g/t Ag from 8m (including 1 metre @ 1.41% Cu, 38 g/t Ag and 1 metre @ 1.15% Cu, 36 g/t Ag)
- HWRC003: 2 metres @ 0.14% Cu, 7.4g/t Ag from 13m and 3 metres @ 0.33% Cu, 9.2 g/t Ag from 19m

Hawker is of potential for copper and silver. Moreton Resources reported an **Exploration Target at Harrier prospect in the range of 100,000 to 500,000 tonnes at 1.0 to 1.5% Copper and 30 to 60 g/t Silver**. The potential quantity and grade of the Hawker Exploration Target is conceptual in nature, as there has been insufficient exploration to estimate a Mineral Resource.

[14] See MRV ASX announcement "MRV Metals Pty Ltd Identifies Exploration Potential at Granite Belt Project – Hawker Prospect" dated 18 July 2016 (https://www.asx.com.au/asxpdf/20160718/pdf/438mcr29bxdwys.pdf)

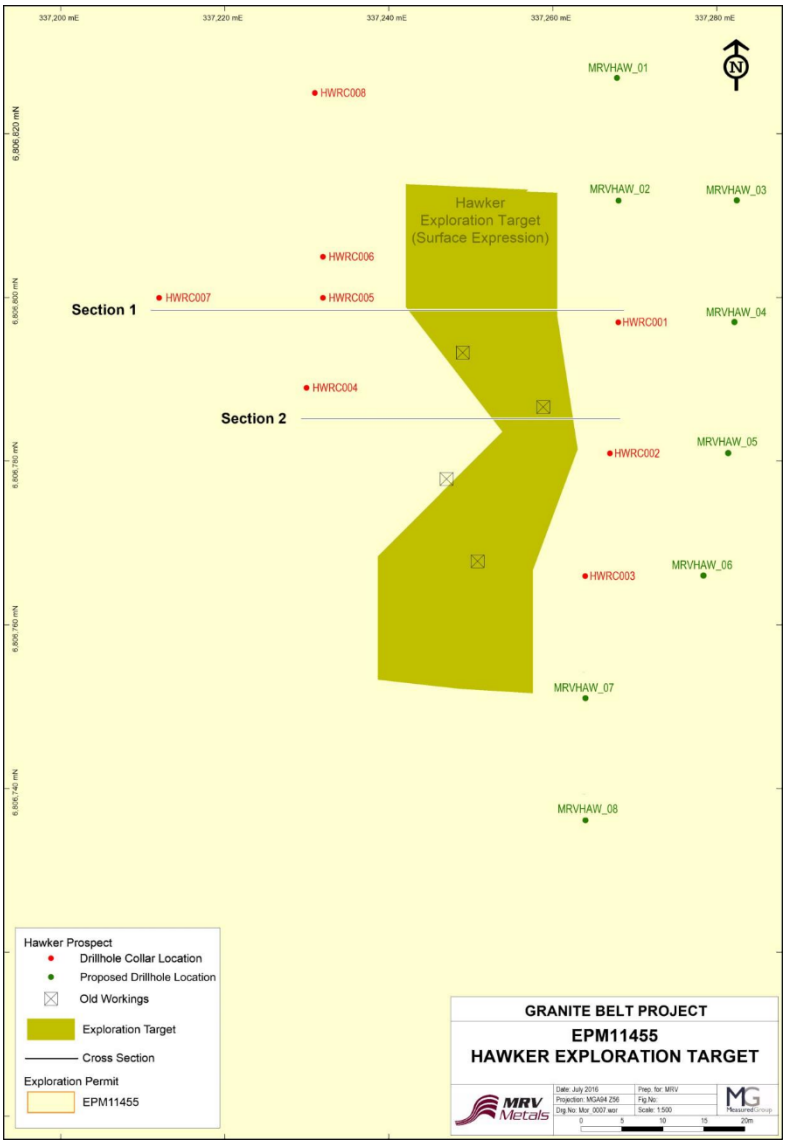

Figure 10: Location of drilling and remnant workings

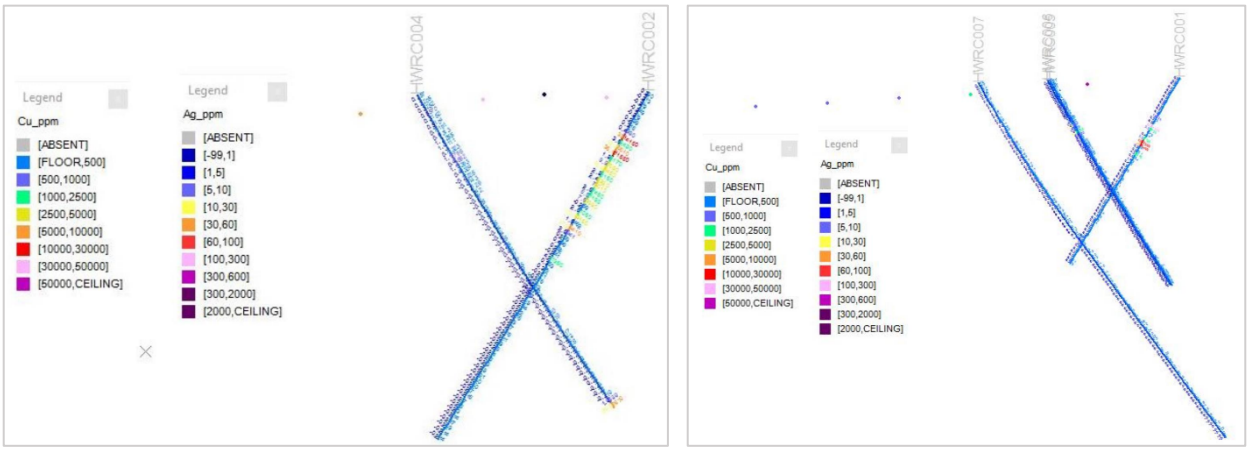

Figure 11: Cross sections showing holes HWRC002, HWRC004, HWRC001 and HWRC005 – 007

Supporting Work for Exploration Targeting

The following geological exploration scoping work was completed by Morton Resources to support the public report of an Exploration Target for Hornet:

- 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 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.

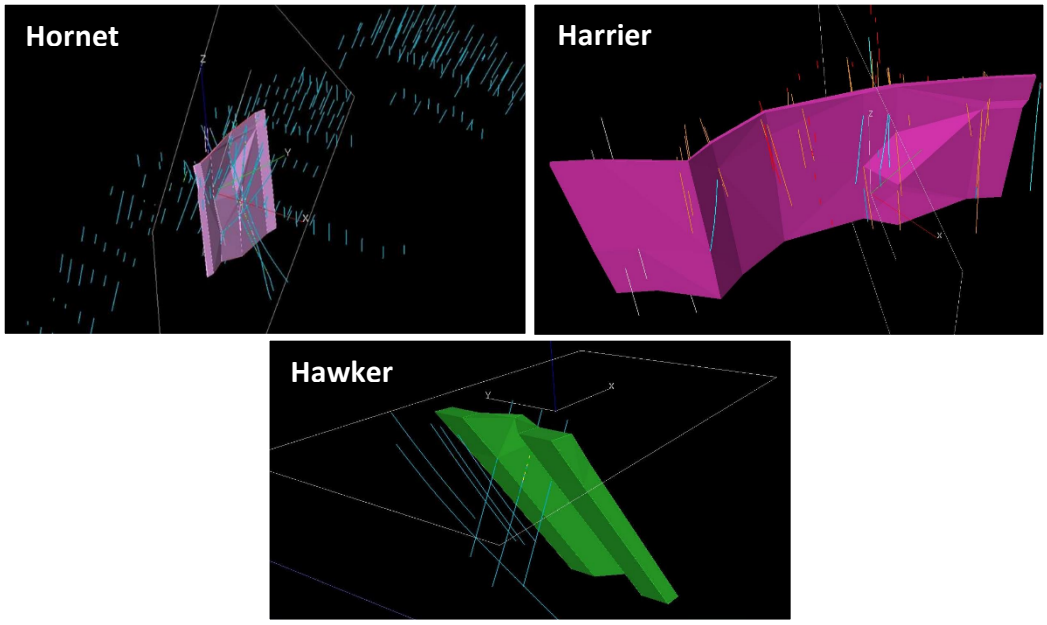

Figure 12: Wireframe model of the exploration targets

ENDS

For further information, please contact:

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E: luke@jadar.com.au

This ASX announcement was authorised for release by the Board of Jadar Resources Limited.

Previously Released ASX Material References

For further details relating to the Granite Belt Project and information in this announcement, please refer to the following ASX announcements:

ASX: MMN: 30 September 2004
ASX: AYN: 15 September 2010
ASX: AYN: 24 January 2012
ASX: AYN: 01 October 2012
ASX: MRV: 05 February 2016
ASX: MRV: 18 July 2016
ASX: MRV: 19 July 2016
ASX: MRV: 19 September 2016
ASX: MRV: 04 October 2016
ASX: MRV: 05 October 2016
ASX: MRV: 30 August 2019
ASX: MRV: 20 November 2019
ASX: MRV: 03 February 2020
ASX: JAD: 03 August 2020

Competent Person Statement

The information in this announcement that relates to the sampling techniques data and the reporting of exploration results and estimation and reporting of mineral resources at the Granite Belt Project is based on data compiled by Mr Dejan Jovanovic, a competent person who is a Member of European Federation of Geologist (EFG). Mr Jovanovic is an employee of Jadar Resources Ltd and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Jovanovic consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

Forward Looking Statement

Forward Looking Statements Statements regarding Jadar´s plans with respect to its mineral properties and programs are forward-looking statements. There can be no assurance that Jadar's plans for development of its mineral properties will proceed as currently expected. There can also be no assurance that Jadar will be able to confirm the presence of additional mineral resources, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of Jadar's mineral properties. The performance of Jadar may be influenced by a number of factors which are outside the control of the Company and its Directors, staff, and contractors. These statements include, but are not limited to statements regarding future production, resources or reserves and exploration results. All of such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the

control of the company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include, but are not limited to: (i) those relating to the interpretation of drill results, the geology, grade and continuity of mineral deposits and conclusions of economic evaluations, (ii) risks relating to possible variations in reserves, grade, planned mining dilution and ore loss, or recovery rates and changes in project parameters as plans continue to be refined, (iii) the potential for delays in exploration or development activities or the completion of feasibility studies, (iv) risks related to commodity price and foreign exchange rate fluctuations, (v) risks related to failure to obtain adequate financing on a timely basis and on acceptable terms or delays in obtaining governmental approvals or in the completion of development or construction activities, and (vi) other risks and uncertainties related to the company's prospects, properties and business strategy. Our audience is cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events.

JORC CODE, 2012 EDITION
Twin Hills Deposit including Mt Gunyan
Section 1 Sampling Techniques and Data

Criteria	JORC Code ex Figuration	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	Twin Hills: • The deposit has been drilled and sampled by rock chip, open hole (OH) percussion, reverse circulation (RC) and diamond coring with drill holes sited on variable locations across and around the resource area. The majority of the drill holes were inclined to the west as the mineralisation is steeply dipping within a north-south strike trend. • After the initial drilling programmes confirmed near surface mineralisation subsequent programmes were drilled deeper and infilled to both confirm continuity as well as provide information down dip and plunge. Mt Gunyan: • The deposit has been drilled and sampled by diamond coring, reverse circulation and percussion methods with holes on variable spacings around the hill. • The holes are drilled mostly on sections along the NS strike and vary in orientation from perpendicular to the mostly steeply east dipping mineralisation to more down dip. • Initial surface drilling identified near surface mineralisation which was supplemented by deeper drilling to highlight mineralisation for potential underground mining. The subsequent drill holes mostly in filled and extended the mineralisation coverage down dip. The deeper holes were mostly surveyed using industry standard methods with collars and orientation recorded. • The diamond core was logged for sulphide content, lithology and other geological features.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).*	Twin Hills: • Open hole percussion, reverse circulation percussion and HQ and NQ diamond coring have been employed. • The total drilled metres is 37,108 metres. 533 exploration holes have been drilled as open hole percussion using a down hole hammer, a total of 23,170 metres. Beside percussion drilling, 96 reverse circulation holes have been drilled totalling 10,366 metres and 29 diamond holes for 3,572 metres have been drilled. 650 drill holes totalling 35,782.2m were used for resources estimation. • The diamond drill holes were cored from collar to total depth with depths ranging from 40 metres to 250 metres. • The diamond core was not orientated.

Criteria	JORC Code ex Figuration	Commentary
		• The reverse circulation drill holes ranged in depth from 3 metres to 250 metres and the open hole percussion holes from 2 metres to 75 metres. Mt Gunyan: • The total drilled metres is 21,575 from 306 holes within the immediate vicinity of the deposit. A subset of 296 holes totalling 20,900m was selected as appropriate for resource estimation. Within this subset were diamond drilling (38 holes) with variable orientation, is cored from the collar and with a maximum depth of 223m. The core was not orientated. The RC holes (39 holes) mostly oriented to the west with a maximum depth of 162m and the PC holes (219 holes) mostly vertical to a maximum depth of 200m. • The diamond core was either HQ or NQ size. The mineralised intervals and adjacent locations were sampled by cutting the core in 1/2 or 1/4 based on the logging. The RC and PC sample return was collected in 1m intervals and either spear or riffle split to collect sub-samples which were combined into 2m downhole composites.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	Twin Hills: • The core recovery from the drill logging indicates that it was usually greater than 95% and this has been confirmed by observation ad re-measurement by various parties from examination of the core in the core yard. • No observations or measurements were made regarding the reverse circulation or open hole percussion drill chip recoveries. The drill cyclone used to capture the percussion chips was however fully enclosed to reduce dust and loss of fines. • All of the drill sampling appears to have been carried out competently and to best industry practice, as consequence there is no evidence to suggest there exists a relationship between sample recovery and grade. Mt Gunyan: • The core recovery recorded in the database indicates it is usually in excess of 95% which is supported by observation and remeasurement from the core in the yard. There is nothing recorded concerning the amount and consistency of material recovered from the RC or PC drilling. The cyclone was fully enclosed to reduce dust and thus loss of fines. • Whilst no assessment has been reported the competency of the core would tend to preclude any potential issue of sampling bias. However there is some evidence that larger samples may provide more representative samples given the nature of the mineralisation.

Criteria	JORC Code ex Figuration	Commentary
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	Twin Hills: • Geological logging was undertaken to record lithology, mineralisation type (ie sulphides) and content, style of mineralisation (i.e. veining, disseminated), degree of weathering, alteration if present and type and structure where discernible. The geological logging is considered appropriate to the style of mineralisation forming the mineral resource. • Both summary and detailed logging was carried out and also included in some cases angle to core axis and vein type and frequency. The entire length of all drill holes was geologically logged. No core boxes or chips tray photographs available. Mt Gunyan: • Geological recording of lithology, mineralisation, veining, alteration, weathering, structure is appropriate to the style of the deposit. • Geological logging is both in summary and detailed for the information listed above and includes mineralisation type and content, some angle to core axis information (core only), vein type, incidence and frequency. • Not all geological logs are recorded in the database but appear on hardcopy logs. No core boxes or chips tray photographs available.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Twin Hills: • The drill core was either halved or quartered using a mechanical device. It is not known if the core was orientated before cutting or if a consistent side was taken. • The reverse circulation and open hole percussion samples were taken at 1 metre intervals from the cyclone and either riffle spilt of spear sampled. Two adjacent samples were combined. The large majority of the samples were dry. • The sampling techniques were considered appropriate and it is understood that some test work was undertaken to ensure the reverse circulation and open hole percussion sampling techniques were representative. • The use of commercial laboratory (Analabs or ALS Chemex) facilities for the preparation of samples is industry standard practise and the techniques used appropriate to the style of mineralisation. Mt Gunyan: • The majority is 1/4ed with the Alcyone core 1/2ed pre Alcyone. A mechanical cutting device was used. It is not known if the core was consistently taken from one side of the stick. • The RC and PC samples were collected at 1m intervals from the cyclone and either

Criteria	JORC Code ex Figuration	Commentary
		riffle split or spear sampled. Two adjacent samples were combined. All material was sampled as returned - usually dry. Wet holes were re-drilled. • Based on the information provided and the test work comparisons, the field sampling techniques were appropriate. The use of commercial laboratory facilities for the preparation of samples is industry standard practise and the techniques used appropriate to the style of mineralisation.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	<u>Twin Hills</u>: • The chip and core samples were dispatched via commercial transport services from Texas to either AnaLabs or ALS Chemex both located in Brisbane. • Prior to Alcyone Limited's work the samples were analysed using GA201 AnaLabs method, an aqua regia digest with AAS finish for Ag, Cu, Pb and Zn which had detection limits of 2 ppm, 4 ppm, 5 ppm and 4 ppm respectively. Method GG309 was used for Au analysis with a detection limit 0.008ppm. • Beside AnaLabs pre Alcyone work samples were analysed at ALS Chemex using PM203 and IC203 methods for gold and silver respectively. The methods used aqua regia digestion followed by AAS measurement with detection limits for Au of 0.02 ppm and for Ag of 0.2 ppm. All the samples with Ag values greater than 20 g/t were resubmitted and analysed using method A101, an aqua regia digestion with ICP-AES finish. • Alcyone Resources prepared and analysed at ALS Chemex in Brisbane. The samples were analysed using ME-ICP41 method an conventional ICP-AES Analysis after aqua regia digest. This is a tool for first pass exploration geochemistry and an aqua regia leach should be considered as representing only the leachable portion of the particular analyte. The sample with over 40ppm Ag were analysed using AlS´s ME-OG46 ore grade method - Aqua regia digestion with ICP-AES or AAS finish. Prior to Alcyone Limited's work QAQC (blanks) were not used and instead standard sample duplication for the reverse circulation and open hole percussion drilling employed. Alcyone Limited instigated the use of standards and blanks which were included with the samples at a rate of approximately 1 in 20 with the samples submitted for analysis. • Field duplicate sampling from the reverse circulation and open hole percussion drilling, when employed, was supportive of the original results. No core duplicate assay results have been observed. No geophysical tools were employed for analysis. <u>Mt Gunyan</u>: • The assay techniques applied for the measurement of silver content is appropriate for the determination of the level of silver in the sample. The routine technique was aqua

Criteria	JORC Code ex Figuration	Commentary
		regia digest with ICP-AES analysis with over range values repeated using a similar digest with atomic absorption spectroscopy finish. • Prior to Alcyone QAQC samples (standards and blanks) were not used with only sample duplication for RC and PC holes carried out. Alcyone adopted standards and blanks included with the samples submitted for analysis. • Field duplicate sampling from the PC and RC holes, when conducted, is supportive of the original results. 1/2 v 1/4 core comparisons assay results have been observed and are generally fair. • The silver mineralisation style and the relatively low local grade variance combined with the domaining and lack of bias between the various drilling sample types provides confidence in the overall silver grade of the deposit being fairly represented.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	Twin Hills: • Comparisons between drill sample types show no evidence of bias. • Higher grade intercepts were observed and verified by Alcyone Limited personnel. • No twinned holes were drilled however, in many locations within the resources the drilling is in close proximity and the comparison of assay results is supportive of the reported intersections. • For the majority of holes the primary data was recoded onto paper logs and sample record sheets. In later programmes electronic spread sheets were introduced and validated against code tables by the Alcyone Limited data base manager. • There was no adjustment made to assay data. Mt Gunyan: • High grade mineralisation in the core was observed and verified by Alcyone personnel with intercepts compiled correctly. • The twinning of holes (DD v RC/PC) has been conducted with reasonably supportive results. • For most holes primary data was recorded onto paper logs and sample record sheets. More recent directly onto electronic spread sheets and validated against code tables by the database manager. • There was no adjustment made to assay data.
Location of data points	• *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.*	Twin Hills: • All the collar positions were surveyed by DGPS at the set out stage and the rig was positioned over the collar and alignment was by compass against magnetic bearing. The diamond core and percussion chips (from both RC and OH) were logged for

Criteria	JORC Code ex Figuration	Commentary
	• *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	lithology, sulphide content and geological features where possible. The drill hole collar positions were surveyed by a contractor from known surface datum. The orientation and dip at the commencement of the drill hole was recorded and similar information down hole was recorded by a single shot camera. • The regional grid used was AMG84 Zone 54 and the resources were laid out on this grid. • The elevation is according to AHD. • Topographic control was taken from detailed site surveys and individual drill hole collar surveys. This methodology was considered adequate for the survey control required. <u>Mt Gunyan</u>: • Holes were surveyed by DGPS and the orientation and inclination at collar is set out using clinometer. Down hole survey was recorded at intervals averaging 30m down hole with either single or multi-shot cameras. The regional grid is GDA94 Zone 56 and the Deposit is laid out on this grid. Elevation is according to AHD. Topographic control is taken from site surveys and hole collar surveys and is adequate for the control required.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	<u>Twin Hills</u>: • Drill spacing varies with the position within the resources. The mostly open hole percussion near surface drilling was on a grid spacing averaging 10mE x 20mN to 20mE x 25mN. • At depth (below 80 metres) the drill spacing was 25mE x 30mN to 50mN. • Below 130 metres the drill spacing was variable. • Successive drill programmes have in-filled previous programmes and in the majority of drill holes returned mineralisation in the expected position. This provided a high degree of confidence in the geological continuity. Close spaced drilling provides good support for positioning of mineralisation by domain. • The drill sampling reflects the geological conditions. For mineral resource estimates a 2 metre composite length was chosen given that is the dominant sample length in the drilling. <u>Mt Gunyan</u>: • Overall the drill holes are spaced on average on sections along strike between 20m and 50m apart; across strike generally between 5m and 30m but up to 50m (quite variable due to positioning difficulties on the hill) and vertically approximately 30m (but variable) with the most density of information in the top 50 to 80m. • This drilling is over the strike length of 650m, a maximum width of 350m (average

Criteria	JORC Code ex Figuration	Commentary
		250m) and the maximum vertical extent of 170 to 200m depending on the position. • Successive drilling programs have in filled the previous and on the majority of occasions drilling has returned mineralisation in the expected locations. This provides a high degree of confidence in the geological continuity. Close spacing drilling provides good supporting for positioning of mineralisation by zone/domain. • The sampling reflects the geological conditions. For mineral resource estimation a 2m composite length was chosen given that this is the dominant sample length in the more recent drilling.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	Twin Hills: • The drill holes were orientated as close as possible to perpendicular or near perpendicular to the structure or geological trend containing the mineralisation. • No sampling bias was evident given that the mineralisation is disseminated within the alteration and as well associated with small scale quartz veins. Mt Gunyan: • The drilling is oriented as best as possible to perpendicular to the geology/alteration containing or controlling the mineralisation. Drilling is in some locations down dip and the influence of this drilling is recognised in the estimation methodology. • There may be the opportunity for some bias in holes which are mostly down dip - this is not the norm within the deposit.
Sample security	• *The measures taken to ensure sample security.*	Twin Hills and Mt Gunyan: • The chain of custody adopted by Alcyone and as best known by previous operators was appropriate and based on responsibility and documentation.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	Twin Hills: • Not aware of any audits having been carried out. Mt Gunyan: • DataGeo when working as Alcyone's Geology Manager reviewed field procedures and in combination with the database manager audited the data.

Section 2 Reporting of Exploration Results
(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code ex Figuration	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	• EPM 11455 (for all minerals apart from coal) valid till 31-Mar-21 • EPM 12858 (for all minerals apart from coal) valid till 09-Aug-21, • EPM 18950 (for all minerals apart from coal) valid till 30-May-21, • EPM 26275 (for all minerals apart from coal) valid till 26-Feb-22, • EPM 8854 (for all minerals apart from coal) valid till 07-Jul-21 • ML 100106 (Mining license) Cu, Pb, Zn, Ag, Au valid till 30-Sep-37 • All tenements are in good standing.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• MacMin Limited commenced exploration in the area in or around 2000 and Alcyone Limited secured the project area in or around 2009. Moreton Resources Limited had title to the project area up to 2020.
Geology	• *Deposit type, geological setting and style of mineralisation.*	<u>Twin Hills</u>: • The Twin Hills Deposit is centred on a north-south trending ridge with a maximum vertical height variation of approximately 120m. The intense alteration is up to 300 metres wide and is bordered by weak to moderately altered grey to khaki strongly cleaved siltstones and conglomerate. The silver mineralisation is epigenetic and formed through epithermal derived solutions intruding into fine grained volcanoclastic sediments. Pervasive to intense silicic and potassic alteration is common and appears associated with the more intense mineralisation. • Metal Zoning is extremely common in intrusion related systems and there are numerous variations along the general theme of proximal Cu-Mo and distal Pb-Zn. There are also many examples of high silver association within the distal zones. <u>Mt Gunyan</u>: • The deposit consists of steeply to moderately east dipping roughly north south trending mineralisation hosted by altered sediments and displaying anomalous silver content. The main mineralisation occurs over a strike length of 650m, a depth of 170m to 200m and a width which varies between 20 and 350m. Silver minerals have not been identified, it is suspected that silver occurs in the galena lattice. The zones of mineralisation are wire framed as were surrounding lower-grade anomalous region. Gold was modelled in a similar manner but separately to the silver.

Criteria	JORC Code ex Figuration	Commentary
Drill hole Information	• *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:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *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.*	• The drill data base is too large to meaningful summarise. Drill data has been released by previous explorers.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Reported drill result data contains aggregated length and assay results. • Unaggregated true drill width grades were used for the sample base to estimate the mineral resource. • No metal equivalents were used or applied.
Relationship between mineralisati on widths and	• *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*	• Drill holes were drilled as close as possible to perpendicular to the geological strike and particularly the strike of mineralised zones. • All depths and intervals are downhole depths.

Criteria	JORC Code ex Figuration	Commentary
intercept lengths	*statement to this effect (e.g. 'down hole length, true width not known').*	
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 Figure view of drill hole collar locations and appropriate sectional views.*	• Drill location maps have been released by previous explorers.
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.*	• The JORC 2012 report had full access to all drill results.
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.*	• Not relevant to this report apart from cross reference.
Further work	• *The nature and scale of Figurened further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Not applicable for this report.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• The data used for the mineral resource estimates was validated by Alcyone Limited and its data base management consultant by comparing laboratory results sheets and sample intervals on the drill logs to the contents of the database. The majority of assays were reloaded from original ALS result sheets sourced from ALS archives. • The data base manager utilised a SQL server database and loaded data with the contents checked against validation tables. The process adopted provided sufficient confidence in the database contents to state that it accurately represents the drill information.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The competent person engaged by Alcyone regularly visited the site. • Representatives of Jadar have not been able to visit the site as of yet because of border restrictions.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	<u>Twin Hills</u>: • Alcyone considered that the confidence in the geological interpretation is considered good as it is supported by a considerable amount of exposure from historic mining activities and a relatively large drill data. Only physical data obtained in the field was used. The application of hard boundaries to reflect the position of the domains is supported by the field and drilling observations. It was considered by Alcyone Limited that other estimation techniques would provide similar results. The presence of alteration in favourable geology combined with the overall orientation control of the shearing provides the geological control and this combined with the presence of silver was used to constrain the3 interpretation. The higher grades of silver occour within the centre areas of the mineral resources and this is sub-parallel to the domain boundaries. All the silver mineralisation is disseminated within the host rock and/or occours in association with quartz veining. The position and style of the mineralisation can impact grade continuity. <u>Mt Gunyan</u>: • The confidence in the geological interpretation is considered good as it is supported drilling, mapping and relatively close spaced drilling. The geological sequence is near identical to the nearby Twin Hills Deposit which is well understood. The mineral domaining is generally against well known orientations. Only physical data obtained

Criteria	JORC Code explanation	Commentary
		in the field was utilised. The application of hard boundaries to reflect the position of the domains is supported by the field and drilling observations. The presence of alteration in favourable rock types provides the geological control and this combined with presence of silver is used to constrain the interpretation. The higher-grade silver occurs mostly on the northern and southern flanks of the hill which is generally well mineralised. All silver mineralisation is disseminated within the host rock and/or occurs in association with fine quartz sulphide veins. The position and style of mineralisation impacts the grade continuity.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	Twin Hills: • The higher grade silver areas occur within the resources occurs over a 700 metre strike length with widths varying between 20 metres and 200 metres and with model constrained depth of around 200 metres vertically. • The silver anomaly is much longer being over 1,000 metres in length, up to 300 metres wide and some 300 metres in vertical depth. • Whilst the resources remain open at depth current drill information indicates it does thin significantly. Mt Gunyan: • The deposit occurs over the strike length of 650m, a maximum width of 350m (average 250m) and maximum vertical extent of 170 to 200m depending on position. • The deposit remains open at depth. The individual high-grade lens vary between 250m in strike length; up to 20m in width and between 120m and 170m in vertical extent.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	Twin Hills: • The large size of the domains and the large number of included composites plus the availability of a continuity model supported the use of ordinary kriging techniques by Alcyone Limited. Grade estimation was carried out using Vulcan software. • Density values were assigned using default values based on core analysis. The composites were created within each=h domain and input to the grade estimation was restricted to those composites which were within the domain being estimated. Top cuts were applied to the composites based on a statistical analysis. • Estimated blocks were formed in a three step methodology with orientation set to the orientation of the domain being estimated. The initial (primary search) was 30metres x 15 metres x 10 metres in strike, dip and across the dip –strike plane. • This search range was expanded by double the length for blocks not informed in the primary search and again in the final search strategy. This strategy informed on

Criteria	JORC Code explanation	Commentary
	• *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	average 70% of the blocks in the primary and secondary search. • Comparison of the estimate in global terms to production figures was considered generally fair by Alcyone Limited with some indications however that the exploration model was slightly over stating in tonnes and grade above cut-off compared to the blast hole defined grade control information. • The mineral resource model did not account for production. • The silver mineralisation contained within the resource contains gold which=h is estimated within the model. Gold can be recovered in the leach process with a recovery factor estimated at 45% based on the test work completed. • No assessment of deleterious elements was made but it was noted that some of the resource contains base metals in low concentrations which could interfere with the recovery process. • The block model was constructed using blocks of 5mE x 20mN x 5m RL. Sub-celling to half the block size in each direction was adopted to ensure accurate volume representation. Grade estimation was to the parent block size. The block size was a compromise given the variation in drill spacing with position in the resources. • There were no assumptions behind the modelling of selective mining units. • Whilst comparisons have been made between silver and gold no correlation of grades has been observed and the result did not influence the estimation process. • Hard boundaries were applied to the Domains. Grade was estimated within these boundaries. • Statistical analysis of the silver indicated that it was fairly normally distributed according to the coefficients of variation thus only the extreme outliers were controlled by top cutting. For gold the populations were positively skewed and thus to minimise the influence of higher grade composites their influence was restricted to the primary search distances. • Volume validation was carried out by comparison of the solids representing the mineralisation to the block model. Grade validation was carried by both global comparison of the average estimated grade to the average input grade and spatially by comparison of the estimated grades to the input grades by position. Alcyone Limited reported that visual comparison was also used. Comparison to production information was fairly supportive of the model. <u>Mt Gunyan:</u> • For silver the modest size of most zones/domains and the subsequent number of included composites plus the good statistical composite behaviour supported the use of inverse distance to the power of 2 as the estimation technique. • Grade estimation was carried out in Vulcan™ application.

Criteria	JORC Code explanation	Commentary
		• Density was assigned by weathering position using default values based on the nearby Twin Hills Deposit. • The composites were created within each zone/domain and input to the grade estimation was restricted to those composites which were within the zone/domain being estimated. Top cuts were applied to the composites based on statistical analysis. • Estimated blocks were informed a three step strategy with orientation set to the orientation of the zone/domain being estimated. The initial (primary) search was 35m x 25m x 5m in strike, dip and across dip-strike plane. This search range was expanded by double the length for blocks not informed in the primary search and again in the final search strategy. This strategy informed on average 78% of the blocks in the primary and secondary search. For gold inverse distance to the power of 3 was used with domaining and topcutting strategies applied to the composites. • Comparison of the estimate in global terms to previous model is generally within expectations. There is no production data for comparison. • The silver "ore" contains gold which is estimated within the model. Gold is recovered in the leach process with a recovery factor of 45% based on test work. • No assessment of deleterious elements has been made, it is noted that the "ore" contains some base metals which could interfere with the recovery process. • The block model was constructed using blocks which were 5mE x 20mN x 5mRL. Sub-celling to 1/2 the block size in each direction was adopted to ensure accurate volume representation. Grade estimation was to the parent block size. • whilst comparisons have been made between silver and gold no correlation was observed and the result did not influence the estimation process. • Hard boundaries where applied to the Zones/Domains. Grade was estimated within these boundaries. • Statistical analysis of the silver indicated that it was fairly normally distributed according to the coefficients of variation thus only the extreme outliers were controlled by top-cutting. For gold the populations were positively skewed and thus to minimise the influence of higher-grade composites they were top-cut, and their influence was restricted to the primary search distances. • Volume validation was carried out by comparison of the solids representing the mineralisation to the block model. Grade validation was carried by both global comparison of the average estimated grade to the average input grade and spatially by comparison of the estimated grades to the input grades by position. Also, visual comparison was used.

Criteria	JORC Code explanation	Commentary
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Twin Hills: • The tonnages were estimated using density determined by wet and dry measurements and applied by weathering profile position as a default. Mt Gunyan: • The tonnages were estimated using default density applied by weathering profile position. The defaults were based on information from the nearby Twin Hills Deposit.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	Twin Hills: • Reporting cut-off = 26.5g/t Ag Mt Gunyan: • Reporting cut-off = 26.5g/t Ag
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	Twin Hills: • The model was optimised using 65% silver recovery on a crushed ore heap cyanide leach process. Mining, blast, haul, crushing, stacking and processing costs were driven by owner operation using existing mining fleet and upgraded crushing and stacking infrastructure. Historic mining has been by open cut which has proven in the areas mined to be appropriate to the physical extraction of the mineralised material which is in turn confirmed by comparison of the model to production. The optimisation process indicated a reporting cut-off of 26.5g/t. Mt Gunyan: • A 30g/t Ag boundary appears to define statistically and geologically the margins of the more continuous higher-grade mineralisation whilst 10g/t Ag provides the extent of the mineralisation. Gold zones were defined using a 0.1g/t boundary given there was gold outside the silver zones. • An optimisation based on owner operated open pit mining, crushing, stacking and processing (as per Twin Hills) indicated that the economical cut-off could be set at 26.5g/t Ag based on appropriate parameters and costs at the time – 2012.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made*	Twin Hills: • The metallurgical characteristics of the mineral resources were determined by column leach trials using finely ground bulk sample s from the historic open cuts as it existed in 2009. The silver recovery curve was projected to 68% over an extended period of time (+90 days). Based on data collected when the former Twin Hills was an operating mine, the heap leach stacks have performed in the range of 55-60% recoveries.

Criteria	JORC Code explanation	Commentary
	when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	Mt Gunyan: • Given the geological similarities it is thought that the metallurgical characteristics of the Deposit will be similar to Twin Hills and thus amenable to heap leaching with cyanide. Late in its project ownership Alcyone commenced column testing but the results have not been made available if indeed the tests were completed.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	Twin Hills: • The mineral resources are within a granted mining lease and all of the required licensing approvals are in place. Mt Gunyan: • Mt Gunyan exploration tenure was acquired by MRV Metals Pty Ltd in 2016 from the Administrator appointed by Alcyone. • Tenement applications are in place for a mining license and an overlapping mineral development license which cover the Deposit and the location of previous/existing infrastructure • Government Approvals including an environmental authority to recommence a mining, crushing and heap leach processing have yet to be obtained/finalised.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	Twin Hills: • The bulk density has been determined from core using weight in the air and weight in water techniques. The results were applied by weathering profile position into the block model. • The rocks do not display any significant porosity and as a consequence the technique described was considered appropriate. • The material is generally fairly uniform as evidenced by observations from mining. Mt Gunyan: • Density has been assumed based on results achieved at the nearby Twin Hills Deposit. The assumptions are applied to the model by weathering position. • No specific measurements have been made at Mt Gunyan. • The material is generally fairly uniform as evidenced from the core and the geological setting. Application of weathering position is felt appropriate but direct measurement is required to confirm the defaults.

Criteria	JORC Code explanation	Commentary
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	Twin Hills: • The classifications are based on the quality and amount of input data, the grade continuity model and the physical domaining which is supported by mining and drilling observation of the mineral system. • Shortcomings in QAQC have been offset by the amount of drilling data and the apparent lack of bias between sample types. • Higher confidence areas have more supporting data and mining history, areas of lower geological support reflect a lower classification. • The input data particularly in the more recent data is consistent and closely spaced enough to support the projection of the geological interpretation at depth. Later drilling programmes have successfully in-filled earlier programmes in mineralised locations predicted by the initial programme. The estimated grade correlates reasonably well with the input data given the nature of the mineralisation. Mt Gunyan: • The classification is based on the quality and amount of input data and the physical domaining which is supported by drilling observation of the mineral system. Shortcomings in QAQC have been offset by the amount of drilling data. Higher confidence areas have more supporting data, areas of lower geological support reflect a lower classification. • The input data particularly the more recent is consistent and closely spaced enough to support the projection of the geological interpretation at depth. Later drilling programs have successfully in filled earlier programs in mineralised locations predicted by the initial program. The estimated grade correlates reasonably well with the input data given the nature of the mineralisation. • The Mineral Resource estimate reflects the Competent Persons understanding of the Deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	Twin Hills: • Alcyone limited report that audits have been carried out by external parties reviewing financing options. Mt Gunyan: • No audits have been undertaken but comparison to previous models by other companies indicates that the model is appropriate in tonnes and grade at a global scale.
Discussion of relative	• *Where appropriate a statement of the relative accuracy and confidence level in the*	Twin Hills: • Relative accuracy has not been quantified given the mineral resource is volume and

Criteria	JORC Code explanation	Commentary
accuracy/ confidence	*Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	sample constrained. The confidence in the mineral resource is defined by the classification adopted as per the guidelines of the JORC 2012 code. • The statement elates to global estimates of tonnes and grade. • Alcyone reports that mining grade control production information (based on blast hole sampling) has been compared to the exploration model prediction on a monthly basis and the result is fair with the exploration model over predicting tonnes and grade by 2% and 5% respectively. <u>Mt Gunyan:</u> • relative accuracy has not been quantified given the mineral resource is volume and sample constrained. The confidence in the mineral resource is defined by the classification adopted as per the guidelines of the 2012 JORC code. • The statement relates to global estimates of tonnes and grade. • no comparisons are able to be made.

JORC CODE, 2012 EDITION
Hornet, Harrier and Hawker Exploration Targets
Section 1 Sampling Techniques and Data

Criteria	JORC Code ex Figuration	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	<u>Hornet:</u> • RAB completed by Macmin TXB513 to TXB595 was only bottom of hole sampled with a two-metre composite. As the drill holes are relatively shallow 15-20 m only 165 m of the 1187 m being sampled (about 14%). • RAB drilling conducted by Alcyone drilling was sampled generally at 1 m intervals. In areas logged as waste, samples are combined into 3 m intervals. 5751 m of RAB drilling from 183 holes was completed with 99.9% sampled. • RC drilling was sampled 1 m (53.5%) and 2 m (46.5%) intervals. 1780 m of RC of RC drilling from 9 holes was completed with 99.9% sampled. • Diamond drill half core was sampled on intervals generally between 0.5 m to 1 m except at geological contacts where samples met the geological domain. The sampling was irregular controlled by interpreted geological domains. 806.6 m of diamond drill core, from 10 holes, was drilled with 718.06 m sampled representing 89% of core sampled. • Historical production records for the old Texas mine have not been located and it unsure whether such records have survived. <u>Harrier:</u> • 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. • 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. • Core was cut with diamond saw and one half sampled with one half retained. • RAB sampling generally occured on 1 m intervals, however procedures of splitting and sub sampling are not known. <u>Hawker:</u> • 120 soil samples were collected. • RC drilling was sampled at 1 m intervals. • There is a total of 558 m of RC drilling from 8 drill holes.

Criteria	JORC Code ex Figuration	Commentary
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).*	<u>Hornet:</u> • RAB, RC and Diamond Drilling was completed at Hornet. No details of core orientation have been observed. <u>Harrier:</u> • 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. • Drilling has occurred the three main campaigns first by the Queensland Geological' Survey in 1971, the second by Macmin in 2004 and third by Alcyone in 2010. • Details given below refer to the Macmin and Alcyone programmes only and not Drilling programme conducted by the Geological Survey of Queensland. <u>Hawker:</u> • Drilling was completed using Reverse Circulation (RC) techniques using a face sampling bit.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	<u>Hornet:</u> • Details of sample recovery have not been retained for RAB drilling; however, the majority of intersections are from diamond core. • 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. <u>Harrier:</u> • Details of sample recovery have not been retained for RAB and drilling however the majority of intersections are from diamond core. • 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. <u>Hawker:</u> • No details of sample recovery or wet or dry sampling is recorded in the dataset

Criteria	JORC Code ex Figuration	Commentary
		analysed. • It should be noted the drill holes are relatively shallow and unlikely to intersect high water flows leading wet RC samples that would compromise sample quality.
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	<u>Hornet:</u> • The core has been geologically logged and the log is retained in the drill hole database. No record of geotechnical logging has been retained. <u>Harrier:</u> • The core has been geologically logged and the log is retained in the drill hole database. No record of geotechnical logging has been retained. <u>Hawker:</u> • All samples have been geologically logged to lithology and other characteristics. • The geological log is recorded in the drill hole database and is fit for later interpretation.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	<u>Hornet:</u> • Sample type listed in the drilling database for the RC and RAB drilling is describe as spear, indicating the sample where not split at least at initial sampling phase. • The core has been geologically logged and the log is retained in the drill hole database. • No record of geotechnical logging has been retained. • No record of geotechnical logging has been retained. • There is evidence of check and repeat sampling for the drilling and sampling conducted by Alcyone however detail record for the Hornet prospect have not been sighted or analysed. <u>Harrier:</u> • 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. • Core was cut with diamond saw and one half sampled with one half retained. • The core size is appropriate at NQ and NQ2 sized core. • 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.

Criteria	JORC Code ex Figuration	Commentary
		Hawker: • Details of laboratory analysis, quality assurance and quality control are not known, however the work was conducted in 2010 by a respected ASX listed company under the supervision of competent persons. • Details of subsampling, splitting at time of sample collection is not known, however the work was conducted in 2010 by a respected ASX listed company under the supervision of competent persons. • All drilling intervals are sampled.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	Hornet: • 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. • 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. • Analysis was conducted and a commercial external commercial laboratory accredited to Australian standard. Harrier: • The following refers to Macmin and Alcyone drill programmes only: • 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. • 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. • Analysis was conducted and a commercial external commercial laboratory accredited to Australian standard. Hawker: • All samples were analysed at laboratory accredited to Australian standards. • Details of laboratory analysis, quality assurance and quality control are not known, however the work was conducted in 2010 by a respected ASX listed company under

Criteria	JORC Code ex Figuration	Commentary
		the supervision of competent persons.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	<u>Hornet:</u> • No sample verification has occurred. • No twin holes were drilled. • Documentation of data was sufficient to provide an exploration target level of reporting. • No adjustments were made to assay data. • Collar positions have been partially checked in the field visit conducted by the competent person. <u>Harrier:</u> • No sample verification has occurred. • A field inspection indicated several twin drill holes are present and review of the results show of twin are well re-produced. • 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. • Collar positions have been partially checked in the field visit conducted by the competent person. • No adjustments were made to assay data. <u>Hawker:</u> • No sample verification has occurred. • No twin holes were drilled. • Documentation of data was sufficient to provide an exploration target level of reporting. • No adjustments were made to assay data.
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	<u>Hornet:</u> • DGPS was used to locate and pick up collars and other workings. • Grid system was MGA94_56S. • No information has been sighted regarding the quality of topography data. • Down hole surveys were conducted by down hole camera at regular intervals (30 m down-hole) for the Alcyone RC and diamond campaigns. <u>Harrier:</u> • Drilling completed in 1971 does not have accurate surveys and has not been used

Criteria	JORC Code ex Figuration	Commentary
		in evaluation. • Collars have been sighted in the field by the competent person and checked against and no issues have been found. • Collars were located using GPS and Survey. • 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. • Grid system was AGD66/Zone 56J and AGD84/Zone 56J. <u>Hawker:</u> • Collars were located using GPS and Survey.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	<u>Hornet:</u> • Angled RAB drill holes on 25m by 50m spaced lines over 1.6 km strike length. • Mineralisation is discontinuous and interpretation is complex and further exploration is required. <u>Harrier:</u> • 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. • Sample compositing was applied around geological boundaries to the nominal 1m length that most sample lengths were applied. <u>Hawker:</u> • Data spacing is close with a reasonable distribution to warrant the level of classification. • The results are at an early stage of exploration and continuity of mineralisation or connection to old mine workings has not yet been established.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key*	<u>Hornet:</u> • Drill holes have generally been across the dip of the orebody with rare exceptions down dip. The samples have been taken down hole limiting to geological structure and has no apparent bias as the mineralisation is interpreted to be sub-vertical.

Criteria	JORC Code ex Figuration	Commentary
	mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Harrier: • 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. • Drill testing is insufficient at this stage to determine the orientation of the mineralisation with high confidence. • No sample security has been reviewed. Hawker: • 3 Drill holes have been across the dip of the orebody with 5drilled down dip. The samples have been taken down hole limiting to geological structure and has no apparent bias. • The results are at an early stage of exploration and down dip and along strike positions are as yet untested by drilling.
Sample security	• *The measures taken to ensure sample security.*	• No evidence of sample security has been reviewed.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits review.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code ex Figuration	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	• EPM 11455 (for all minerals apart from coal) valid till 31-Mar-21 (Hawker) • EPM 8854 (for all minerals apart from coal) valid till 07-Jul-21 (Hornet and Harrier) • All tenements are in good standing.

Criteria	JORC Code ex Figuration	Commentary
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	<u>Hornet:</u> • MRV has not conducted any exploration apart from a geological review and a site visit by the Competent Person. • Three main phases of exploration and historic mine production has been conducted. <u>Harrier:</u> • MRV has not conducted any exploration apart from a geological review and a site visit by the Competent Person. • The three main phases of exploration and historical mine production has been conducted. • 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. <u>Hawker:</u> • Alcyone Resources Ltd completed the exploration presented in the period 2000 to 2012. • Details regarding time period worked and production details of historical (old) mine workings are not known however it is likely to be circa 1920 and of limited tonnage.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Structurally controlled low sulphurisation, epithermal.

Drill hole Information	• *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:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not*
		<u>Hornet:</u>
		• The exploration results presented here are resent historical and have been previously reported by the previous owners who conducted the exploration. As such the listing of details collar co- ordinates provides no purpose.
		• A map showing collar locations has been provided in the main body of Report No: MG140_Nornet_01.
		
		<u>Harrier:</u>
		• 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 co- ordinates provides no purpose. However, a map showing collar locations has been provided in the main body of Report No:

Criteria	JORC Code ex Figuration	Commentary
	Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	MG140_Harrier_01. <u>Hawker:</u> • The exploration results presented here are recent historic and have been previously reported by Alcyone Resources Ltd. • The listing of details collar co-ordinates provides no purpose. The exploration is also at a very early stage with only 8 RC drill holes completed.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	<u>Hornet and Harrier:</u> • According to previous announcements no recent aggregation of sample results has not been conducted. • Metal equivalents are not reported. <u>Hawker:</u> • Results are reported above a 0.1% copper and minimum two-meter width. • Copper is generally associated with silver and silver grades are averaged where it occurs with copper. Silver is not reported above a threshold, only the copper threshold is considered. For simplicity, copper is assumed to be the primary commodity of interest, although it is likely silver will be important. • Copper and silver grades are reported as simple arithmetic average and no length weighing is required as all sample lengths are equal (1m). • No equivalents are considered and metal concentration (grade) is reported and recorded in the sample dataset provided.
Relationship between mineralisation widths and intercept lengths	• *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 (e.g. 'down hole length, true width not known').*	<u>Hornet:</u> • The mineralized 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 western sides. • All depths and intervals are downhole depths. <u>Harrier:</u> • 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.

Criteria	JORC Code ex Figuration	Commentary
		Hawker: • The relationship between the orientation of the mineralisation and orientation of the drill holes is yet to be determined as the prospect at an early stage of exploration. However, the mineralisation is likely sub-vertical and therefore down-hole intervals are likely not to vary significantly from true widths.
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 Figure view of drill hole collar locations and appropriate sectional views.*	• Drill location maps have been released by previous explorers.
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.*	• Report is based on previous announcements. Checking and re logging of the 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.*	Hornet: • The previous holders Alcyone conducted a ground-based Sub Audio Magnetics (SAM) of the licence which has advanced geological understanding of the prospect. Harrier: • All exploration has been detailed in the four campaigns - historical mining, Qld government's drilling, Macmin drilling and Alcyone drilling. Hawker: • The prospect is at an early stage with only surface soils sample and first pass RC drill testing. • The competent person has visited the area in general, but landholders have not yet granted access to the precise location.
Further work	• *The nature and scale of Figurened further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*	• Not applicable for this report.

Criteria	JORC Code ex Figuration	Commentary
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	