

## MOUNT BIRNIE

# Spectacular historical drill results unearthed - 11.7 m @ 7.1 % copper

Carnaby Resources Ltd (ASX: CNB) ('Carnaby' or 'Company') is pleased to announce the unearthing of historical diamond drill results from the Mount Birnie prospect located only 4 km north of the 100% owned Tick Hill gold deposit in the Mt Isa region of Queensland, Australia.

### Highlights

- **Over 50 years ago, diamond drilling at Mount Birnie intersected significant copper mineralisation including the following results;**

**DDH03      11.7 m @ 7.1 % Copper from 84.1 m**

**DDH06      13.0 m @ 3.3 % Copper from 172.8 m  
inc 4.1 m @ 8.6 % Copper from 181.6 m**

**DDH10      4.2 m @ 3.9 % Copper from 176.9 m**

- **The mineralisation is open and is located within a 4 km long copper-gold surface geochemical anomaly hosting numerous historical workings.**
- **The historical diamond drilling was not routinely assayed for gold - recent sampling of mullock dumps has demonstrated gold grades of up to 6.5 g/t gold, showing a strong association with the copper mineralisation.**
- **Remarkably no reported drilling has been identified in the 50 years since these holes were drilled even though Mount Birnie is only 4 km north of the 100% owned Tick Hill gold deposit.**
- **The historical drill results are from sampling of selected highly mineralised intervals only. Other adjoining intervals recorded disseminated chalcopyrite in logging suggesting the potential for a larger Iron Oxide copper-gold (IOCG) style deposit.**
- **Sub Audio Magnetic (SAM) survey has just been completed over Mount Birnie and Tick Hill. Carnaby maiden drilling campaign to commence in late June targeting Tick Hill and Mount Birnie.**

### Fast Facts

Shares on Issue 96M

Market Cap (@ 13 cents) \$12.5M

Cash \$4.7M<sup>1</sup>

<sup>1</sup>As of 31 March 2019 adj. for \$1.6M placement

### Board and Management

Peter Bowler, Non-Exec Chairman

Rob Watkins, Managing Director

Neil Inwood, Non-Exec Director

Justin Tremain, Non-Exec Director

Paul Payne, Non-Exec Director

Aaron Bertolatti, Company Secretary

### Company Highlights

- Proven and highly credentialled management team
- 100% ownership of the Tick Hill Gold Project (granted ML's) in Qld, historically one of Australia highest grade and most profitable gold mines
- Past production of 511 koz at 22 g/t gold
- 323 km<sup>2</sup> surrounding exploration package containing numerous gold and copper targets
- Tight capital structure and strong cash position

### Registered Office

78 Churchill Avenue Subiaco Western  
Australia 6008

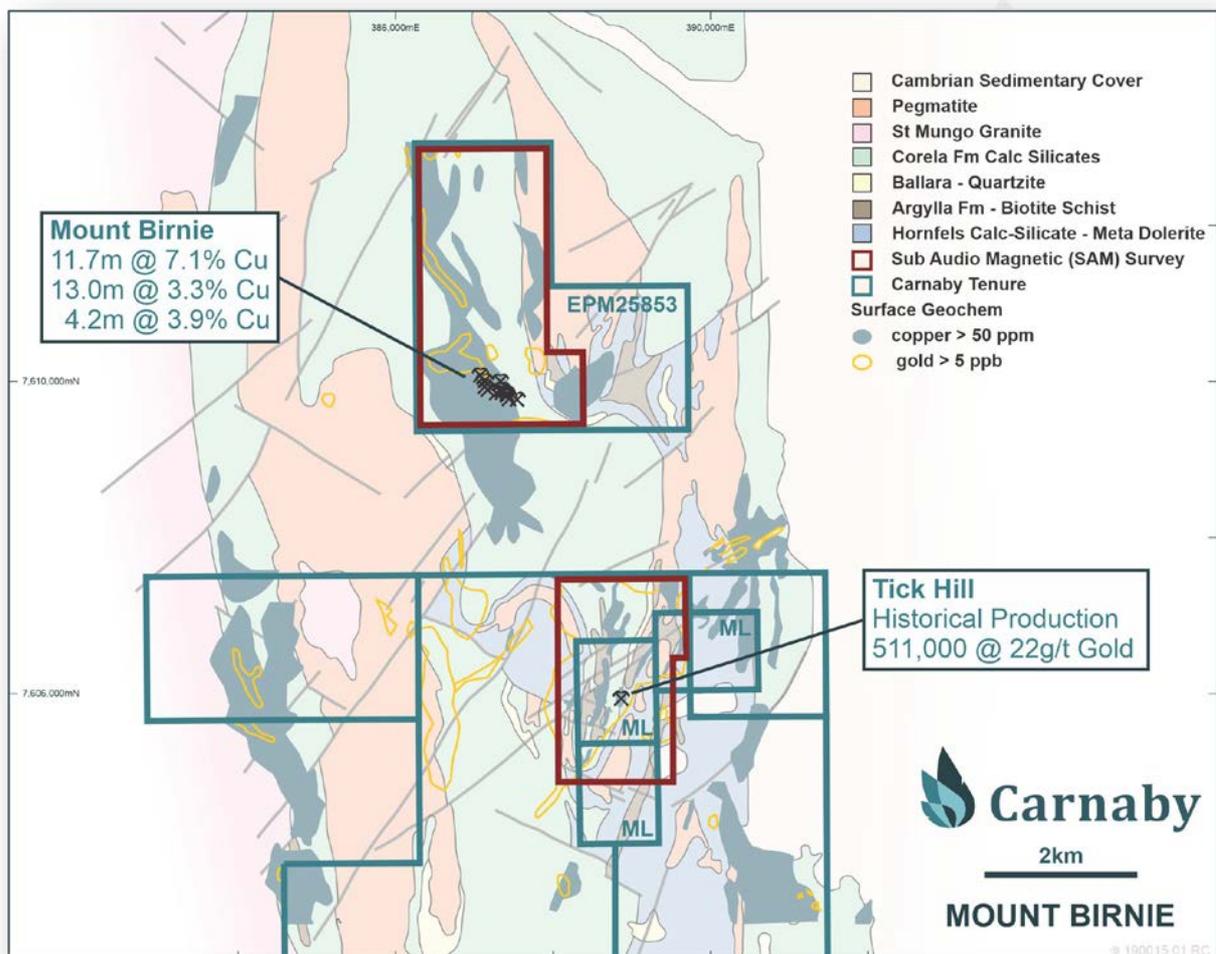
T: +61 8 9320 2320

[www.carnabyresources.com.au](http://www.carnabyresources.com.au)

The Company's Managing Director, Rob Watkins commented:

**“The unearthing of these spectacular historical drill results located only 4 km north of one of Australia’s highest-grade gold rich IOCG deposits at the 100% owned Tick Hill deposit is further early vindication of our belief in the prospectivity of the extensive land holding that we have established at Tick Hill.**

**We look forward to following up these results as soon as possible as part of Carnaby’s maiden drilling program targeting Tick Hill and Mount Birnie, which is due to commence in late June. We are also highly encouraged by the SAM survey over Tick Hill and Mount Birnie which has just been completed. Results from the SAM surveys are being compiled and will be released shortly.”**



**Figure 1: Tick Hill regional geology plan showing location of Mount Birnie and location of recently completed SAM surveys.**

## MOUNT BIRNIE

Recently identified exploration reports show that in 1967 Longreach Minerals Pty Ltd drilled 10, wide spaced, diamond holes at the Mount Birnie copper workings located 4 km north of Tick Hill within EPM25853 (Figure 1). The drilling intersected significant copper mineralisation (Table 1) associated with an ENE striking shear and hosted by chalcopyrite and calcite gangue within amphibolitic rocks. The mineralised zones are subvertical dipping and remain open at depth and along strike (Figures 2-4).

Historical mining records for Mount Birnie are scarce, however limited information indicates the mine was worked during WWI where two small shafts were sunk to approximately 24 m and 36 m. Mullock from the dumps has recorded assays of up to 6.5 g/t gold and 19.2% copper (see ASX release 16 May, 2019). Numerous other small pits are also present in the area indicating widespread copper occurrences (Figure 2).

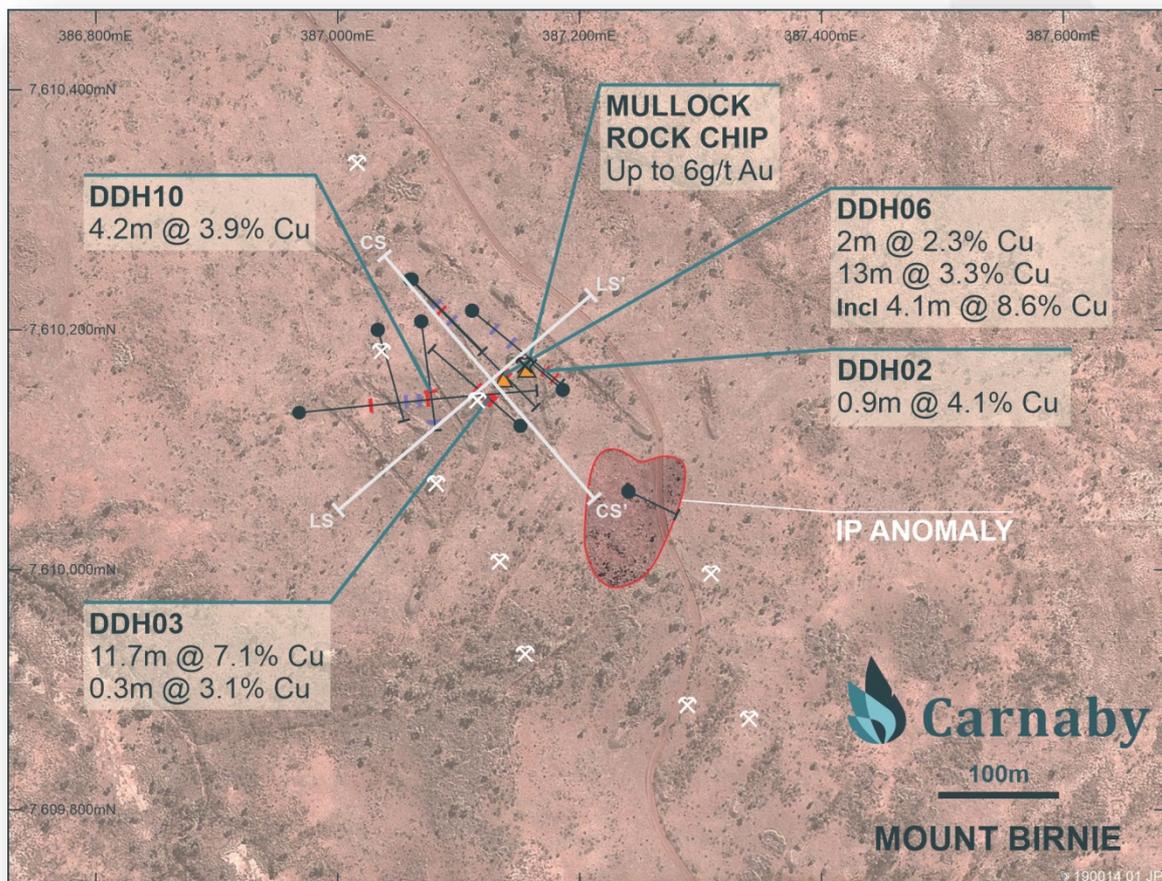
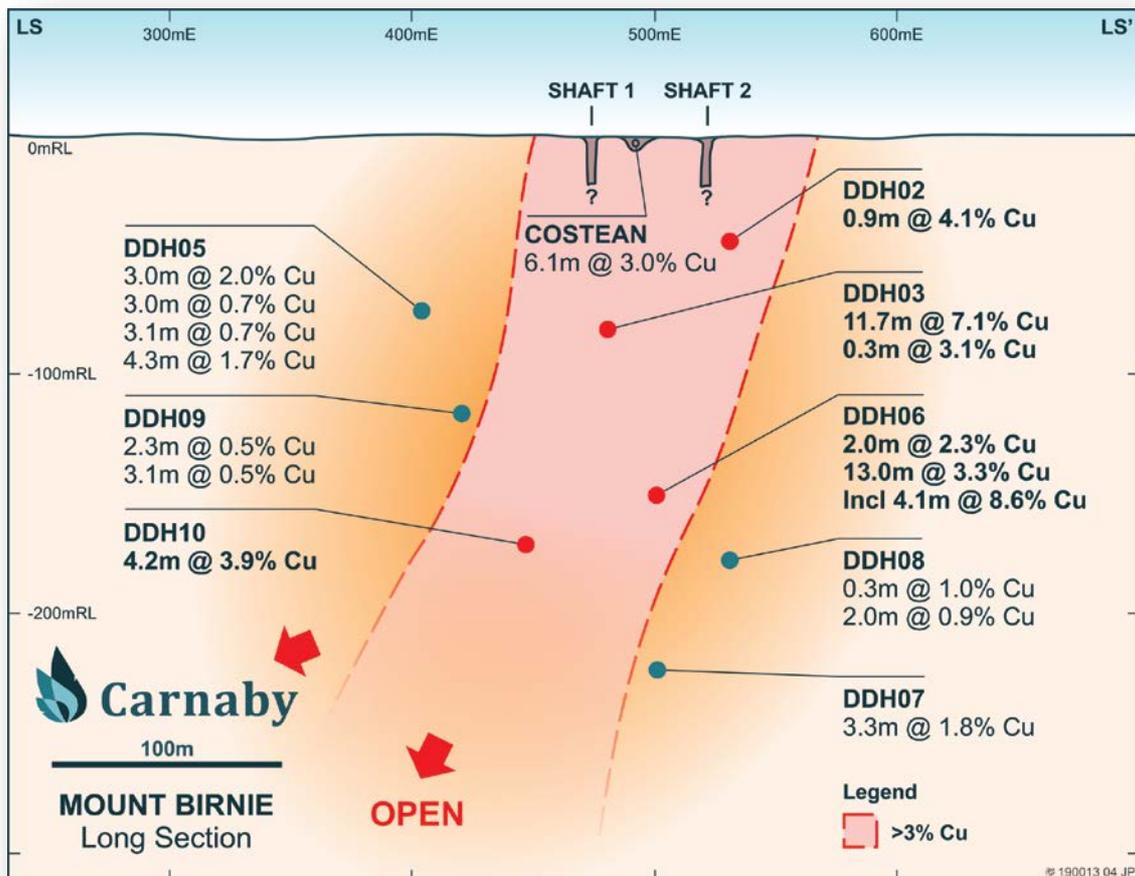


Figure 2: Mount Birnie plan showing historical drill results.



**Figure 3: Mount Birnie longsection showing location of historical results.**

Remarkably no recorded follow up drilling has been reported from Mount Birnie since this initial drilling in 1967. The area was held under a mining lease until 1998.

At surface the mineralisation is in the form of secondary copper (malachite) and historical reports also indicate the presence of chalcocite and bornite with deeper primary mineralisation in the form of chalcopyrite.

The depth of oxide copper mineralisation is unknown however a costean between the shafts recorded a true width result of 6.1 m @ 3.0 % copper oxide at surface (Figure 3 & 4).

The historical drill results were selectively sampled for intervals of visual high grade copper mineralisation and did not systematically sample the lower grade sections of core even though disseminated copper mineralisation was noted in logs. Likewise none of the high grade copper intervals were assayed for gold even though sampling of mullock indicates a strong association between copper and gold of up to 19.2% copper and 6.49 g/t gold and 25.9 g/t silver. Copper and gold mineralisation is associated with secondary malachite and azurite and primary

sulphides include disseminated chalcopyrite hosted in a calcite dominant gangue. Significant IOCG style alteration appears to be associated with the mineralisation and includes magnetite and k feldspar.

A historical IP survey was also completed over 50 years ago, with a recorded IP anomaly approximately 150 m to the south (Figure 2). A single diamond hole was drilled to test this anomaly and intersected 133 m of weakly disseminated pyrite and chalcopyrite with few selected assays recording up to 0.6% copper, gold was not assayed for.

The Mount Birnie workings are located within a 4 km long NNW trending surface geochemical copper-gold anomaly (Figure 1) part of the broader IOCG belt that hosts both Tick Hill 4 km's to the south and Trekelano 14 km to the north. Whilst Tick Hill was mined solely for high grade gold, it is important to note that the mineralisation does have sub-economic levels of copper and cobalt associated with the deposit and is considered to be an epigenetic end member of the IOCG style of mineralisation that occurs within the belt.

The Mount Birnie IOCG target represents a highly prospective key focus area for immediate follow up and will form part of Carnaby's upcoming maiden drill program to commence in late June.

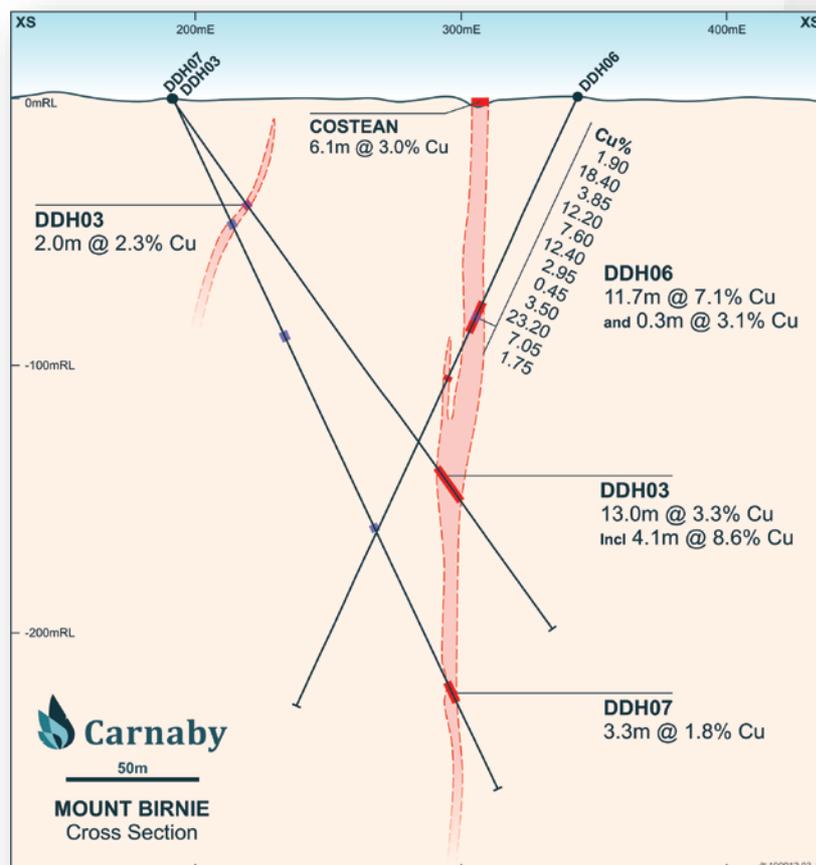


Figure 3: Mount Birnie cross section showing historical drill results.

Location	Hole ID	Easting	Northing	Azimuth	Dip	Depth From	Interval	Cu (%)
Mount Birnie	DDH01	387231	7610070	90	76	80.5	1.8	0.6
Mount Birnie	DDH02	387186	7610150	309	65	49.1	<b>0.9</b>	<b>4.1</b>
Mount Birnie	DDH03	387151	7610120	310	65	84.1 115.4	<b>11.7</b> <b>0.3</b>	<b>7.1</b> <b>3.1</b>
Mount Birnie	DDH04	387151	7610120	310	77			<b>NSI</b>
Mount Birnie	DDH05	386968	7610131	84	50	93.4 128.5 152.8 168.3	3 3 3.1 <b>4.3</b>	2 0.7 0.7 <b>1.7</b>
Mount Birnie	DDH06	387060	7610242	137	54	47.6 172.8 Inc 181.6	<b>2.1</b> <b>13</b> <b>Inc 4.1</b>	<b>2.2</b> <b>3.3</b> <b>8.6</b>
Mount Birnie	DDH07	387061	7610242	137	64.5	243.6	<b>3.3</b>	<b>1.8</b>
Mount Birnie	DDH08	387111	7610216	131	63.5	178 194.5	0.3 2	1 0.9
Mount Birnie	DDH09	387033	7610200	166	61.5	29.9 33.5	2.3 3.1	0.5 0.5
Mount Birnie	DDH10	387069	7610207	172	70	56.1 176.9	3.1 <b>4.2</b>	0.7 <b>3.9</b>

**Table 1: Historical Diamond Drill Results.**

Detailed information on all aspects of the Company's projects can be found on the Company's website [www.carnabyresources.com.au](http://www.carnabyresources.com.au).

**For further information please contact:  
Robert Watkins, Managing Director  
(08) 9320 2320**

**Competent Persons Statement**

The information in this document that relates to exploration results is based upon information compiled by Mr Robert Watkins. Mr Watkins is a Director of the Company and a Member of the AUSIMM. Mr Watkins consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears. Mr Watkins has sufficient experience which

is relevant to the style of mineralisation and type of deposit under consideration and to the activity which is undertaken to qualify as a Competent Person as defined in the December 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code).

**Notes regarding reporting of Exploration Results in this announcement**

1 For full details of exploration results refer to ASX announcements on 12 March 2019. The Company is not aware of any new information or data that materially affects this information other than as specified in this announcement and the mentioned announcements. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources, Exploration Target or Ore Reserves that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements. The Company confirms that the information in the announcement relating to exploration results is based upon, and fairly represents the information and supporting documentation prepared by the named Competent Persons.

## Appendix 1 | JORC Code, 2012 Edition | 'Table 1' Report

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Sampling from diamond core was from selected geological intervals of varying length. Core has half core sampled. No record of sample preparation or assay technique was provided in the historical report however reasonable to assume it was from an industry standard</li> <li>Historical drill holes are understood to have been undertaken by diamond drilling.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Records indicated that diamond core samples were taken at St Mingo – hole diameter of BQ and NQ size were identified on site</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Not recorded</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> </ul>	<ul style="list-style-type: none"> <li>Historical drill holes were logged geologically.</li> <li>Recent hand samples were given a geological description</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Remaining core has been observed at site and half core or whole core sampling was most likely completed, although historical reports do not specifically note the method.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>It is unknown what QAQC procedures were used by the previous workers. It is reasonable to assume that they used industry acceptable procedures for that time.</li> <li>The historical results have been recorded to 2 decimal places for copper and therefore are likely to have been assayed at an industry standard laboratory</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Results have been collated from original company reports</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Sample locations were obtained using a Garmin GPS in UTM MGA94 mode</li> <li>Multiple historical drill hole collars were identified in the field and showed a &lt;10m distance shift from plotted coordinates – which is considered appropriate for the reporting of these results.</li> <li>Down-hole surveys were not measured by Longreach</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological</li> </ul>	<p>Historical drillhole collars were drilled 30- to 100- metres apart</p>

Criteria	JORC Code explanation	Commentary
	<p>and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</p> <ul style="list-style-type: none"> <li>• Whether sample compositing has been applied.</li> </ul>	
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>• Hole orientation to mineralisation is still being assessed. Most holes appear to have been at right-angles, or close, to the main mineralisation. Drilling appears to have been completed at good angle to the mineralisation.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• Historical drill samples were controlled by Longreach personal at the time</li> <li>• Not recorded in historical reports</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>• Not conducted</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	Explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>• 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.</li> <li>• The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>• The Queensland projects comprise the Tick Hill Mine Project Region (105.5km<sup>2</sup>) and the Regional Leases (217.3km<sup>2</sup>). The projects comprise of three Mining Leases at Tick Hill (3.9km<sup>2</sup> - 100% interest acquired from Diatreme and Superior – ML's 7094, 7096 and 7097), twelve surrounding and regional tenements (293.3km<sup>2</sup> - 82.5% interest to be acquired from Syndicated – EPM's 9083, 11013, 14366, 14369, 17637, 18980, 19008, 25435, 25439, 25853, 25972.); and two additional tenements from Carnaby associated entities (25.6km<sup>2</sup> – 100% beneficial interest which will become a wholly owned subsidiary of Berkut – EMP26651 and 27101). The historical drill results are from EPM 25853</li> <li>• Beneficial interest in the Western Australian tenements (969.3km<sup>2</sup>) is held by Carnaby which will become a wholly owned subsidiary of Berkut (E69/3510, E69/3509 and E38/3289).</li> <li>• The Tick Hill ML's are subject to a royalty on gold production, to a 3<sup>rd</sup> party, using the following formula: Production Royalty = Percent Royalty Rate X Recovered Gold / 100. The Percent Royalty Rate (below \$5M in total royalty) = (Annual Recovered Grade (g/t) / 5) – 1. The Percent Royalty Rate (above \$5M in total royalty) = (Annual Recovered Grade (g/t) / 10) – 0.5. For gold produced from the tailings dam, the Percentage Royalty Rate will be 10% for gold recovered above 1g/t Au.</li> <li>• The 3<sup>rd</sup> party royalty holder for Tick Hill ML's has the right to purchase any copper ore or concentrates on commercial terms.</li> </ul>
Acknowledgment and appraisal of exploration by other parties.	<ul style="list-style-type: none"> <li>• Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>• There has been exploration work conducted over the Queensland project regions for over a century by previous explorers. The project comes with significant geoscientific information which covers the tenements and general region, including: a compiled database of 6658 drill hole (exploration and near-mine), 60,300 drilling assays and over 50,000 soils and stream sediment geochemistry results. This previous is understood to have been undertaken to an industry accepted standard and will be assessed</li> </ul>

Criteria	Explanation	Commentary
Geology	<ul style="list-style-type: none"> <li>• Deposit type, geological setting and style of mineralisation.</li> </ul>	<p>in further detail as the projects are developed. Longreach Minerals Pty Ltd completed the diamond drilling in 1967.</p> <ul style="list-style-type: none"> <li>• The Tick Hill project area is located in the Mary Kathleen domain of the eastern Fold Belt, Mount Isa Inlier. The Eastern Fold Belt is well known for copper, gold and copper-gold deposits; generally considered variants of IOCG deposits. The region hosts several long-lived mines and numerous historical workings. Deposits are structurally controlled, forming proximal to district-scale structures which are observable in mapped geology and geophysical images. Local controls on the distribution of mineralisation at the prospect scale can be more variable and is understood to be dependent on lithological domains present at the local-scale, and orientation with respect to structures and the stress-field during D3/D4 deformation, associated with mineralisation.</li> <li>• Consolidation of the ground position around the mining centres of Tick Hill and Duchess and planned structural geology analysis enables Berkut to effectively explore the area for gold and copper-gold deposits.</li> <li>• The Malmac Project in Western Australia is within the Palaeoproterocic Earaheedy basin abutting the northern part of the Yilgarn Craton. All projects are perspective for orogenic gold while the Malmac Project is also considered perspective for base metal mineralisation.</li> <li>• The Throssel Project in Western Australia is positioned within the Archaean granite greenstone terrane of the Eastern Goldfields which forms part of the Yilgarn Craton.</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>○ easting and northing of the drill hole collar</li> <li>○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>○ dip and azimuth of the hole</li> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> </ul> </li> </ul> <p>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.</p>	<ul style="list-style-type: none"> <li>• Included in report Refer to the report and table 1.</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>• Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• Significant intercepts above 0.5 % Cu have been reported</li> <li>• Metal equivalents have not been used.</li> </ul>

Criteria	Explanation	Commentary
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>• The reported intercepts are interpreted to have intersected the mineralisation from between 90degrees to 45 degrees; and may not necessarily represent the true thickness of the mineralised zones.</li> <li>• The results related to rock chip samples and a character samples of specific styles of mineralisation in an area. They may not be representative of broader mineralisation.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>• See the body of the announcement.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• The exploration results should be considered indicative of mineralisation styles in the region.</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• As discussed in the announcement</li> </ul>
Further work	<ul style="list-style-type: none"> <li>• The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>• Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>• Planned exploration works are detailed in the announcement.</li> </ul>