

# TICK HILL GOLD PROJECT High Grade Gold Resource grows to 65,000 ounces

Carnaby Resources Limited (ASX: CNB) ('Carnaby' or 'Company') is pleased to announce a new high grade gold resource at its 100% owned Tick Hill gold deposit.

#### Highlights

• Total unmined, in situ, high grade Indicated and Inferred Resource for Tick Hill reported at a 0.5 g/t Au cut-off is:

Indicated	-	91,000 t @ 5.15 g/t gold for 15,000 ounces
Inferred	-	117,000 t @ 7.50 g/t gold for 28,100 ounces
Total	-	208.000 t @ 6.47 a/t aold for 43.200 ounces

• This is in an addition to the existing Tailings Dam Indicated stockpile Resource which has previously been the subject to a positive detailed scoping study at significantly lower gold prices:

Tailings Dam - 630,000 t @ 1.08 g/t gold for 21,800 ounces

 Scoping level studies will commence immediately on a combined Mineral Resource for the Tick Hill Gold Project at a time of record Australian dollar gold prices of ~A\$2,300 per ounce:

#### Total Resource - <u>838,000 t @ 2.41 g/t gold for 65,000 ounces</u>

- The high grade in situ Resource is located beneath the 70 m deep Tick Hill open pit which produced 180,000 oz @ 18.1 g/t gold and adjacent to 135 m of underground development that produced a further 331,000 oz @ 26 g/t gold.
- The Tick Hill orebody was an exceptional gold deposit that historically produced a large positive reconciliation during mining and processing.
- Scoping level studies will evaluate the potential for economic extraction from an open pit cutback and / or re-establishment of the underground infrastructure. Preliminary discussions regarding low cost processing options will concurrently be evaluated.

ASX Announcement 29 January 2020

Fast Facts Shares on Issue 96M Market Cap (@ 7.2 cents) \$6.9M Cash \$3.2M<sup>1</sup> <sup>7</sup>As of 30 September 2019

Board and Management Peter Bowler, Non-Exec Chairman Rob Watkins, Managing Director Justin Tremain, Non-Exec Director Paul Payne, Non-Exec Director Ben Larkin, 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

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The Company's Managing Director, Rob Watkins commented:

"The release of Carnaby's maiden in situ Mineral Resource at Tick Hill is a milestone achievement and we look forward to seeing the results of the initiated mining and processing studies in the near term. It's important to understand that due to the prevailing low gold price environment (~\$U350/oz) at the time of historical mining, a majority of the Hangingwall lode and some sections of the Main Lode were not mined, especially the southern strike extent of the Main Lode directly underneath the open pit. We are genuinely excited about the all round potential at Tick Hill at what was historically one of Australia's highest grade and most profitable gold deposits."



Figure 1: Tick Hill 3D view of resource wireframes and stoped areas looking northeast.



### TICK HILL MAIN LODE RESOURCE

The Tick Hill Main Lode historically produced a bulk of the 511,000 ozs @ 22 g/t gold mined from the open pit and underground in the early 1990's (Figure 1). The Main Lode averaged approximately 10 m width over an average strike length of 90 m.

Due to the prevailing low gold price environment (~\$U350/oz) at the time of historical mining, some sections of the Main Lode were not mined, especially the southern strike extent of the Main Lode directly underneath the open pit.

Drilling in the second half of 2019 by Carnaby intersected high grade gold mineralisation in the Main Lode and importantly confirmed that the high grade southern extent of the Main Lode beneath the open pit had not been mined previously (see ASX releases 1 October 2019 & 26 November 2019). Approximate true width drill results from within the Main Lode resource include;

CBC005	6 m @ 8.5 g/t gold including 1 m @ 41.9 g/t gold
CBD023	3 m @ 2.9 g/t gold including 1 m @ 4.8 g/t gold
U8401	12 m @ 9.1 g/t gold including 1 m @ 94.6 g/t gold
U8503	7 m @ 7.6 g/t gold including 3 m @ 16.9 g/t gold
TH047RD	2 m @ 104.1 g/t gold including 1 m @ 207.8 g/t gold
U8703	23 m @ 2.1 g/t gold including 1 m @ 16.8 g/t gold
U8701	14 m @ 7.47 g/t gold including 5 m @ 18.7 g/t gold
TH002D	4 m @ 6.18 g/t gold
U8402	5 m @ 1.46 g/t gold and 6 m @ 2.32 g/t gold

In addition to the unmined sections of the Main Lode, an unmined skin of mineralisation is present at several locations of the stoped areas and has been mostly included as Inferred Mineral Resource. At the time of historical mining of the underground, stope lower cut-off grade was 5 g/t gold therefore considerable high-grade gold mineralisation remains in certain areas.

Total Tick Hill Main Lode Indicated and Inferred Mineral Resources was estimated using Ordinary Kriging and reported at a 0.5 g/t gold lower cut off to be;

154,000 t @ 7.02 g/t gold for 34,700 ounces.





Figure 2: Tick Hill Main Lode "lodestone" intersected in Carnaby drill hole CBD023 directly beneath the open pit, assayed 4.84 g/t gold

#### TICK HILL HANGINGWALL LODE RESOURCE

The Tick Hill Hangingwall Lode is an ancillary lode, sub-parallel to the wider Main Lode that was mined out in the early 1990's producing a bulk of the 511,000 ozs @ 22 g/t gold (Figure 1). The Continuity of the Hangingwall Lode is excellent, averaging approximately 3 m true width and located on the contact between the main Lodestone and Upper Quartzite units approximately 5 m to 15 m away from the Main Lode.

Drilling in the second half of 2019 by Carnaby intersected high grade gold mineralisation in the Hangingwall Lode and importantly confirmed that a majority of the Hangingwall Lode had not been mined previously (see ASX releases 1 October 2019 & 26 November 2019). Approximate true width drill results from within the Hangingwall Lode Resource include:

CBC003	2 m @ 17.9 g/t gold
CBC024	3 m @ 9.78 g/t gold
U9001	2 m @ 15.4 g/t gold
U9005	1 m @ 92.0 g/t gold
TH007RD	1.5 m @ 70.5 g/t gold
TH085RD	2 m @ 10.1 g/t gold

The Hangingwall Lode Resource is located immediately below the Tick Hill open pit covering an area of approximately 80 m strike by 80 m vertical extent. Drill spacing within the resource area is at approximately 10 m x 10 m spacing. Total Hangingwall Lode Indicated and Inferred Mineral Resource was estimated using Ordinary Kriging and reported at 0.5 g/t gold lower cut off to be;

#### 54,000 t @ 4.90 g/t gold for 8,500 ounces.



### TICK HILL PROJECT TOTAL MINERAL RESOURCE

Total Indicated and Inferred Mineral Resources at Tick Hill from the Main and Hangingwall Lodes and including the existing Tailings Dam Resource (refer ASX announcement 12 March 2019) are presented in the following table with supporting detailed information provided in the attached JORC table 1.

Tick Hill	Indicated		Inferred		Total		cut- off			
	tonnes	g/t	ounces	tonnes	g/t	ounces	tonnes	g/t	ounces	g/t
Tick Hill Main Lode	58,000	5.5	10,300	96,000	7.93	24,500	154,000	7.02	34,700	0.5
Tick Hill Hangingwall Lode	33,000	4.53	4,800	21,000	5.51	3,700	54,000	4.9	8,500	0.5
Tick Hill Deposit Total	91,000	5.15	15,000	117,000	7.5	28,100	208,000	6.47	43,200	0.5
Tailings Dam West Paddock	345,000	0.8	8,800				345,000	0.8	8,800	0.5
Tailings Dam East Paddock	285,000	1.42	13,000				285,000	1.42	13,000	0.5
Tailings Dam Total	630,000	1.08	21,800				630,000	1.08	21,800	0.5
Tick Hill Total	721,000	1.59	36,800	117,000	7.47	28,100	838,000	2.41	65,000	0.5

### **SCOPING STUDIES**

The potential for a low cost development scenario of an open pit cutback and / or refurbishment of existing underground workings to extract and toll treat this Resource potentially in conjunction with re-treatment of the 22,000 oz tailings dam Mineral Resource is being assessed.

The Mt Isa district hosts several gold and copper-gold processing plants within trucking distance of Tick Hill and assessment of the viability to toll treat will form part of the scoping study.

### MINERAL RESOURCE STATEMENT OVERVIEW

### **Geology and Geological Interpretation**

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 Tick Hill deposit is hosted within a felsic "lodestone" unit (Figure 2) which dips at 50 degrees to the west. Visible gold is commonly seen in the higher grades sections of the deposit. The Main Lode is located in the core of the host Lodestone unit while the Hangingwall lode is located on the contact of the Lodestone host unit and a hangingwall Quartzite.

The deposit has been interpreted on 10 m sections by reviewing both the geological logging and grades. The confidence in the geological interpretation is considered to be good, with highly continuous mineralised structures defined by good quality drilling.

#### **Drilling Techniques**

The Tick Hill Deposit features drilling on an approximate 10 m drill spacing over the core of the mined mineralisation. Significant amounts of historical RC and diamond drilling exist in the vicinity of the Tick Hill Gold Mine.

All recent RC holes were completed using a 5.5" face sampling bit. Diamond tails were completed on 3 holes using HQ sized core. Recent core was orientated using Boart Longyear True Core. No database recovery information was available for historic drilling. 20 ore zone intervals (Main Lode and Hanging Wall Lode) were examined from 10 historic diamond holes spanning the Tick Hill resource. No significant issues were observed with respect to core recovery. For recent RC drilling, no significant recovery issues for samples was observed for either drill core or RC. For the recent diamond hole both drilled and recovered lengths per run were recorded. No loss of core was observed with the ground being extremely competent.

#### Sampling and Sub-sampling Techniques

Historical drill holes at Tick Hill have been undertaken by diamond drilling and RC with shallow exploration drilling undertaken by RAB. Historical diamond core at Tick Hill is understood to have been sampled halved (diamond saw cut – surface drill holes) or whole/halved (underground drill holes). Previous explorers (e.g. Carpentaria Gold Pty Ltd – a subsidiary of MIM Holdings Ltd) and are believed to have undertaken industry standard protocols at the time. MIM Holdings drill samples used analysis by AAS for base metals and 50 g fire assay for gold from Pilbara Laboratories in Townsville. The exploration data is considered suitable for current reporting purposes.

Recent RC samples were collected via a Jones splitter mounted below the cyclone. A 2-3 kg sample was collected from each 1 m interval. Samples were pulverised to obtain a 30 g charge for aqua regia digest and AAS analysis of Gold. Infill pit drilling was carried out at an ore-grade detection level for Gold.

Recent diamond core was half sampled. Samples were pulverised to obtain a 30 g charge for aqua regia digest and AAS analysis of Gold.



#### Sample Analysis Method

Recent RC samples are all riffle split dry on 1m intervals at the cyclone to obtain a 2-3 kg sample. Target zones and zones of interest have been sampled on 1 m intervals by taking the riffle split bag.

Recent HQ diamond core has been half sawn and sampled mainly on 1 m intervals. Nonmineralised or low interest sections of the hole have been sampled using quarter core on 2 m intervals.

No original historical records of subsampling have been found for drilling. Database records indicate that a nominal 1 m sampling regime was used in the Tick Hill Mine Corridor, with localised smaller intervals (to 30 cm) based upon lithology.

No historic detailed records of assaying QAQC is available and it is not possible to comment absolutely on the quality of assaying work undertaken. The work carried out by previous workers used reputable assay laboratories within the region and it is reasonable to assume that the assay results stated in the exploration reports are indicative of mineralisation styles in the area.

The recent infill RC programme has used ore grade standards for gold. Blanks have been inserted by Carnaby staff approximately every 150 samples and standards (CRMs) are inserted every 50 samples. Standard CRM identification was removed prior to submitting to the external lab. Results of the standards and blanks were reviewed against the CRM reference sheets to check they were within tolerance.

Historic laboratory reports for assaying services have been sighted for a small number of drilling and geochemical results. Spot checks have been made to original company reports/diagrams for selected anomalous soils geochemical results and significant drill hole intercepts.

Construction of a webhosted Maxgeo SQL database is currently in progress to house all historic and new records. Recent results have been reported directly from lab reports and sample sheets collated in excel. Results reported below the detection limit have been stored in the database as half the detection limit – e.g. <0.001 ppm stored as 0.0005 ppm.

#### **Estimation Methodology**

Using parameters derived from modelled variograms, Ordinary Kriging (OK) was used to estimate average block grades within the deposit. Surpac software was used for the estimation. A separate high grade core was modelled in the void areas, at a nominal 40 g/t cut-off and top cut to the 97.7th percentile of 755 g/t. The wireframes were applied as hard boundaries in the estimate.

The parent block dimensions used were 5m NS by 5m EW by 5m vertical with sub-cells of 0.625 m by 0.625 m by 0.625 m. The parent block size represents 50% of the drill hole spacing in the deposit area beneath the existing pit. Checks of the calculated resource grade against the underground production grade shows only minor differences indicating an appropriate estimation method and top cut strategy has been selected. Only Au was



interpolated into the block model. An orientated ellipsoid search was used to select data and was based on parameters derived from the variography.

An initial interpolation pass was used with a maximum range of 40 m which filled 98% of blocks. A second pass radius of 200 m filled the remaining 2% of the blocks.

A minimum of 3 samples and a maximum of 15 samples was used on the estimations of Main Lode and HW lode. For the very high grade core and minor narrow peripheral lodes, a minimum of 1 sample and a maximum of 15 samples were used in the estimation. The block size used in the model was based on drill sample spacing and lode orientation.

The deposit mineralisation was constrained by wireframes constructed using a nominal 0.5 g/t Au cut-off grade. The wireframes were applied as hard boundaries in the estimate. For validation, comparisons were made on a lode by lode basis by comparing composite grades to the block estimated grades.

#### **Mineral Resource Classification**

The resource was classified on the basis for the search ellipsoid determined from variography modelling of the main lode domain (ellipsoid dimensions = 40x22x3m). Blocks estimated within the range of the search ellipse were classified as Indicated. Blocks estimated on a broader pass to the limits of the lode wireframes were assigned an Inferred classification. A manual inferred re-classification was applied to the resource where there may be uncertainty over the quantity of material remaining immediately adjacent to old voids.

#### **Cut-off Grades**

Top cuts have been applied on a lode by lode basis, cut to the 97.7th percentile of the sample population. High grade cuts were applied composites modelled on wireframes using a 0.5 g/t nominal cut-off. These include 208 g/t for main lode and 129 g/t for hanging wall lode.

The Mineral Resource has been reported at a lower cut-off grade of 0.5 g/t gold which is considered appropriate for potentially open pittable mineralisation and underground extraction from existing decline and adjacent underground development.

#### Metallurgy

Processing was undertaken by previous operators at the project and good recoveries of 97% were reported from conventional cyanide leaching.

#### **Modifying Factors**

The deposit has previously been mined using selective open pit and underground mining methods. Portions of the Mineral Resource are considered to have sufficient grade and continuity to be considered for underground mining. No modifying factors were applied to the reported Mineral Resources. Parameters reflecting mining dilution, ore loss and metallurgical recoveries will be considered in a scoping study. The reported Mineral Resource Estimate has been depleted to account for existing open pit and underground mining.



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

#### **Competent Persons Statement**

The information in this document that relates to the Tick Deposit Mineral Resources is based upon information compiled by Mr Paul Tan. Mr Tan is a full time employee and security holder of the Company and a Member of the AUSIMM. Mr Tan consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears. Mr Tan 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).

The information in this document that relates to the Tailings Dam Mineral Resources is based upon information compiled by Mr Robert Watkins. Mr Watkins is a Director and security holder 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).

#### Disclaimer

References have been made in this announcement to certain ASX announcements, including references regarding exploration results and mineral resources. For full details, refer to said announcement on said date. 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(s) 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 announcement.

Detailed information on all aspects of the Company's projects can be found on the Company's website <u>www.carnabyresources.com.au</u>.

#### 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> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement</li> </ul>	<ul> <li>Historical drill holes at Tick Hill have been undertaken by diamond drilling and RC with shallow exploration drilling undertaken by RAB.</li> </ul>
	tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc).	<ul> <li>Historical diamond core at Tick Hill is understood to have been sampled halved (diamond saw cut – surface drill holes) or whole/halved (underground drill holes).</li> </ul>
	These examples should not be taken as	• Previous explorers (e.g. Carpentaria Gold Pty Ltd – a subsidiary



Criteria	JORC Code explanation	Commentary
	<ul> <li>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 (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>of MIM Holdings Ltd), Cullen Resources and Barrick were Australian domiciled companies and are believed to have undertaken industry standard protocols at the time.</li> <li>MIM Holdings drill samples used analysis by AAS for base metals and 50 g fire assay for gold from Pilbara Laboratories in Townsville.</li> <li>The exploration data is considered suitable for current reporting purposes, however further work would be required to verify the data suitable for inclusion in potential future project reviews of resource estimations.</li> <li>Recent RC samples were collected via a Jones splitter mounted below the cyclone. A 2-3 kg sample was collected from each 1m interval. Samples were pulverised to obtain a 30g charge for aqua regia digest and AAS analysis of Gold. Infill pit drilling was carried out at an ore-grade detection level for Gold. Samples from holes more distal from the pit have been analysed for trace level Gold using AAS and trace level Copper, Cobalt and Silver using the same digest and ICP-AES analysis.</li> <li>Recent diamond core was half sampled. Samples were pulverised to obtain a 30g charge for analysis of Gold.</li> </ul>
Drilling techniques	<ul> <li>Drill type (e.g. core, reverse circulation, openhole 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).</li> </ul>	<ul> <li>Historical drilling was reported to be primarily AC, RAB, and RC on regional projects; and significant amounts of RC and diamond drilling in the vicinity of the Tick Hill Gold Mine. Information pertaining to the type of drilling is recorded in a compiled database.</li> <li>All recent RC holes were completed using a 5.5" face sampling bit. Diamond tails were completed on 3 holes using HQ sized core.</li> <li>Recent core was orientated using Boart Longyear True Core.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>No database recovery information was available for historic drilling (e.g. drilled interval vs. core recovered).</li> <li>20 ore zone intervals (Main Lode and Hanging Wall Lode) were examined from 10 historic diamond holes spanning the Tick Hill resource. No significant issues were observed with respect to core recovery.</li> <li>For recent RC drilling, no significant recovery issues for samples was observed for either drill core or RC.</li> <li>For the recent diamond hole both drilled and recovered lengths per run were recorded. No loss of core was observed with the ground being extremely competent.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Records available indicate that logging completed by geologists formerly employed by various companies working on the Tick Hill Project, is at a level sufficient to generate maps, plans and sections found in company reports.</li> <li>488 out of 1,537 currently compiled drill holes &gt; 10 m deep have logging information available in a compiled database, further work is required to verify this data against original company reports; and to compile additional drill logs.</li> <li>Recent RC holes have been chip trayed (1 m intervals) and logged for lithology, weathering, sulphide mineralisation, alteration, veining and magnetic susceptibility. RC chips have been photographed.</li> <li>Recent Diamond holes been logged for lithology, weathering, sulphide mineralisation, alteration, veining, structure and magnetic susceptibility. All core has been orientated using a Boart Longyear "TRUECORE" tool. Orientation lines are shown to</li> </ul>



Criteria	JORC Code explanation	Commentary
		have an extremely good matching between core runs. Depth markups have been checked between core blocks and are shown to be accurate. Structures and veining are orientated to the orientation line and recorded in the database. All recent core is photographed wet for later reference.
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>No original records of subsampling have been found for drilling; it is possible that this information can be sourced in the future. Database records indicate that a nominal 1m sampling regime was used in the Tick Hill Mine Corridor, with localised smaller intervals (to 30 cm) based upon lithology.</li> <li>Recent RC samples are all riffle split dry on 1m intervals at the cyclone to obtain a 2-3 kg sample. 5 metre composite samples have been collected over some intervals by spear sampling the bulk metre sample retained in a plastic bag. Target zones and zones of interest have been sampled on 1 m intervals by taking the riffle split bag. Riffle split bags within the 5 m composite zones are left in the field for later reanalysis if required.</li> <li>Recent HQ diamond core has been half sawn and sampled mainly on 1 metre intervals. Non-mineralised or low interest sections of the hole have been sampled using quarter core on 2m intervals.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>No historic detailed records of assaying QAQC is available and it is not possible to comment absolutely on the quality of assaying work undertaken. The work carried out by previous workers used reputable assay laboratories within the region and it is reasonable to assume that the assay results stated in the exploration reports are indicative of mineralisation styles in the area. It is possible that further information can be sourced in the future. 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 recent infill RC programme has used ore grade standards for gold. Trace level and ore grade standards have been used for drilling more distal to the pit. Blanks have been inserted by Carnaby staff approximately every 150 samples. Standard CRM identification was removed prior to submitting to the external lab.</li> <li>Results of the standards and blanks were reviewed against the CRM reference sheets to check they were within tolerance</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Historic laboratory reports for assaying services have been sighted for a small number of drilling and geochemical results. Spot checks have been made to original company reports/diagrams for selected anomalous soils geochemical results and significant drill hole intercepts. No material errors have yet been identified.</li> <li>At the prospect scale the quality of data is currently considered acceptable for exploration purposes. Further investigation and validation will be undertaken as work programs progress.</li> <li>Construction of a webhosted Maxgeo SQL database is currently in progress to house all historic and new records. Recent results have been reported directly from lab reports and sample sheets collated in excel.</li> <li>Results reported below the detection limit have been stored in the database as half the detection limit – e.g. &lt;0.001 ppm stored as 0.0005 ppm</li> </ul>
Location of data	Accuracy and quality of surveys used to locate drill holes (collar and down-hole	• The historic method of collar coordinate determination is recorded in the compiled drill-hole database with a combination



Criteria	JORC Code explanation	Commentary
	surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	<ul> <li>of GPS surveyed and geographical and local gridding methods used.</li> <li>Grid systems used by previous explores included AMG84/54, MGA95/54, local mine grids and local soil grids.</li> <li>20 historical diamond hole collars around the Tick Hill pit have been ground checked using high accuracy Trimble SP60 GNSS GPS receiver by Carnaby staff. The results show a 1.46m shift to the East and 2.5m shift to the North when comparing the database coordinates to the ground survey coordinates. The shift has been used to correct the historic database prior to performing the estimation.</li> <li>Recent drill hole locations were obtained using a Trimble SP60 GNSS GNSS GPS in UTM MGA94 Zone 54 mode. Current RC and diamond holes were all downhole surveyed by CHAMP true north seeking gyro. Surveys were recorded every 30 m down hole and the resultant surveys checked by Carnaby staff.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>The Tick Hill Deposit features drilling on an approximate 10m drill spacing over the core of the mined mineralisation. Broader exploration drilling around the tick hill deposit ranges from 80 m x 100 m (RC and DDH) to &gt;200 m and localised regions of 50 m x 50 m of shallow percussion.</li> <li>Recent RC drilling used both 5 m composited intervals and 1 m intervals. Recent Diamond drilling used both 2m composited intervals and 1 m intervals and 1 m intervals.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>The Tick Hill mine drilling is comprehensive and drilled near orthogonal to the mineralisation trend.</li> <li>Based upon reviews undertaken to date, the prospect scale orientation of data is considered acceptable for exploration targeting and review purposes. Additional verification work will be undertaken as project targets are derived through future exploration.</li> </ul>
Sample security	<ul> <li>The measures taken to ensure sample security.</li> </ul>	<ul> <li>No detailed information is available for the historic sample security undertaken at Tick Hill.</li> <li>Recent samples are routinely taken directly to the ALS preparation lab in Mt Isa by Carnaby staff.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>No detailed information is available for the historic sampling techniques and data. Data analysis of the shallow percussion based geochemistry indicates that it is less effective than soil- based geochemistry. Selected reviews of hard-copy data against data contained in the compiled exploration database has not identified any material issues.</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> <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</li> </ul>	<ul> <li>The Queensland projects comprise the Tick Hill Mine Project Region (105.5 km<sup>2</sup>) and the Regional Leases (217.3 km<sup>2</sup>). The projects comprise of three Mining Leases at Tick Hill (3.9 km<sup>2</sup> - 100% interest acquired from Diatreme and Superior Resources – ML's 7094, 7096 and 7097), twelve surrounding and regional tenements (293.3 km<sup>2</sup> - 82.5% interest to be acquired from Syndicated – EPM's 9083, 11013, 14366, 14369, 17637, 18980,</li> </ul>



Criteria	Explanation	Commentary
	reporting along with any known impediments to obtaining a licence to operate in the area.	<ul> <li>19008, 25435, 25439, 25853, 25972,); and two additional tenements held by Carnaby associated entities (25.6km<sup>2</sup> – 100% beneficial interest held by a wholly owned subsidiary of Carnaby – EMP26651 and 27101).</li> <li>Beneficial interest in the Western Australian tenements (969.3 km<sup>2</sup>) is held by Carnaby through wholly owned subsidiary of Carnaby (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.	Acknowledgment and appraisal of exploration by other parties.	<ul> <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 in further detail as the projects are developed.</li> </ul>
Geology	• Deposit type, geological setting and style of mineralisation.	<ul> <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 Carnaby 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> </ul>
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of</li> </ul> </li> </ul>	Included in report Refer to the report and Table 1.



Criteria	Explanation	Commentary
	<ul> <li>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>	
	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.	
Data aggregation methods	<ul> <li>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.</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> <li>Significant intercepts above 0.5 g/t Au with no more than 2 m internal dilution have been reported</li> <li>Higher grade intercepts have been separately reported where applicable.</li> <li>Metal equivalents have not been used.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul> <li>All drill intercepts have been reported as downhole lengths however true widths are likely to approximate downhole widths.</li> </ul>
Diagrams	<ul> <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>	• See the body of the announcement.
Balanced reporting	<ul> <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>	• The exploration results should be considered indicative of mineralisation styles in the region.
Other substantive exploration data	<ul> <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>	As discussed in the announcement
Further work	<ul> <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</li> </ul>	<ul> <li>Planned exploration works are detailed in the announcement.</li> </ul>



Criteria	Explanation	Commentary
	areas, provided this information is not commercially sensitive.	

## **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	<ul> <li>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.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>Historic data and new data was captured in a Maxgeo web hosted SQL database. Historic data was audited by Carnaby and checked by Maxgeo staff to ensure assay data was correctly imported.</li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>The competent person has undertaken several site visits to Tick Hill, the latest in December 2019. During the visits historic holes were located and surveyed with a high accuracy Trimble SP60 GNSS GPS receiver. Check surveys of the pit were also undertaken. Historic core samples of ore intervals were located on site and density samples collected for analysis.</li> </ul>
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>The deposit has been interpreted on 10m sections by reviewing both the geological logging and grades.</li> <li>The confidence in the geological interpretation is considered to be good, with highly continuous mineralised structures defined by good quality drilling.</li> <li>An additional very high grade internal lode domain was wireframed using a 40g/t nominal cut-off. This domain was used to help reduce the lateral influence of extreme grades in the OK estimate.</li> </ul>
Dimensions	<ul> <li>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.</li> </ul>	<ul> <li>Approximate dimensions of the resource are 150m (strike) x 320m (plunge) x 5 to 25m (plan width). The</li> </ul>



Criteria	JORC Code explanation	Commentary
		deposit extends to a known depth of 250m below surface.
Estimation and modelling techniques	<ul> <li>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.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul> <li>Using parameters derived from modelled variograms, Ordinary Kriging (OK) was used to estimate average block grades within the deposit.</li> <li>Surpac software was used for the estimation.</li> <li>A separate high grade core was modelled at a nominal 40g/t cut-off and top cut to the 97.7<sup>th</sup> percentile of 755g/t. High grade cuts were applied composites modelled on wireframes using a 0.5g/t nominal cut-off. These include 208g/t for main lode and 129g/t for hanging wall lode.</li> <li>The parent block dimensions used were 5m NS by 5m EW by 5m vertical with sub-cells of 0.625m by 0.625m the parent block size represents 50% of the drill hole spacing in the deposit area beneath the existing pit.</li> <li>Checks of the calculated resource grade against the underground production grade shows only minor differences indicating an appropriate estimation method and top cut strategy has been selected.</li> <li>No assumptions have been made regarding recovery of by-products.</li> <li>No estimation of deleterious elements was carried out. Only Au was interpolated into the block model.</li> <li>An orientated ellipsoid search was used to select data and was based on parameters derived from the variography.</li> <li>An initial interpolation pass was used with a maximum range of 40m which filled 98% of blocks. A second pass radius of 200m filled the remaining 2% of the blocks.</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>A minimum of 3 samples and a maximum of 15 samples was used on the estimations of Main Lode and HW lode. For the very high grade core and minor narrow peripheral lodes, a minimum of 1 sample and a maximum of 15 samples were used in the estimation.</li> <li>Selective mining units were not modelled in the Mineral Resource model. The block size used in the model was based on drill sample spacing and lode orientation.</li> <li>Only Au assay data was analysed.</li> <li>The deposit mineralisation was constrained by wireframes constructed using a nominal 0.5g/t Au cut-off grade. An additional very high grade core envelope was modelled using a 40g/t cut-off grade.</li> <li>The wireframes were applied as hard boundaries in the estimate.</li> <li>For validation, comparisons were made on a lode by lode basis by comparing composite grades to the block estimated grades.</li> </ul>
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	<ul> <li>All tonnages are estimated on a dry basis.</li> <li>All density samples were fresh core samples, impervious to water.</li> </ul>
Cut-off parameters	<ul> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	• Top cuts have been applied on a lode by lode basis, cut to the 97.7 <sup>th</sup> percentile of the sample population.
		• An additional very high grade envelope has been modelled in the core of the Hanging Wall and Main Lode to limit the influence of extreme grades in the estimation.
Mining factors or assumptions	<ul> <li>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</li> </ul>	<ul> <li>The deposit has previously been mined using selective open pit and underground mining methods.</li> <li>Portions of the Mineral</li> </ul>



Criteria	JORC Code explanation	Commentary
	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.	<ul> <li>Resource are considered to have sufficient grade and continuity to be considered for underground mining.</li> <li>No mining parameters or modifying factors have been applied to the Mineral Resource.</li> </ul>
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 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.	<ul> <li>Processing was undertaken by previous operators at the project and good recoveries were reported from conventional cyanide leaching;</li> </ul>
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.	<ul> <li>The previous mining operation included the development of waste dumps at the site.</li> <li>The area is not known to be environmentally sensitive and there is no reason to think that approvals for further development including the dumping of waste would not be approved.</li> </ul>
Bulk density	<ul> <li>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.</li> <li>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.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>The average bulk density was determined from an average total of 20 core samples of both the Main Lode and Hanging wall mineralisation. The samples were taken from diamond holes at a regular spacing across the deposit.</li> <li>Bulk density was measured at ALS laboratiories in Perth and calculated from the weight of the sample measured in air and in water.</li> <li>All samples were fresh rock samples with no vugs or pores observed.</li> <li>Bulk density values used in the resource was 2.66t/m3.</li> </ul>
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in</li> </ul>	<ul> <li>The resource was 2.66t/m3.</li> <li>The resource was classified on the basis for the search ellipsoid determined from variography modelling of</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul> <li>continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>the main lode domain (ellipsoid dimensions = 40x22x3m). Blocks estimated within the range of the search ellipse were classified as Indicated. Blocks estimated on a broader pass to the limits of the lode wireframes were assigned an Inferred classification.</li> <li>A manual inferred re- classification was applied to the resource where there may be uncertainty over the quantity of material remaining immediately adjacent to old voids.</li> </ul>
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	No reviews or audits have been undertaken.
Discussion of relative accuracy/ confidence	<ul> <li>Where appropriate a statement of the relative accuracy and confidence level in the 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.</li> <li>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.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>The Tick Hill Mineral Resource estimate is considered to be reported with a high degree of confidence.</li> <li>The consistent lode geometry and continuity of mineralisation is reflected in the Mineral Resource classification. The data quality is good and the drill holes have detailed logs produced by qualified geologists.</li> <li>The Mineral Resource statement relates to global estimates of tonnes and grade.</li> <li>The deposit is not currently being mined. Production records are available for historical open pit and underground mining completed at the deposit.</li> </ul>