

## ASSAYS CONFIRM MULTIPLE HIGH GRADE ZONES AT CARAVEL COPPER PROJECT

### HIGHLIGHTS

- Multiple high grade copper zones confirmed along strike and down-dip at Bindi West including
  - 18m @ 0.80% Cu from 102m within a broader zone of 30m @ 0.55% Cu from 100m.
  - 6m @ 1.03% Cu from 108m within a broader zone of 20m @ 0.50% Cu from 94m (hole extended, further assays pending).
- New geological modelling of multi-domain resource has commenced. The assay results and new modelling substantially evolves earlier understanding of the Bindi resource.
- The new multi-domain geology model will allow variations to be considered for mine development including earlier scheduling of higher-grade ore as well as potential reduction of plant size and staged development to reduce initial capital cost.

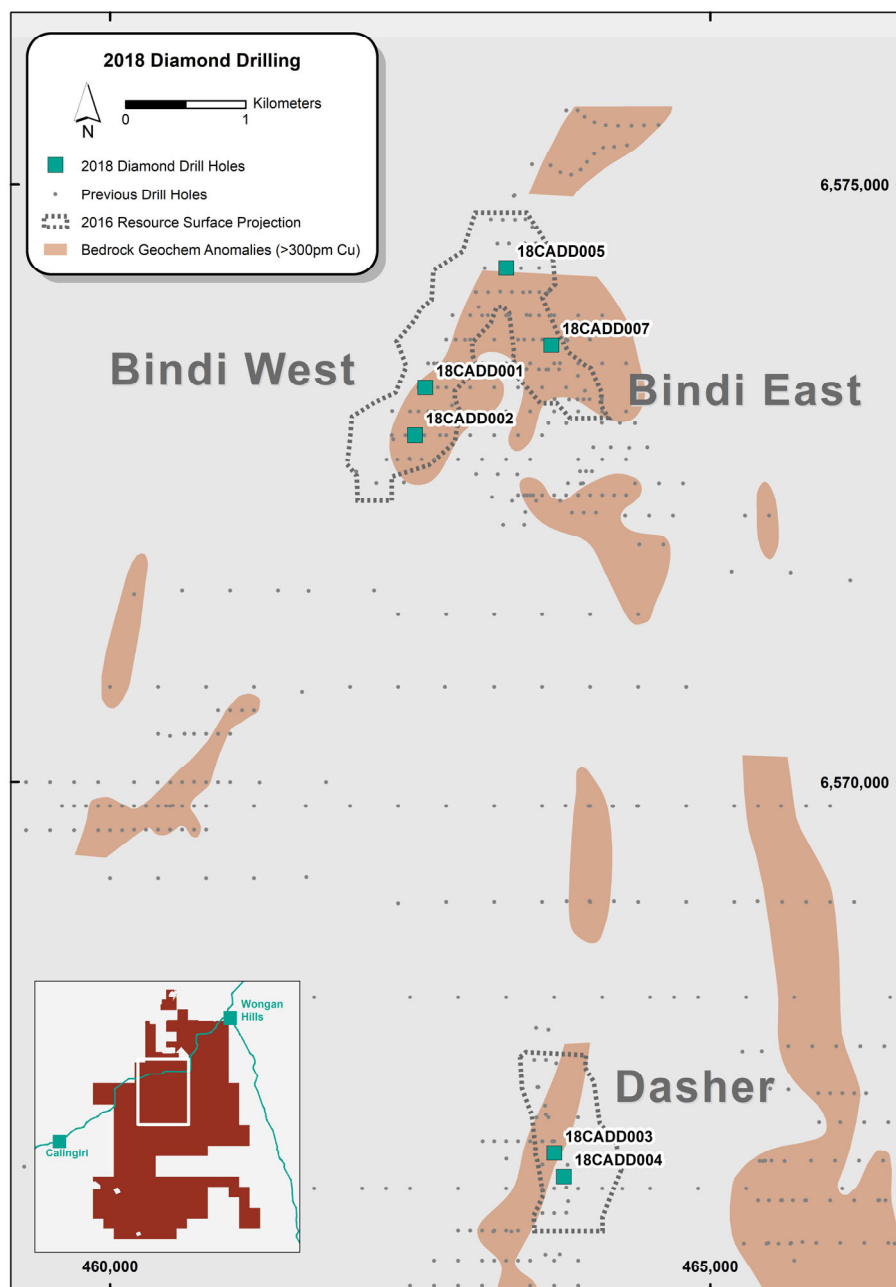
Caravel Minerals (ASX: CVV, Caravel or Company) is pleased to announce assay results from diamond core holes drilled at the Bindi West deposit. The results are the first received from a recently completed 6-hole diamond drilling program completed at the Caravel Copper Project between September and November 2018 (**Figure 1**).

The drill holes targeted high grade domains and are part of a work program established by the Company in July 2018 to interrogate and update the previous resource model. Core from the program is also being used for geotechnical and metallurgical test work/studies. Assay results are presented in Table 1:

**Table 1:** Summary of significant intersections returned from 18CADD001 and 18CADD002 (0.3% Cu cut off)

Hole ID	From	To	Interval (m)	Cu %
18CADD001	44	74	30	0.43
18CADD001*	108	114	6	1.03
18CADD002	102	120	18	0.80
18CADD002	154	180	26	0.47

\*Hole extended to 159.7m with further mineralisation intersected (assays are pending)



**Figure 1:** Location of 2018 core drill holes at the Caravel Copper Project

The diamond drilling program has delivered improved understanding of the structural controls on mineralisation and geological domains and greater levels of confidence in the resource estimates. Initial investigations have shown mineralisation predominantly occurs as sulphide veins or layers, typically 10-100mm thick, which are aligned within a well-developed foliation fabric (Figure 2).

Variations in grade between the domains are due to the width and spacing of these veins, which are mostly comprised of chalcopyrite with lesser pyrite. The orientation of the veins and associated foliation fabric aligns with the interpreted continuity of grade domains between holes, providing support for the structural model of grade continuity.



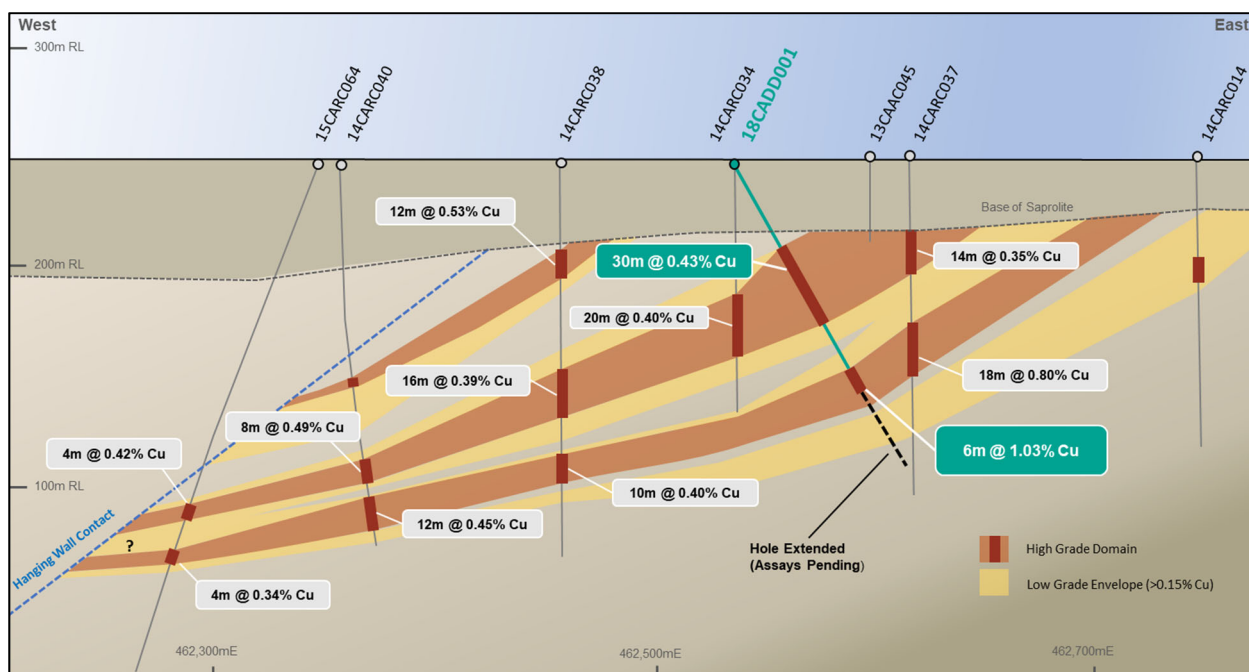
**Figure 2:** Chalcopyrite mineralisation from higher grade domain within Bindi West resource, intersected in diamond drill core from hole 18CAD001 at 62m depth.

The holes at Bindi West were designed to confirm the continuity of two interpreted stacked high grade zones at the deposit. The two zones, both of which sit within broad lower grade envelope ( $>0.15\%$  Cu), were intersected in both 18CADD001 and 18CADD002, providing confidence in the interpretation and demonstrating continuity.

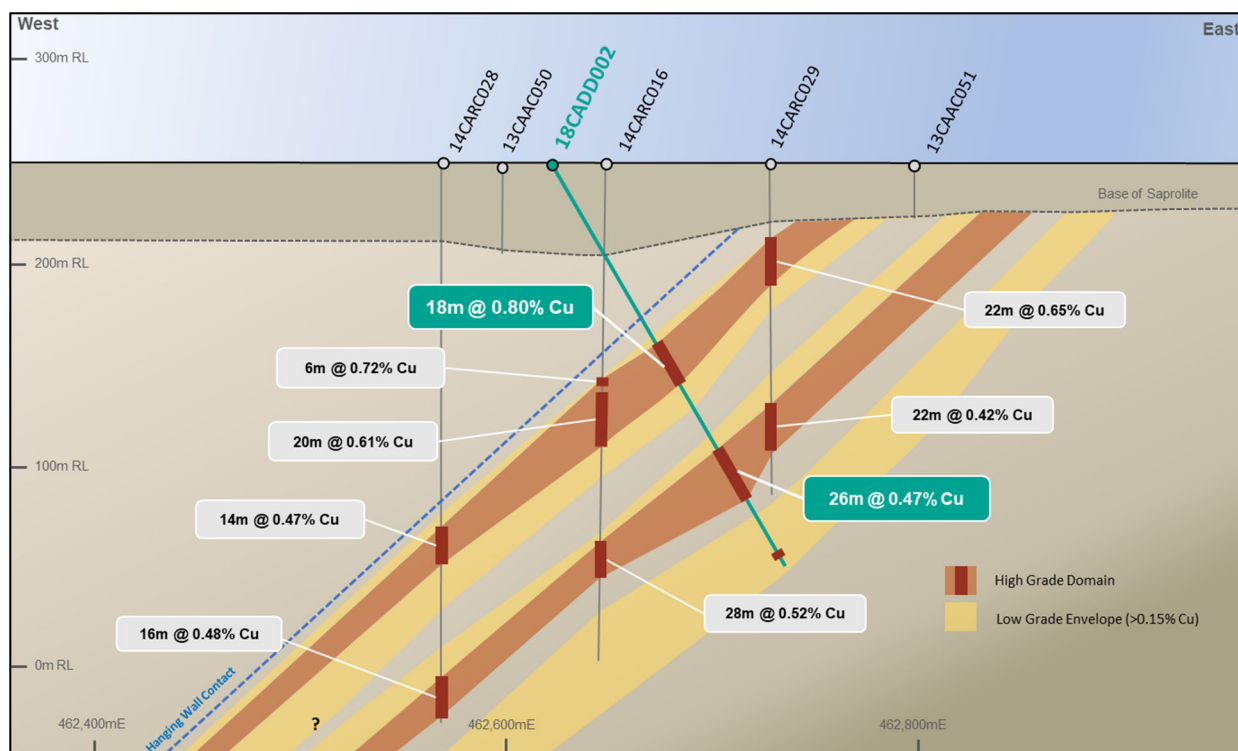
**18CADD001** was drilled to intersect the upper higher grade copper zone immediately below the base of saprolite and returned **30m @ 0.43% Cu from 44m** located within a broader zone of **44m @ 0.34% Cu from 44m** (Figure 3). The lower high grade zone was intersected by 18CADD001 at a downhole depth of 108m. Preliminary results from the lower high grade zone returned **6m @ 1.03% Cu from 108m** located within a broader zone of **20m @ 0.50% Cu from 94m**.

18CADD001 was extended later to its planned depth of 160m intersecting further copper mineralisation. Assay results for the extended portions are expected in late December and the full interval will be reported once received.

**18CADD002** was drilled approximately 400m north of 18CADD001. The hole was designed to drill through the hanging wall sequence and to intersect the upper high grade zone at a downhole depth of approximately 100m. Assay results confirmed initial assessments of the high grade nature of the zone (announced on 28 September 2018), returning **18m @ 0.80% Cu from 102m** located in a broader zone of **30m @ 0.55% Cu from 100m** (Figure 4). The lower high grade zone returned **26m @ 0.47% Cu from 154m** located within a broader intersection of **30m @ 0.44% Cu from 150m**.



**Figure 3:** Cross Section through Bindi West (6,572,900mN)



**Figure 4:** Cross Section through Bindi West (6,573,300mN)

Drill hole collar details are provided in Table 2, while summaries of significant intersections at a 0.3% Cu cut-off and at a 0.15% Cu cut-off are provided in Table 3 and Table 4.

## **Significance of Results**

The Scoping Study completed in 2016 was based on a resource estimate at Bindi that was modelled on a single domain of mineralisation rather than continuous higher grade zones as have now been identified .

The ability to selectively mine high grade zones provides the opportunity to consider alternate project development options such as the ability to plan higher grades early in the mine schedule and potential for staging of development to reduce initial capex requirements, thereby improving early cash flows and the overall NPV of the Project.

A new resource estimate has commenced and is scheduled to be completed in early 2019. The new estimate will provide the basis for revised pit designs and mine schedules, which will then be used to assess project development options.

**Table 2: Drill hole collar details for new Bindi West drill holes (MGA Zone 50)**

Hole ID	Area	Hole Type	Easting	Northing	Elevation	Depth	Dip	Azimuth
18CADD001	Bindi West	DDH	462538	6572900	251	159.7*	-60	088
18CADD002	Bindi West	DDH	462628	6573300	255	219.7	-60	088
18CADD003	Dasher	DDH	463699	6566900	330	177.7	-60	268
18CADD004	Dasher	DDH	463777	6566700	314	170.1	-62	270
18CADD005	Bindi Hinge	DDH	463305	6574302	256	222.7	-60	081
18CADD006	Bindi East	DDH	463678	6573658	Abandoned			
18CADD007	Bindi East	DDH	463683	6573659	260	100	-60	088

\* Hole extended from depth previously reported.

**Table 3: Summary of significant intersections (0.3% Cu cut-off)**

Hole ID	From (m)	To (m)	Length (m)	Cu %
18CADD001	44	74	30	0.43
<b>18CADD001*</b>	<b>108</b>	<b>114</b>	<b>6</b>	<b>1.03</b>
<b>18CADD002</b>	<b>102</b>	<b>120</b>	<b>18</b>	<b>0.80</b>
18CADD002	154	180	26	0.47
18CADD002	206	212	6	0.31

\* Hole extended from 114m to 159.7m.

**Table 4: Summary of significant intersections (0.15% Cu cut-off)**

Hole ID	From (m)	To (m)	Length (m)	Cu %
18CADD001	44	88	44	0.34
<b>18CADD001</b>	<b>94</b>	<b>114</b>	<b>20</b>	<b>0.50</b>
18CADD002	87.15	96	8.85	0.26
<b>18CADD002</b>	<b>100</b>	<b>130</b>	<b>30</b>	<b>0.55</b>
18CADD002	150	180	30	0.44
18CADD002	196	216	20	0.26

For and on behalf of the board

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## COMPETENT PERSON'S STATEMENT

The information in this report that relates to Exploration Results is based on and fairly represents information and supporting documentation prepared by Mr Andrew McDonald (consultant to Caravel Minerals Limited). Mr McDonald is a member of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration and to the activities undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr McDonald consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.

The information in this report that relates to the Calingiri Mineral Resource estimates is extracted from an ASX Announcement dated 4 April 2016 (see ASX Announcement 4 April 2016 "Calingiri Maiden JORC Resource", [www.caravelminerals.com.au](http://www.caravelminerals.com.au) and [www.asx.com.au](http://www.asx.com.au)). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the Mineral Resource 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 represented have not been materially modified from the original market announcement.

## APPENDIX 1 - JORC Compliance Table

### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i>	Drill holes were sampled via conventional Reverse Circulation (RC) or Diamond drilling (DD).
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Sampling was carried out under Caravel's standard protocols and QAQC procedures and is considered standard industry practice.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i>	Reverse Circulation drilling was used to obtain 1m samples. ~3kg samples were combined to form 2m composite samples for assay. Samples are riffle split to 3.2kg and pulverised to nominal 85% passing 75 microns and sent for assay. Reverse Circulation samples were weighed, dried and pulverized to 85% passing 75 microns to form a sub-sample. All RC samples were sampled on 2m composites and sent for a multi-element suite using multi-acid (4 acid) digestion with an ICP/OES and/or MS finish and selected samples for 50g Fire Assay for gold with an AAS finish.  HQ3 diamond core was halved at ALS in Perth. Nominal 2m half core samples were collected at ALS Ammtec, where the entire 2m sample was control crushed using a jaw, followed by a cone crusher. A 500g split was collected from the entire crushed sample and submitted to ALS Geochemistry in Perth where samples were weighed and pulverized to 85% passing 75 microns to form a sub-sample. A multi-element suite was completed using multi-acid (4 acid) digestion with an ICP-OES/MS finish and 50g Fire Assay for gold with an AAS finish.
Drilling techniques	<i>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).</i>	RC (reverse circulation) drilling was used using a 5 to 5.5 inch face sampling hammer. Diamond drilling was by conventional HQ techniques. HQ triple tube was used in more weathered zones. Core was oriented using a reflex ACT 3 instrument.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	RC sample recoveries remained relatively consistent throughout the program and are estimated to be

Criteria	JORC Code explanation	Commentary
		100% for 95% of drilling. Any poor (low) recovery intervals were logged and entered into the database. Diamond recoveries in fresh rock approximated 100%.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	The RC rotating cone splitter and or riffle splitter was routinely cleaned and inspected during drilling. Care was taken to ensure calico samples were of consistent volume. Diamond samples were cut on the same core side to improve assay representivity.
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	There is negligible to no relationship observed between grade and recovery.
Logging	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	RC and DD holes were logged geotechnically and geologically including but not limited to weathering, regolith, lithology, structure, texture, alteration, mineralisation and magnetic susceptibility. Logging was at an appropriate quantitative standard to support future geological, engineering and metallurgical studies.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	Logging is considered quantitative in nature.
	<i>The total length and percentage of the relevant intersections logged.</i>	All holes were geologically logged in full.
Sub-sampling techniques and sample preparation	<i>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.</i>	All core is half cut and sampled. Duplicate samples were collected by ALS Geochem by splitting the 500g crushed sample submitted for analysis in two and analysing each sample separately. 1 meter RC samples were split off the drill rig into 1 calico bag using a rotating cone or riffle splitter. For each two meter interval, the 1m split samples were fully combined to make one 2m composite. >95% of the samples were dry in nature. Reverse Circulation samples were weighed, dried, pulverized to 85% passing 75 microns. This is considered industry standard and appropriate. Diamond Drilling samples were weighed and pulverized to 85% passing 75 microns to form the sub-sample.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Caravel has its own internal QAQC procedure involving the use of certified reference materials (standards), blanks and duplicates which accounts for 6% of the total submitted samples. QAQC has been checked with no apparent issues.

Criteria	JORC Code explanation	Commentary
	<i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i>	Field duplicate data suggests there is general consistency in the drilling results. The mineralisation does not appear to be 'nuggety' in nature.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	The sample sizes are considered to be appropriate for the style of base and precious metal mineralisation observed which is typically coarse grained disseminated copper and molybdenum.
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	All RC samples were sent for multi-element analysis via multi (4) acid digestion, ICP Atomic Emission Spectrometry (ICP-OES) and/or Mass Spectrometry and selected samples for 50g Fire Assay for gold. All DD samples were sent for multi-element analysis via multi (4) acid digestion, ICP Atomic Emission Spectrometry (ICP-OES) and Mass Spectrometry (MS) and 50g FA/AAS for gold. These techniques are considered appropriate and are considered industry best standard. All assay results are considered reliable and total.
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	No such instruments have been used for reported intersections.
	<i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	Caravel has its own internal QAQC procedure involving the use of certified reference materials (standards), blanks and duplicates which accounts for 6% of the total submitted samples. The certified reference materials used had a representative range of values typical of low, moderate and high grade copper mineralisation. Standard results for drilling demonstrated assay values are both accurate and precise. Blank results demonstrate there is negligible cross-contamination between samples. Duplicate results suggest there is reasonable repeatability between samples.
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes.</i>	No twin holes have yet been drilled for comparative purposes. The diamond holes reported were drilled between two RC holes and intersected mineralisation that compares well with the widths and grades intersected in the RC drilling.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Primary data was collected via digital logging hardware using in house logging methodology and codes. The data was sent to the Perth based office where the data is validated and

Criteria	JORC Code explanation	Commentary
		entered into an industry standard master database by Caravel's database administrator.
	<i>Discuss any adjustment to assay data.</i>	There has been no adjustment to assay data.
<i>Location of data points</i>	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	Hole collar locations have been picked up by Caravel employees whilst in the field using a GPS accurate to within $\pm 3$ m. Easting and Northing coordinates are considered reliable ( $\pm 3$ m). Downhole surveys on all angled RC and DD holes used single shot or multishot readings at downhole intervals at approximately every 30m.
	<i>Specification of the grid system used.</i>	The grid system used for location of all drill holes as shown on all figures is MGA Zone 50, GDA94.
	<i>Quality and adequacy of topographic control.</i>	RL data is considered unreliable at present although topography around the drill areas is relatively flat and hence should not have any considerable effect on the current interpretation of data.
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i>	Drill hole spacing is variable. 2m (RC) drill composite samples were sent for elemental analysis. DD samples were sampled nominally at 1m intervals and between 0.3 and 1.3 mtrs dictated by geological boundaries.
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	Drill and sample spacing is considered sufficient as to make geological and grade continuity assumptions.
	<i>Whether sample compositing has been applied.</i>	2 meter sample compositing (i.e. from two 1 meter samples) of the RC drilling was used.
<i>Orientation of data in relation to geological structure</i>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	The orientation of drilling and sampling is not considered to have any significant biasing effects. The majority of drill holes have been completed perpendicular or oblique to the interpreted mineralised systems.
	<i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	As above
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	Chain of custody is managed by Caravel. Sampling is carried out by Caravel's experienced field staff. Samples are stored on site and transported to the Perth laboratory by Caravel's employees.
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No review has been carried out to date.



## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i>	The results relate to 70/2788.
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	All applicable tenements are held securely by Caravel with no impediments identified.
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	N/A
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	The mineralisation at all prospects is believed to be of porphyry and/or skarn deposit style which occurs within a possible larger scale Archean subduction related geological setting.
<i>Drill hole Information</i>	<i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes, including 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 plus 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.</i>	Refer to Tables in announcement above. See representative drill collar plans and cross-section.
<i>Data aggregation methods</i>	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. 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.</i>	Length weighted averages used for exploration results. Cutting of high grades was not applied in the reporting of intercepts.

Criteria	JORC Code explanation	Commentary
<i>Relationship between mineralisation widths and intercept lengths</i>	<i>These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i>	Downhole lengths are reported in this announcement. Diamond holes reported in this announcement were drilled approximately perpendicular to the interpreted mineralised system and downhole widths are interpreted to approximate true widths.
<i>Diagrams</i>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	Refer to Figures included in the release.
<i>Balanced reporting</i>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	All significant results are reported with no intended bias.
<i>Other substantive exploration data</i>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	Multi-element assaying was conducted on all samples which include potentially deleterious elements including arsenic.
<i>Further work</i>	<i>The nature and scale of planned further work (eg 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.</i>	Further drilling and geological evaluations are in progress to infill, potentially extend and further understand the Bindi and Dasher deposits, in particular the geological continuity and modelling of higher and lower grade zones within the mineralised systems. Collection of geotechnical data and sample material for metallurgical test-work is also part of the drilling program.