



18 OCTOBER 2017

## **STRONG CHARGEABILITY ANOMALY IN STEP OUT IP SURVEY LINES CONFIRMS PRIORITY GOLD TARGET AT HOLLETON**

### **HIGHLIGHTS**

- Strong IP anomaly up to 33 mV/V defined by single line orientation survey at the Brahma Prospect.
- Inversion modelling of step-out lines confirms strong west plunging chargeability anomaly over 300m in strike.
- Anomaly is coincident with surface geochemical gold signature interpreted to be 'bleeding' through transported cover.
- Survey designed to identify zones with higher sulphide concentrations associated with high grade gold.
- Previous drilling shows a clear correlation between sulphide content and gold grade.
- Lower grade gold in previous drill hole GRDD0002 (32m @ 0.3 g/t Au<sup>1</sup>) is coincident with a weaker IP response.
- Results suggest the much stronger response to the north may be indicating higher sulphide content and potentially higher gold grades.

Montezuma Mining Company Ltd ("Montezuma" or "Company") is pleased to advise that a successful dipole-dipole array induced polarisation ("IP") step out survey has been completed at the Company's 100% owned Holleton Gold Project to follow up the encouraging results from the previously announced orientation survey<sup>2</sup>.

The purpose of the IP survey was to test whether the technique can be used to target areas with higher sulphide concentrations along the 2km long basement gold anomaly at the Brahma Prospect. Two lines were completed parallel to the orientation line at 100m spacings, with the remainder of the strike of the basement geochemical anomaly tested at 300m line spacing.

<sup>1</sup> See company announcement dated 20 July 2016.

<sup>2</sup> See company announcement dated 11 September 2017.

## **ABOUT MONTEZUMA MINING**

Montezuma Mining Company Ltd (ASX: MZM) is a diversified explorer focused on manganese, cobalt, lithium and gold. The Company's objective is to achieve returns for shareholders through selected strategic acquisitions and targeted exploration.

Montezuma is currently working to develop a flowsheet to produce high purity manganese products for use in the Li-Ion battery industry.

Montezuma also has 100% interests in the Holleton and Green Dam Gold Projects, the Pinnacles Cobalt Project and the Lake Johnson Lithium Project, all in Western Australia.

## **MARKET DATA**

ASX code:	MZM
Share price:	\$0.20
Shares on issue:	83.5M
Market capitalisation:	\$16.7M
Cash (at 30 June):	~\$4.2M
Listed Investments (at 30 June):	~\$7.1M

## **BOARD AND MANAGEMENT**

Chairman	Seamus Cornelius
Executive Director	Justin Brown
Non-Executive Director	John Ribbons
Exploration Manager	Dave O'Neill



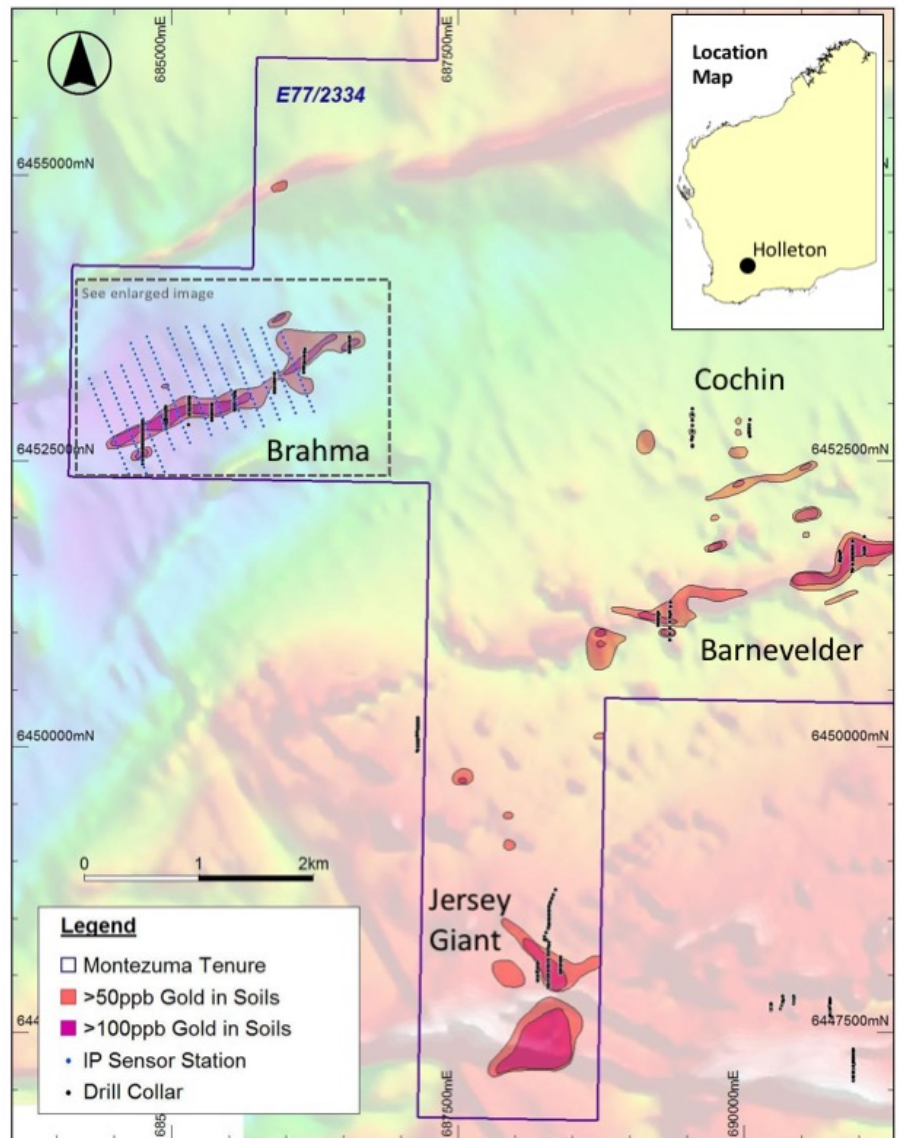
Company information, ASX announcements, investor presentations, corporate videos and other investor material on the Company's projects can be viewed at [www.montezuma.com.au](http://www.montezuma.com.au)

Limited historical drilling, where only three holes have been drilled deeper than 40m, returned a best intersection of 73m @ 0.3 g/t Au (including 4m @ 1.6 g/t Au and 1m @ 7.6 g/t Au)<sup>1</sup>, with all three diamond holes returning broad mineralised intervals. The higher grade gold zones are typically associated with a higher sulphide content.

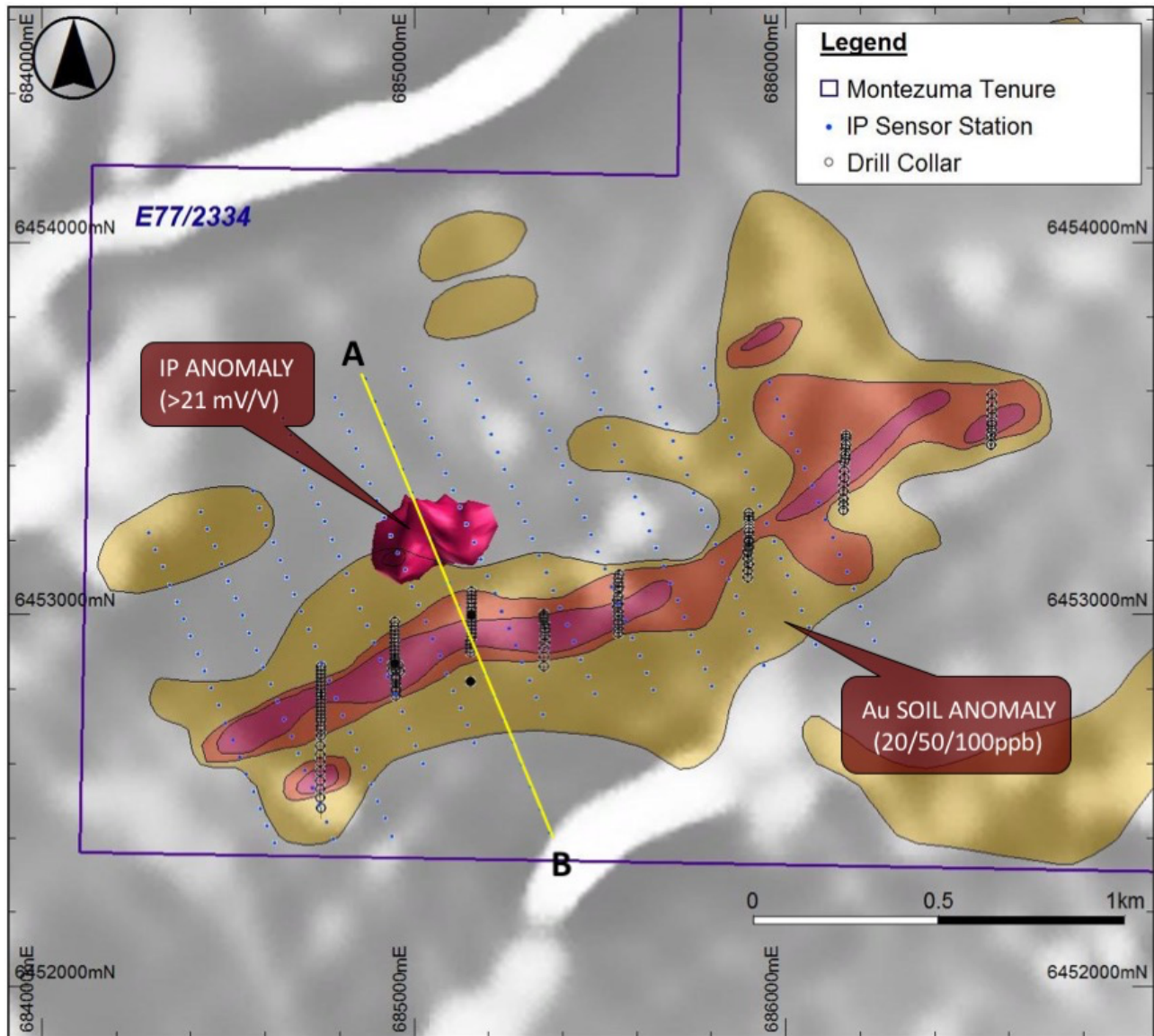
The results of the survey confirmed a high amplitude (33 mV/V) chargeability anomaly located to the north of the basement geochemical expression. The anomaly plunges to the west and is located under approximately 60m of interpreted cover. The known extent of the anomaly extends over 300m and is open along strike in both directions. On section, the anomaly overlaps the previous drilling and shows a weaker chargeability response (8-10 mV/V) coincident with the gold and sulphide mineralisation on the same section. Importantly, directly above the chargeability anomaly, there is a surface gold geochemical signature which appears to be 'bleeding' through the transported cover.

The survey has been successful in highlighting the highest priority part of the 2.5km long geochemical anomaly. If the interpretation of the various datasets is correct, the IP data should be mapping the higher concentrations of sulphides in the basement rocks, which are expected to have the best potential for higher gold grades.

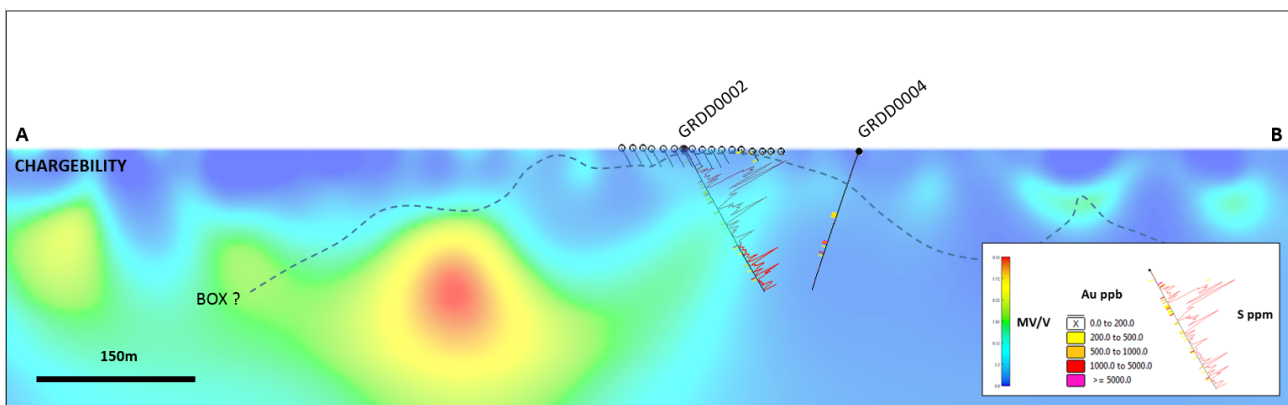
Planning is now underway to design a drilling programme to test the anomaly and other targets within the 100% owned Holleton Project.



**Figure 1:** Plan view of the Holleton Gold Prend showing basement gold anomalies and the location of the IP survey stations at the Brahma Prospect overlaying magnetics (RTP 1VD).

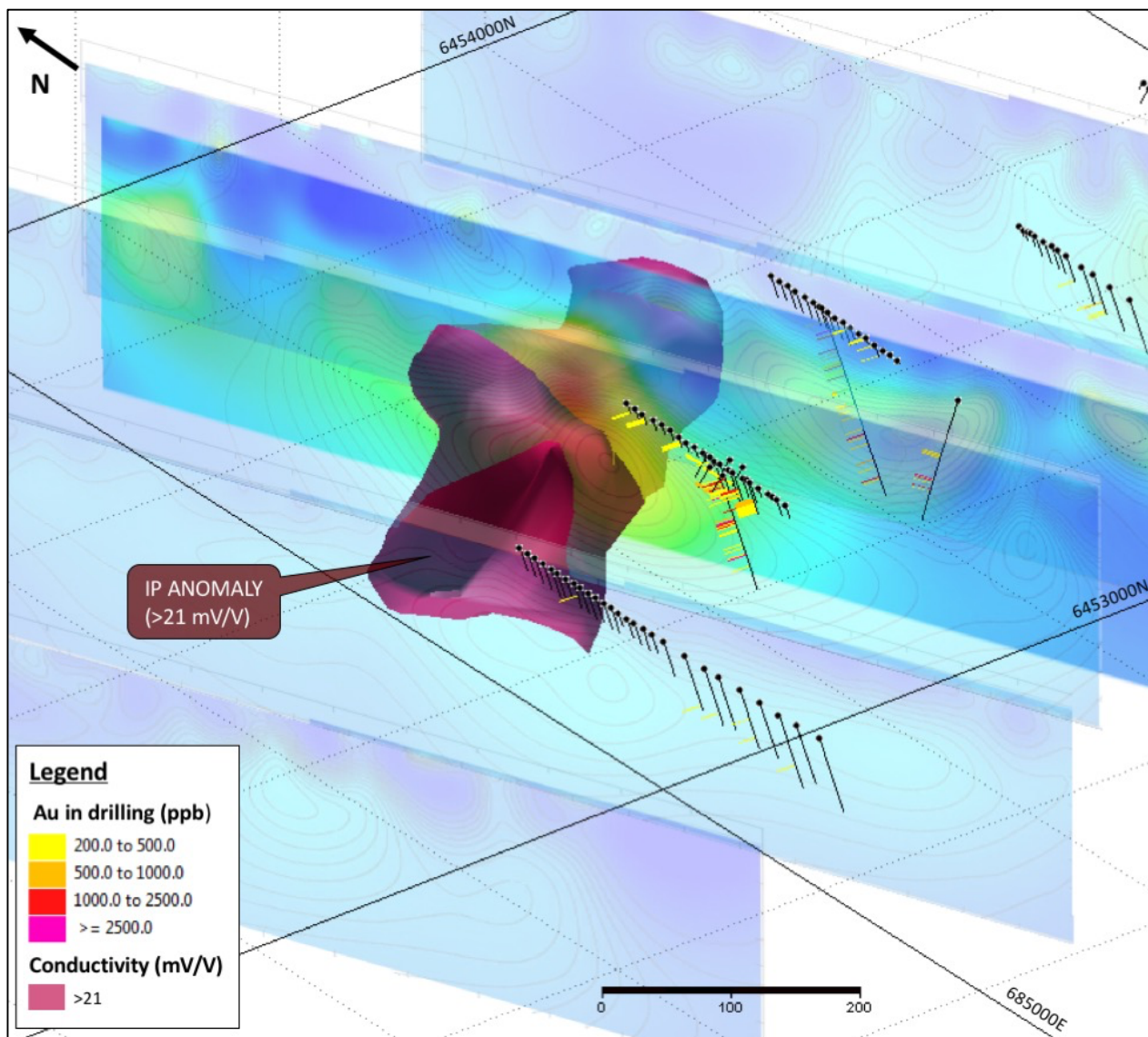


**Figure 2:** Plan view of the Brahma gold trend showing gold geochemical contours and the location of the IP survey stations overlaying magnetics (RTP 1VD).



**Figure 3:** Sectional view of the inversion model along section A-B showing chargeability (mV/V) and historical drilling. Drill traces show gold values and sulphur assays. The lower order sulphur assays are coincident with the lower amplitude chargeability response indicating the undrilled higher amplitude anomaly may be indicative of higher gold grades.





**Figure 4:** Orthographic view of the of the inversion model, IP section lines showing chargeability (mV/V) and historical drilling.

**FOR MORE INFORMATION...**

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The information in this report that relates to Exploration Results, Exploration Targets, Mineral Resources and Mineral Reserves is based on information compiled by Mr David O'Neill who is a member of the Australasian Institute of Mining and Metallurgy. At the time that the Exploration Results, Exploration Targets, Mineral Resources and Mineral Reserves were compiled, Mr O'Neill was an employee of Montezuma Mining Company Ltd. Mr O'Neill is a geologist and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr O'Neill consents to the inclusion of this information in the form and context in which it appears in this report

Please note with regard to exploration targets, the potential quantity and grade is conceptual in nature, that there has been insufficient exploration to define a Mineral Resource and that it is uncertain if further exploration will result in the determination of a Mineral Resource.

JORC Table 1

## JORC Code, 2012 Edition – Table 1 report – Holleton Project

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li><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></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The data presented herein is historic in nature and as such sampling technique and its nature and quality cannot be ascertained with certainty.</li> <li>It can be assumed that industry standard methods have been utilised by the previous holder.</li> <li>The Induced Polarization (IP) geophysical data collected during August, September and October 2017 was captured by Vortex Geophysics using GDD sensors and a Vortex VIP-30 transmitter (100A).</li> <li>The IP survey used receivers spaced 50m along the test line and the dipole-dipole technique, and at 100m and 300m line spacings.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li><i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, 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></li> </ul>	<ul style="list-style-type: none"> <li>Drilling presented is a combination of historical Air-core and Diamond Drilling.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li><i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential</i></li> </ul>	<ul style="list-style-type: none"> <li>Due to the historic nature of the data, recovery cannot be determined with confidence.</li> <li>The relationship between sample recovery and grade has not been determined.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Logging</b>	<p><i>loss/gain of fine/coarse material.</i></p> <ul style="list-style-type: none"> <li>• <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></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not all geological data for the historical drillholes is available. Where data is available, it has been compiled and entered into the company historic database. The data will be unsuitable for use in a Mineral Resource or more advanced study and is to be used as an exploration aid only.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <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></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All samples reported are taken from a 1-4 metre drilling interval.</li> <li>• The sample preparation and sample size information is not available due to the historic nature of the data.</li> <li>• The methods of core preparation and sampling are not available due to the historic nature of the data.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <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></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• QAQC protocols are not provided in the historic data.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Verification of sampling and assaying</b>	<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>The historic data cannot be verified and it has been collected from publicly available sources.</li> </ul>
<b>Location of data points</b>	<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>The survey method for collar co-ordinates is not recorded in the historic data. Visual checks have been applied where possible using aerial photography and/or Google Earth imagery to locate holes correctly if errors are discovered. Selected drill collars have been field checked using handheld GPS with excellent correlation.</li> <li>The IP geophysical location data was captured using 12 channel GPS receivers.</li> </ul>
<b>Data spacing and distribution</b>	<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 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 style="list-style-type: none"> <li>Data has been collected at various spacings (&lt;10m in places).</li> <li>Compositing has been applied to selected samples.</li> <li>The 2017 IP receiver stations were spaced at 50m intervals in a dipole-dipole configuration on section.</li> <li>The IP lines were spaced at 100m in the centre of the survey, and at 300m on the western and eastern extents.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<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>The historic data is to be used as a guide to future exploration and at face value has been collected in a manner that is sensible with respect to general geological trends and deposit types.</li> <li>More detailed interpretation will be required to assess this further.</li> <li>The IP orientation survey was designed with a 50m sensor spacing across the strike of the stratigraphy (ie E-W). This resolution is considered adequate and was planned with forward modelling of a number of potential target sizes and geometries.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Due to the historic nature of the data presented, this cannot be determined.</li> </ul>
<b>Audits or reviews</b>	<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>No external audits or reviews have been conducted apart from internal company review during the compilation of the historical data.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<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 Holleton Project consists of a single granted exploration license (E77/2334), and three pending exploration licenses (E77/2458, E70/4994 and E70/5033)</li> <li>The granted tenure is 100% owned by Montezuma Mining Corporation Ltd.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The historical exploration data has been collected by various parties and has been reported to high standards.</li> <li>The methods of exploration and techniques used are considered appropriate for the deposit types sought (Au)</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The majority of the historical exploration has been focused on the discovery of Archean lode style and orogenic gold deposits.</li> </ul>
<b>Drill hole Information</b>	<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>	<ul style="list-style-type: none"> <li>Refer to historical ASX releases.</li> </ul>
<b>Data aggregation methods</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>IP the data was processed by the UBC Geophysical Inversion Facility using DCIP3D Inversion software.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></p> <ul style="list-style-type: none"> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>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></li> </ul>	<ul style="list-style-type: none"> <li>Only downhole lengths are reported.</li> <li>Further work is required to determine exact orientations due to the historic nature of the data.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>Refer to document.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>The historic data presented is to illustrate trends only and all available data is provided.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>Refer to document.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>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></li> </ul>	<ul style="list-style-type: none"> <li>Future work will involve drill testing of key targets and further geophysical and geochemical programs.</li> </ul>