



## ASX Announcement

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**Kalamazoo  
Resources Ltd**  
ACN: 150 026 850  
ASX: KZR

**Head Office**  
Unit 6  
328 Reserve Road  
Cheltenham 3192  
Victoria

Suite 7  
8 Clive Street  
West Perth 6005  
Western Australia

**Phone** 1300 782 988

**Fax** +61 8 9481 8488

admin@kzr.com.au

kzr.com.au

## CASTLEMAINE GOLD PROJECT EXPLORATION UPDATE: GROUND GEOPHYSICAL SURVEYS AND 3D STRUCTURAL MODEL COMPLETE

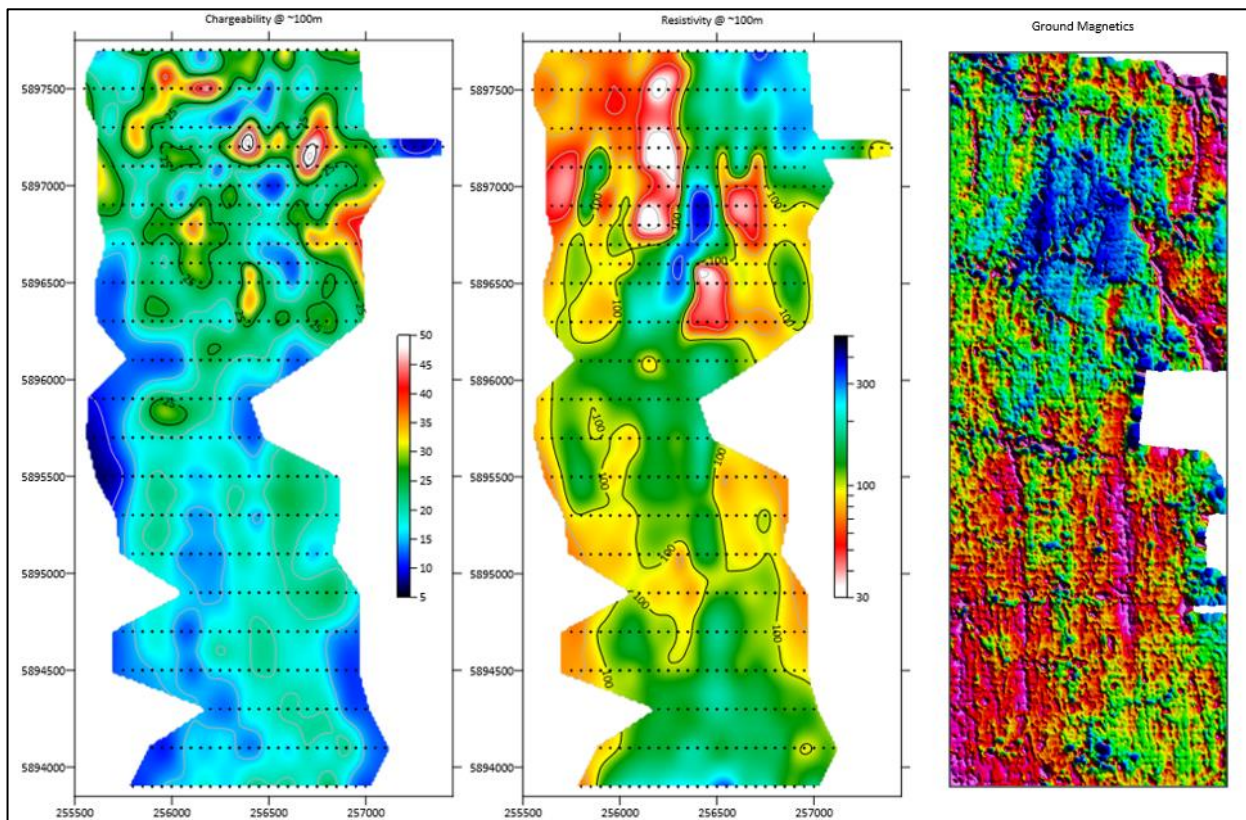
### Highlights

- Low impact, ground geophysical surveys completed over the top ten high priority gold exploration prospects within EL6679
- Geophysical surveys have identified potentially gold mineralised structures for follow-up diamond drill testing
- New prospects range in size up to 2.0km<sup>2</sup> and are located within the Castlemaine Diggings National Heritage Park and Pine Plantation
- A 3D structural model has been completed for the high priority Pine Plantation area which has been used to design a Stage 1, 10 hole diamond drill program (~4,000m)

Kalamazoo Resources Limited (**ASX: KZR**) ("**Kalamazoo**" or the "**Company**") is pleased to announce that it has completed detailed Induced Polarisation (IP) and Ground Magnetic surveys of its current ten highest ranked prospects within Exploration Licence EL6679 ("Wattle Gully"), which forms part of the Company's Castlemaine Gold Project. These high priority prospects were originally defined from a combination of features such as the presence of prospective fault/fold structures, gold mineralised reefs, historical workings, low exploration maturity and historical drill hole intersections.

The completed geophysical surveys involved approximately 36.9 and 448 line km of IP and ground magnetic lines, respectively spread across the top ten ranked prospects. These geophysical surveys achieved their aim of mapping the sub-surface geology and identifying potentially gold mineralised fault/fold structures for follow-up diamond drill testing (Figure 1).

Of note, there have been no ground geophysical surveys conducted within the Castlemaine Gold Project since the 1960s and the area is only covered by broad, regional-scale aeromagnetic and ground gravity data. Furthermore, the absence of any young sedimentary cover (i.e. the Murray Basin) is an additional advantage, which should enable the geophysical surveys to better resolve geological features and at greater depths.



**Figure 1: Plan view examples of the IP survey results (Chargeability and Resistivity at 100m depth below the surface) and Ground Magnetic image for the northern prospects identified within EL6679**

As a key part of its exploration strategy, Kalamazoo subsequently commissioned PGN Geoscience to complete a follow-up 3D structural geology modelling of the high priority Pine Plantation area. This study incorporated all available information such as the recent geophysical surveys, historical drill holes, surface mapping etc (Figure 2). This 3D structural geology model has been used to design a 10 hole diamond drill hole program for approximately 4,000m at the “Mustang” Prospect within the Pine Plantation area. This is the first stage of Kalamazoo’s 10,000m diamond drilling program announced on 21 October 2019.

The application of modern ground geophysical survey techniques with 3D structural modelling to high ranking prospects is a key targeting methodology of Kalamazoo’s overall exploration strategy. This modern exploration approach enables Kalamazoo to explore “smarter” and to deliver high quality drill targets with minimal environmental impact. This approach will be rolled out across other high priority prospects located elsewhere within Kalamazoo’s Castlemaine, South Muckleford and Tarnagulla projects (Figure 3).

The Castlemaine Goldfield produced 5.6M ounces\* of gold across its life and is one of the richest gold fields in Australia, with only minor exploration activity having been undertaken over the past decade and with limited effective drilling below 400m. (\*refer to Willman et al 2002, Geology Survey Victoria, Report 121).

Kalamazoo is committed to acquiring and exploring a portfolio of high-quality Victorian gold exploration projects within highly endowed areas based upon a high grade (>10 g/t) target deposit model. The Castlemaine Gold Project is an important component of Kalamazoo’s exploration strategy.

**For further information, please contact:**

Luke Reinehr  
Chairman / CEO  
[luke.reinehr@kzr.com.au](mailto:luke.reinehr@kzr.com.au)

Victoria Humphries  
Investor Relations – NWR Communications  
[victoria@nwrcommunications.com.au](mailto:victoria@nwrcommunications.com.au)

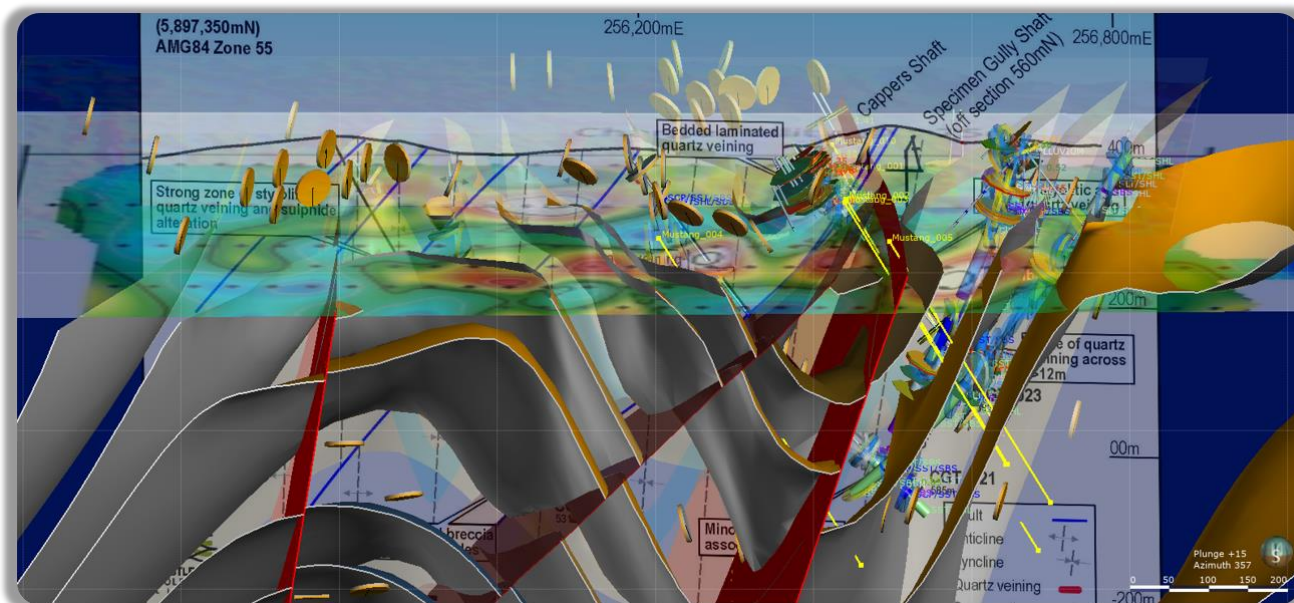


Figure 2: Example East-West cross-section view (looking north) of the Pine Plantation 3D structural geology model with historical drill holes, IP survey results and proposed drill holes (Image credit: PGN Geoscience)

### About the Victorian Gold Projects

Kalamazoo's newest gold assets are the Wattle Gully and Wattle Gully South gold projects, which cover almost all the historical Castlemaine Goldfields, the South Muckleford project and the Tarnagulla project. The project areas are located approximately 100 kilometres northwest of Melbourne and are well serviced by a network of roads, railway and air services. The project area lies within easy distance of the major regional population centres of Ballarat and Bendigo. It consists of three granted exploration licences and one exploration licence applications. Castlemaine was one of the richest gold fields in Victoria, having produced 5.6 million ounces from both alluvial and underground sources. The Castlemaine Goldfield is a north trending mineralised zone approximately 10km long and 4km wide, located within the highly mineralised Bendigo-Ballarat zone of the Lachlan Fold Belt.

### Competent Persons Statement

The information for Kalamazoo's Victorian Projects is based on information compiled by Dr Luke Mortimer, a competent person who is a Member of The Australian Institute of Geoscientists. Dr Mortimer is an employee engaged as the Exploration Manager Eastern Australia for the Company 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'. Dr Mortimer consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

### Forward Looking Statements

Statements regarding Kalamazoo's plans with respect to its mineral properties and programmes are forward-looking statements. There can be no assurance that Kalamazoo's plans for development of its mineral properties will proceed as currently expected. There can also be no assurance that Kalamazoo will be able to confirm the presence of additional mineral resources/reserves, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of Kalamazoo's mineral properties. The performance of Kalamazoo may be influenced by a number of factors which are outside the control of the Company and its Directors, staff and contractors.



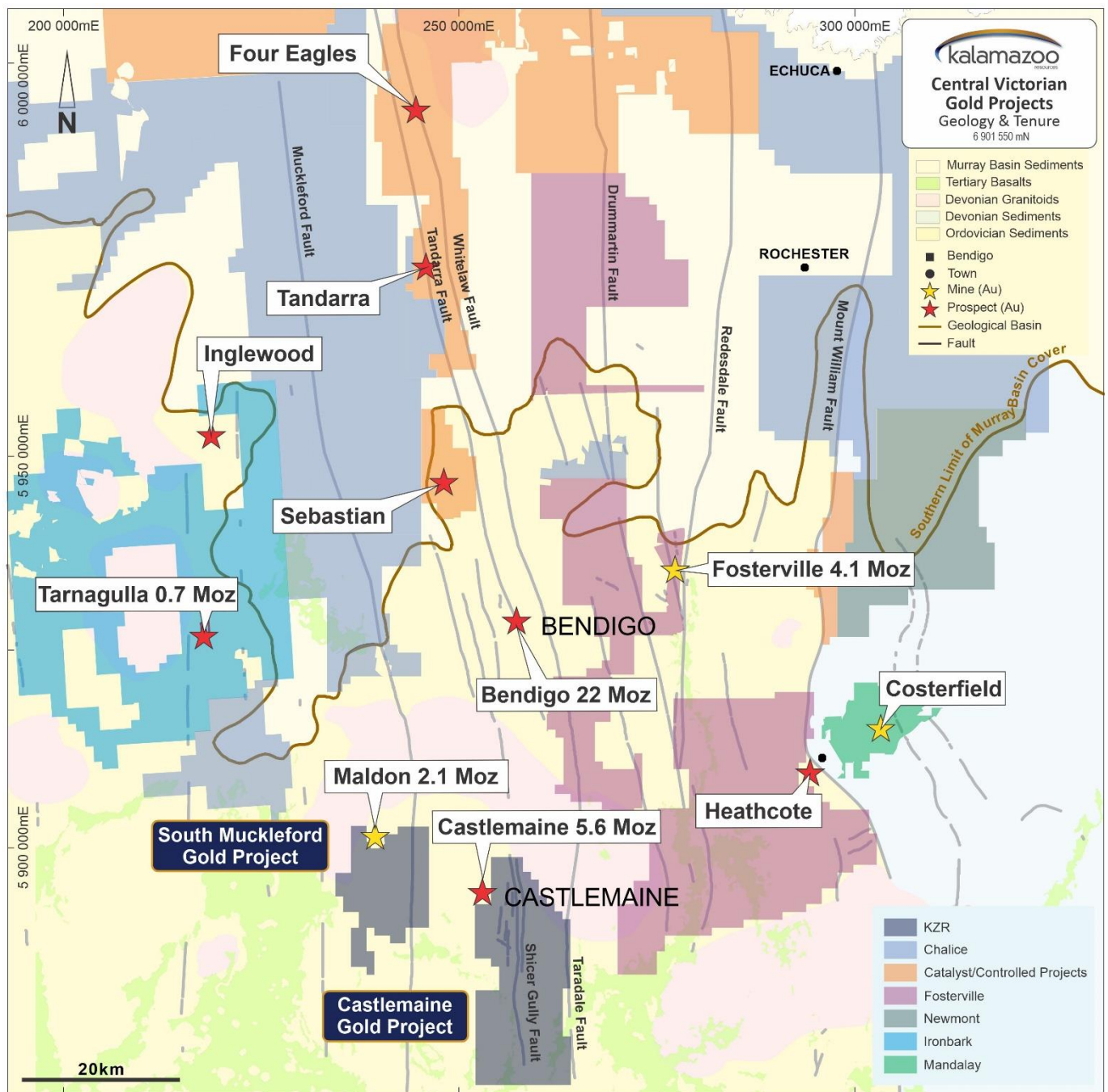


Figure 3: Central Victoria regional gold exploration tenure with Kalamazoo's Castlemaine and South Muckleford Gold Projects in grey

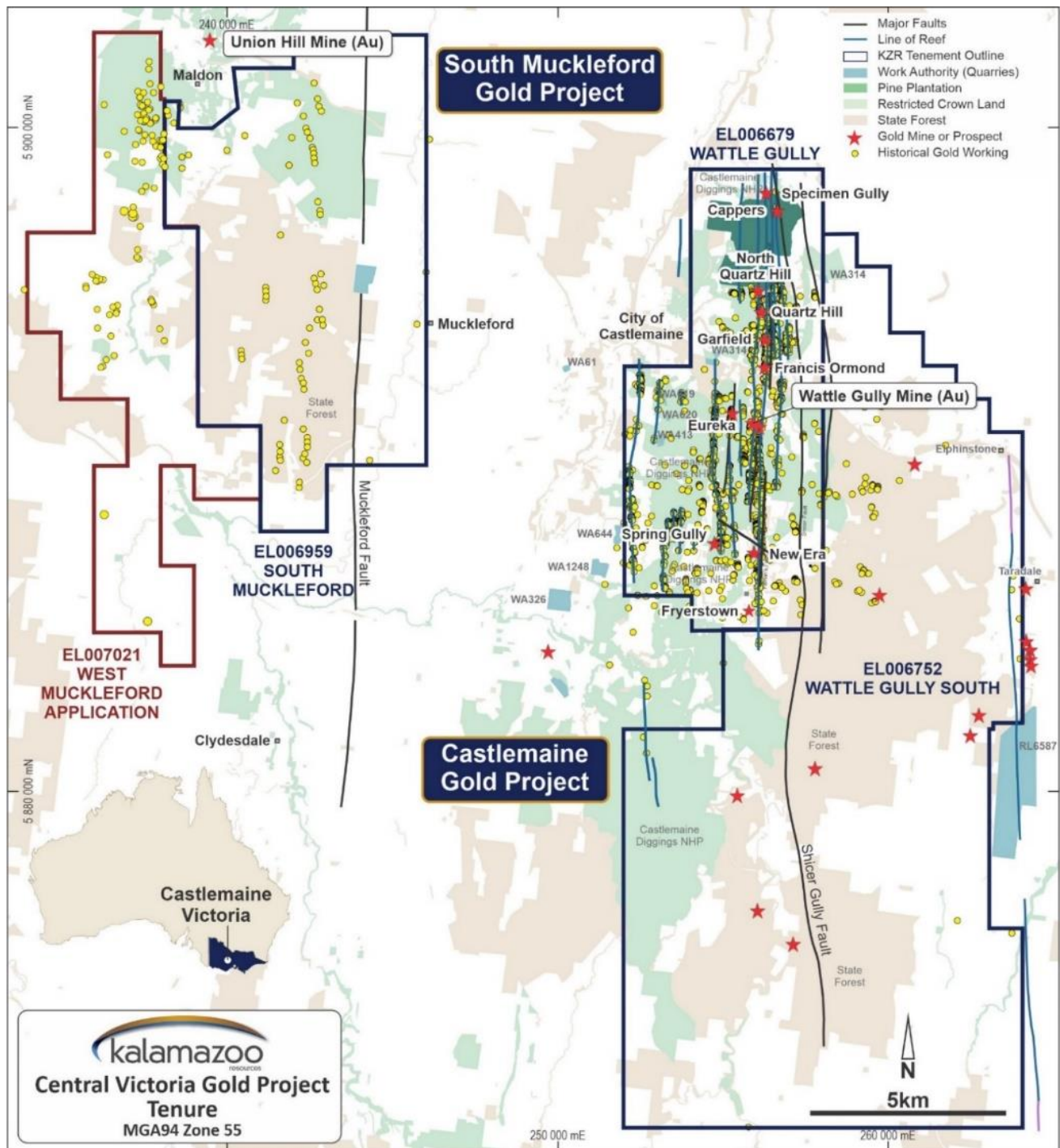


Figure 4: Castlemaine Gold Project Location (EL6679 and EL6752)

**Table 1. JORC Code, 2012 Edition**  
**Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Not Applicable.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>The 3D structural geology model of the Pine Plantation was built utilizing new, detailed re-logging of structural data from available historical, oriented drill holes by PGN Geoscience on behalf of Kalamazoo Resources. There is a high level of confidence in this re-logged structural geology data.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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>	
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<p><b>Ground Magnetic Surveys</b></p> <ul style="list-style-type: none"> <li>Location and topography data are set out on GDA94 MGA Zone 55 grid and recorded with two GPS enabled GSM 19W Overhauser, rapid sampling, Magnetometer (1 Rover; 1 Base) plus a 64s Garmin Handheld GPS.</li> </ul> <p><b>IP Surveys</b></p> <ul style="list-style-type: none"> <li>Location and topography data are set out on GDA94 MGA Zone 55 grid and recorded with two 64s Garmin Handheld GPS</li> <li>Processing of both the ground magnetic and IP survey data also utilized the publicly available SRTM-derived (~30m pixel) Digital Elevation Model.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> </ul>	<p><b>Ground Magnetic Surveys</b></p> <ul style="list-style-type: none"> <li>Line spacing for the ground magnetic surveys was set at 20m with an East-West orientation and total line coverage of 448 line kilometres.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Field and base station magnetometers were GPS enabled GSM 19W Overhauser, rapid sampling, Magnetometers with a sensor height of approximately 2.5m.</li> <li>Instruments were linked by date and time stamps.</li> </ul> <p><b>IP Surveys</b></p> <ul style="list-style-type: none"> <li>Line spacing for the IP surveys was set at 200m and 100m (infill) with an East-West orientation and total line coverage of 36.9 line kilometres</li> <li>IP Survey equipment involved one Iris Elrec Pro IP receiver, one GDD TXIV, 20 Amp transmitter and one 7.5KVA single phase generator.</li> <li>The IP survey technique utilized a dipole-dipole array with dipole spacing of 50m.</li> <li>IP Data was collected in the time domain using 0.125 Hz (2s ON 2s OFF) base frequency.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>Nominal geophysical survey line bearing was 090° - 270°.</li> <li>The strike of the geology is approximately north-south (range ~340° - 020°) dependent upon the location within the exploration licences.</li> </ul> <p>Therefore, the geophysical survey lines were approximately perpendicular to the prevailing strike of the local geology.</p>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>



## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li><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></li> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>EL006679 is 100% owned by Kalamazoo Resources Ltd and is in good standing with no known impediments.</li> <li>A proportion of EL006679 consists of the Castlemaine Diggings National Park which is classified as Restricted Crown Land although that does not prohibit gold exploration and mining here. Although no mining is permitted within the top 0-100m depth horizon below the surface.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>The project area has been explored and mined for both alluvial and quartz-vein gold mineralization by numerous previous parties since 1851.</li> <li>The results of this work including past production is described in numerous publicly available Geological Survey of Victoria publications.</li> <li>Appraisal of the substantial volume of historical exploration and mine production records occurred during the due diligence period and is ongoing.</li> <li>Kalamazoo Resources acquired a substantial drill hole database from the previous EL owners, Castlemaine Gold Fields/LionGold Corp. Historical drill holes within this database were used during the 3D Structural Geology Modelling reported.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Castlemaine Gold Project contains known gold deposits/occurrences typical of the Bendigo Zone of Central Victoria.</li> <li>Primary gold mineralization is described as orogenic in nature, structurally controlled, and associated with quartz-veining and lesser sulphide mineralization.</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li><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:</i> <ul style="list-style-type: none"> <li><i>easting and northing of the drill hole collar</i></li> <li><i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li><i>dip and azimuth of the hole</i></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The 3D structural geology model of the Pine Plantation was built utilizing available historical, oriented drill holes.</li> <li>The historical drill hole database is a compilation of publicly available data derived from several sources. Whilst verified by Kalamazoo</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> <li>● 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.</li> </ul>	Resources as much as possible this data was used as a guide only in combination with other data such as Geological Survey of Victoria surface maps and the newly acquired geophysical surveys.
Data aggregation methods	<ul style="list-style-type: none"> <li>● In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>● Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>● The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>● Not applicable</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>● These relationships are particularly important in the reporting of Exploration Results.</li> <li>● If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>● If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>● Not applicable</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>● Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>● Maps and sections are contained within the announcement, with ground magnetic data (plan view) and modelled 100m depth slice (plan view) IP survey results shown for the northern prospects of EL006679.</li> <li>● The example image taken from the Pine Plantation area 3D structural geology model includes geo-referenced datasets including the reported new geophysical surveys, historical drill hole data and publicly available surface geological mapping.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>● Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>● The ground magnetic survey data (Figure 1) is shown for only the northern prospects of EL006679.</li> <li>● The IP survey data (Figure 1) is shown for only the northern prospects of EL006679 and only as a plan view example located at 100m depth below surface.</li> <li>● Figure 2 is taken from the Pine Plantation area 3D structural geology model as an example cross-sectional view.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Other substantive exploration data</i>	<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>The 3D structural geology model example shown is based upon a compilation of several historical and newly acquired datasets as produced by PGN Geoscience on behalf of Kalamazoo Resources.</li> </ul>
<i>Further work</i>	<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>Based upon a review of the newly acquired geophysical survey and 3D structural geology model data in combination with existing and historical data Kalamazoo Resources have planned a 10 x 400m nominal depth diamond drill hole programme (~4,000m) to test interpreted gold mineralisation targets.</li> </ul>