

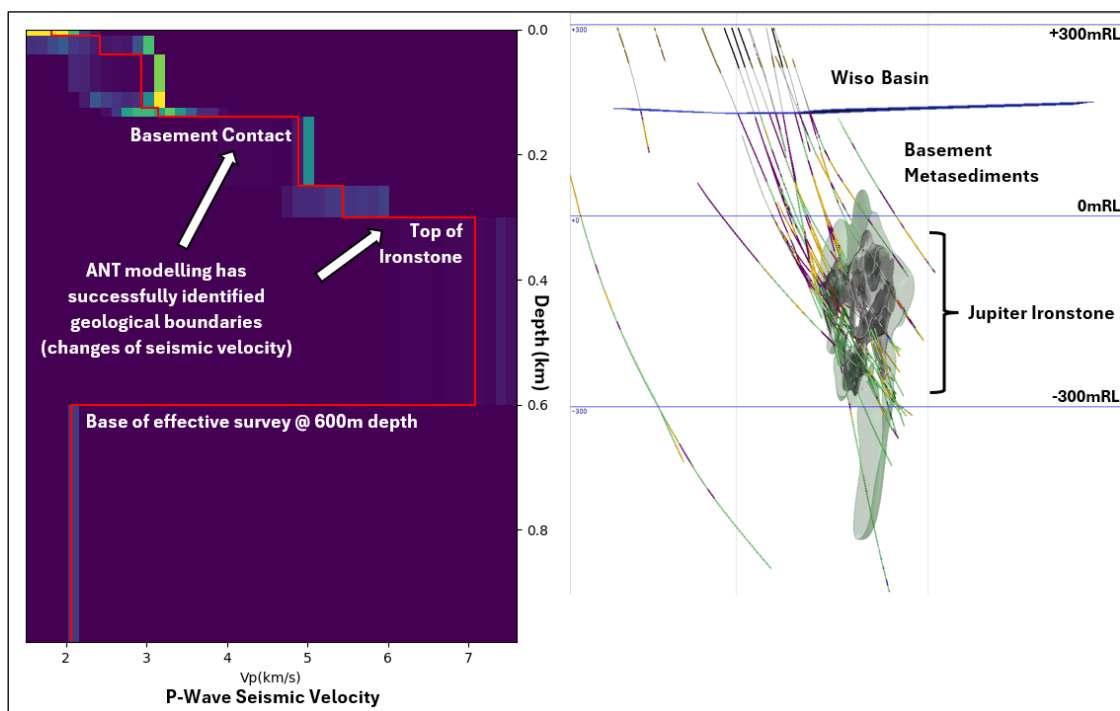
**TESTING OF NEW TECHNOLOGY FOR EXPLORATION IS HIGHLY SUCCESSFUL**

**Castile Resources Limited (ASX: CST) ('Castile' or the 'Company')** is pleased to advise a that it has successfully completed a proof-of-concept passive seismic survey over Rover 1 using the latest Ambient Noise Tomography (ANT) modelling. The purpose of the proof-of-concept test was to establish if ANT can accurately discriminate ironstone bodies such as the Rover 1 iron oxide copper gold (IOCG) deposit, from host metasediments at depth. The test was conducted over the Jupiter Ironstone which hosts the Rover 1 deposit achieving remarkably successful results.

Previous geophysics techniques such as gravity and magnetics could recognise IOCG formations but could not accurately determine the exact depth or location. These test results prove that the ANT survey, which was conducted from surface, imaged to a depth of 600m clearly determined the orebody at 280m to an extremely accurate level (Figure 1). Castile now has an invaluable tool for exploration within the prolific wholly owned Rover Mineral Field, where over one hundred previously identified targets represent potential IOCG bodies highly suited to analysis with the ANT technology. (Figure 2).

Due to the remarkable success of the proof-of-concept survey, Castile will now apply the technology to our high priority exploration targets. We will immediately conduct passive seismic surveys across two, untested coincident magnetic gravity anomalies: Pathfinder 35 and Pathfinder 38 located 23km west of Rover.

**Figure 1: Wave seismic velocity (ANT) vs depth shown against the Jupiter Ironstone orebody of the Rover 1 geological model. The model slice (looking west) is along the seismic section line with a 50m window.**



**CASTILE RESOURCES LIMITED**

Castile is developing the Rover 1 Project within the prolific gold-copper mining province of Tennant Creek in the Northern Territory. The Rover 1 PFS Rover 1 revealed a financially robust, polymetallic, high-grade iron oxide copper gold (IOCG) deposit that will produce gold doré, copper and cobalt metal and high-grade magnetite. High purity (99%) copper and cobalt metal produced will be available for sale to EV and battery manufacturers directly from Castile. The gold doré and 96.5% magnetite product (suitable for green steel) provide further diversity and revenue streams. Castile has been awarded Major Project Status by the NT Government and is engaged with NT Land Corp on a parcel of land within the Middle Arm Sustainable Development Precinct.

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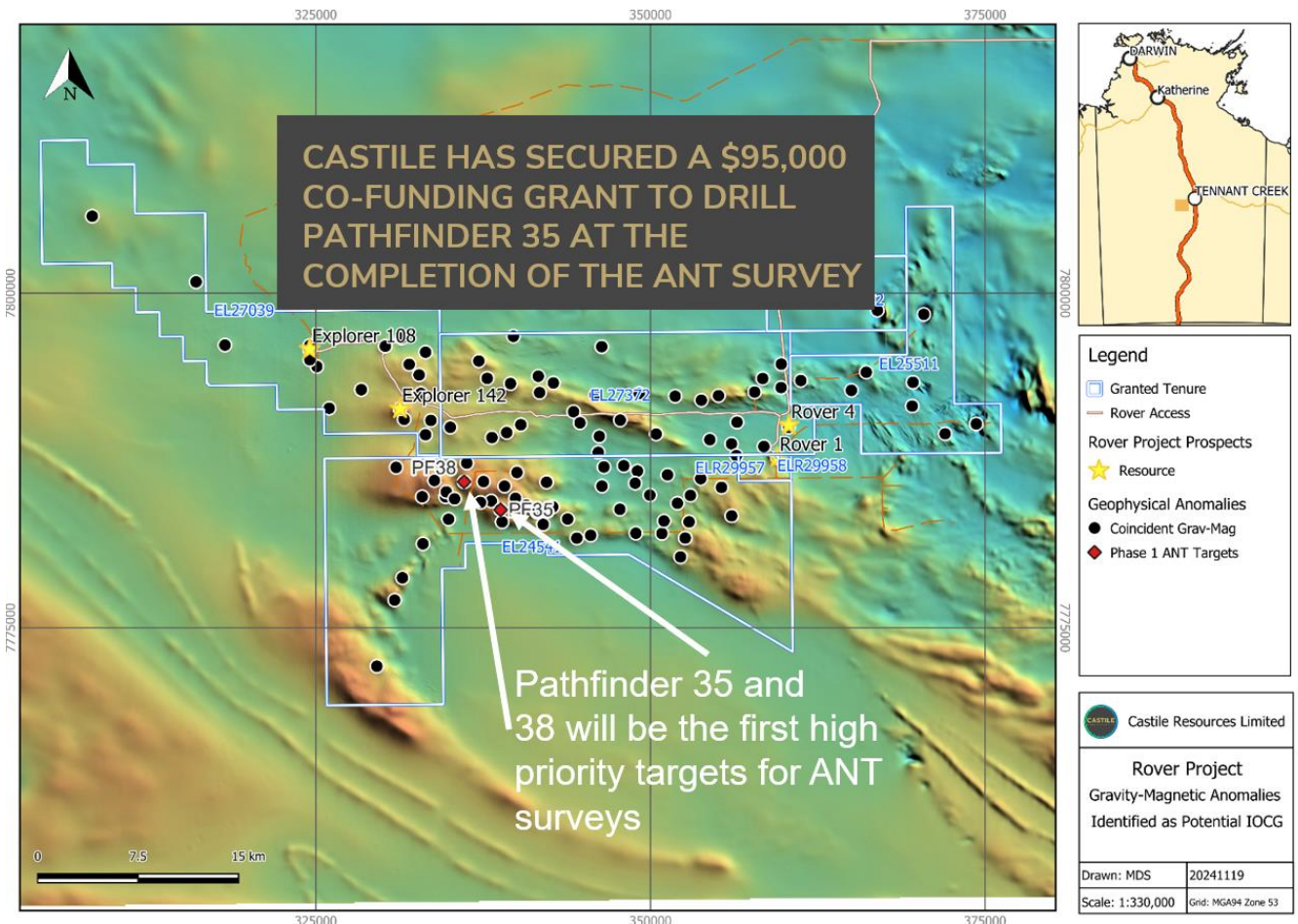
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Mark Hepburn, the Managing Director of Castile commented:

“This incredible cutting-edge technology represents a quantum leap for Castile in our exploration activities. While established geophysical exploration tools such as gravity and magnetics surveys can recognise the presence of IOCG style anomalies below surface, they have limitations in determining the exact depth or extent. ANT technology now provides the luxury of knowing the depth and location of the anomalous body below surface before we drill, virtually guaranteeing that we will hit our desired target. This technology is perfect for Castile – as we can prioritise and inexpensively test over 100 identified potential IOCG targets within our 1,000km<sup>2</sup> of tenements in the Rover Mineral Field and drastically improve our chances of success with the drill bit.”

**Figure 2: The Rover Mineral Field has over one hundred potential IOCG exploration targets (represented as black dots) which are ideal for testing with the ANT technology.**

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**PROOF OF CONCEPT TEST**

ANT utilises cross-correlations of continuous background seismic ‘ambient’ noise (natural and man-made) to determine the crust and mantle structure of Earth through tomographic inversions.

The proof-of-concept study involved completing an ANT survey over the known Rover 1 deposit which is hosted by three ironstones, Jupiter, Jupiter West and Jupiter Deeps. Rover 1 was selected for testing the



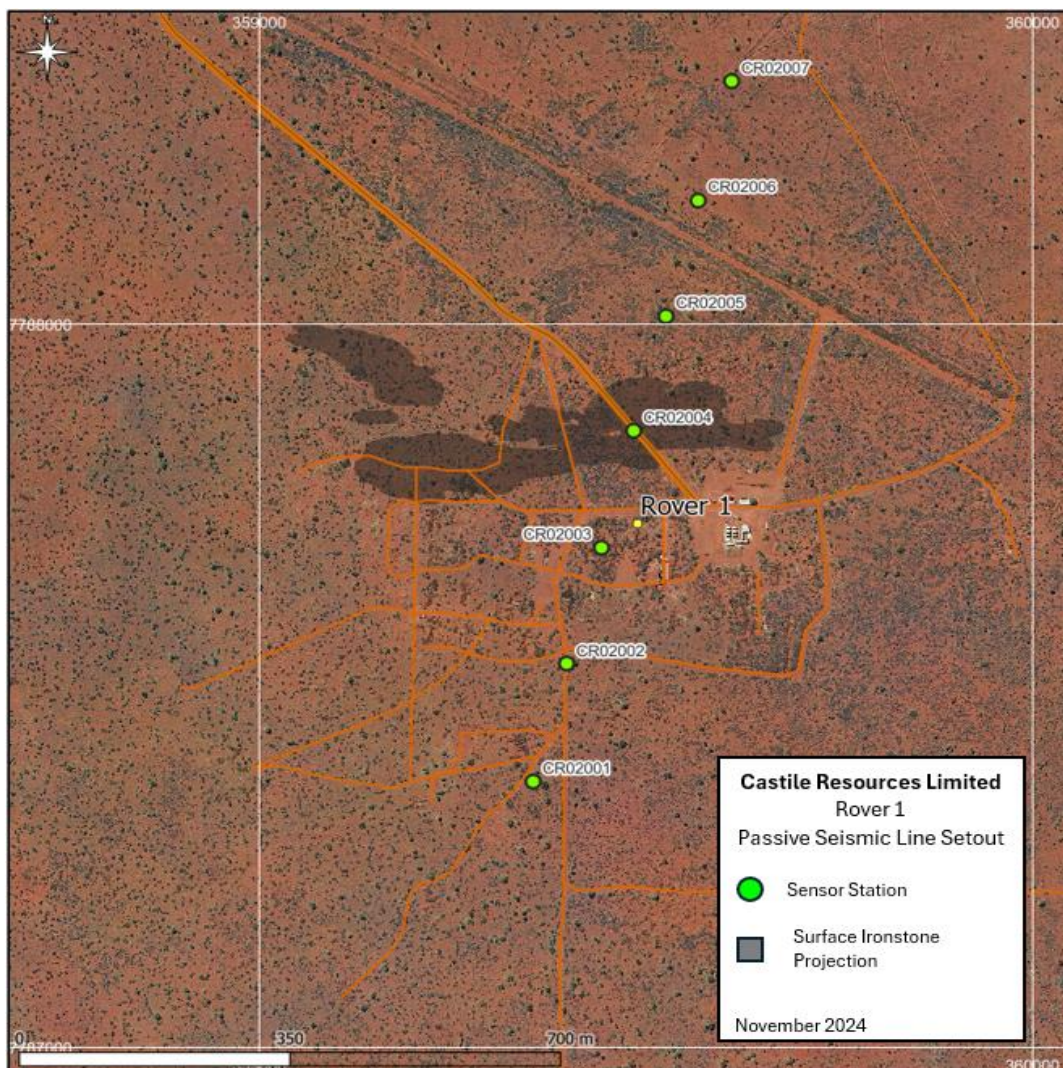
conceptual model as the ironstone extents and properties are well established. Only the surface projection of the ironstone was provided to the survey contractor to aid sensor layout over the ironstone bodies (Figure 3).

Seven sensors were deployed across a one-kilometre line over the Jupiter ironstone, arranged to capture data from surface down to 600m vertical depth and take advantage of the prevailing ambient noise direction from the south.

Sensors collected data over a two-week period. Cross-correlations were undertaken between sensor pairs, resulting in dispersion curves for each station. These dispersion curves of velocity v. time are then inversion modelled. As for many geophysical methods, the ANT technique is subject to the non-uniqueness problem. A two-stage inversion process aims to address this issue and allow for more robust inversion for the local area.

The sensors were re-deployed and reconfigured over Jupiter Deeps to attempt to detect that section of the mineral deposit below 700m depth. Results from the second survey focusing on the Jupiter Deeps ironstone at Rover 1 will be presented to the market once received.

**Figure 3: Rover 1 (Jupiter Ironstone) passive seismic sensor layout over Jupiter section and surface projection of ironstone bodies.**



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## LOOKING FORWARD

After surveys are performed on the priority Pathfinder 35 and Pathfinder 38 targets, a further survey will be conducted over Explorer 108 early in 2025 to determine if ANT has the capability to discriminate semi-massive sulphide mineralisation in metasedimentary rocks and therefore act as an exploration tool for these mineral systems under cover. Castile looks forward to providing further updates as the results of these surveys come to hand.

## CHANGE OF TELEPHONE NUMBER FOR CASTILE RESOURCES LIMITED

Castile advises that the company telephone number has been changed to **+61 8 6313 3969** from 21 November 2024.

## COMPETENT PERSONS STATEMENTS

The information in this report which relates to Exploration Results is based on information compiled by Mr Mark Savage, who is a member of the Australian Institute of Mining and Metallurgy (AusIMM). Mr Savage is a full-time employee of Castile Resources Limited and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Savage consents to the inclusion in this report of the matters based on that information in the form and context in which it appears.

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Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>• <i>Nature and quality of sampling (e.g. 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 (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.</i></li> <li>• <i>Drill type (e.g. core, reverse circulation, open-hole 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.).</i></li> <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 loss/gain of fine/coarse material.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The seismic survey was undertaken using seven seismic sensors. Sensors were designed, constructed and installed by Odyssey Geophysics using Silicon Audio High-Sensitivity seismometers which offer an instrument self-noise of below the New Low Noise Model (NLNM) and are capable of recording frequencies from 0.1 to 10Hz.</li> <li>• The sensors were set out on a 1km line at a nominal station spacing of 170m, oriented to the prevailing ambient noise direction to the south and the cross strike to the Rover orebody. Ambient noise was recorded over two weeks.</li> <li>• Preliminary to the implementation of the seismic survey discussed herein, 3 sensors were deployed for 5 months between December 2023 and May 2024 to evaluate the ambient seismic noise field at the Rover Project. The large volume of baseline data recorded was used to investigate the robustness of the noise and consistency of ambient noise data collected by comparing against smaller sub-windows of processed data. Results show that 10 day sub-periods, 5 day sub periods and 2 day sub-periods can be correlated with a high degree of confidence, indicating data collection is robust and the ambient noise field consistent.</li> <li>• Probabilistic Power Spectral Density (PPSD) analysis was performed to assess the low-frequency noise performance of the Silicon Audio seismometer. Investigations show that the instrument sensitivity is sufficient to record ambient noise within the low and high noise bands. The overall shape of the noise band indicates that the installation of sites were of high-quality; well coupled with the sub-surface and unaffected by high frequency spurious noise or resonance that could negatively influence results.</li> <li>• Data collected was first processed for cross correlation between station pairs to generate dispersion curves for each station. The dispersion curves of seismic velocity over time were then inverted using a two stage process to solve for depth for P-wave and S-wave components of lithological features. The first pass utilised assumptions on depth for various features using a Bayesian rjMCMC</li> </ul>





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<p><b>Drilling techniques</b></p> <p><b>Drill sample recovery</b></p>	<p>inversion algorithm, developed in-house by Odyssey Geophysics. This method is coupled with in-house forward model software based on Diffuse Field Assumption (DFA). The DFA technique allows the modelling of both surface waves and body waves. The second inversion stage relaxes the depth constraints but utilizes the best fitting velocity information received from the previous stage. The same rjMCMC and DFA algorithm is used to perform the second operation.</p> <ul style="list-style-type: none"> <li>• No drilling has been undertaken.</li> <li>• No drilling has been undertaken.</li> </ul>
<p><b>Logging</b></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 applicable, drilling has not been undertaken.</li> </ul>
<p><b>Sub-sampling techniques and sample preparation</b></p>	<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>• Not applicable, drilling has not been undertaken.</li> </ul>

<p><b>Quality of assay data and laboratory tests</b></p>	<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 (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 style="list-style-type: none"> <li>• Not applicable, drilling has not been undertaken</li> </ul>
<p><b>Verification of sampling and assaying</b></p>	<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, drilling has not been undertaken</li> </ul>
<p><b>Location of data points</b></p>	<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>• Stations picked up by GPS with +/-2m accuracy.</li> <li>• MGA94 Zone 53 grid coordinate system used.</li> <li>• Topographic control from photogrammetry undertaken in 2020.</li> </ul>
<p><b>Data spacing and distribution</b></p>	<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>• Seven sensors spaced on a nominal 170m spacing for one kilometre.</li> </ul>
<p><b>Orientation of data in relation to geological structure</b></p>	<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</li> </ul>	<ul style="list-style-type: none"> <li>• Line oriented south-southwest in the direction of the ambient seismic noise field and cross-strike to the Jupiter ironstone body.</li> </ul>

	<i>should be assessed and reported if material.</i>	
<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>Not applicable</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>Not applicable</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 Rover Project comprises 5 granted exploration leases.</li> <li>Native title interests are recorded against the Rover tenements.</li> <li>The Rover tenements are held by Castile Resources Limited exclusively.</li> <li>Third party royalties exist across various tenements at Rover, over and above the Northern Territory government royalty.</li> <li>Castile operates in accordance with all environmental conditions set down as conditions for grant of the leases.</li> <li>There are no known issues regarding security of tenure.</li> <li>There are no known impediments to continued operation.</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 Tennant Creek area has an exploration and production history in excess of 100 years.</li> <li>The Rover area in particular has an exploration history starting in the 1970's.</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 Rover Project is presently considered to be associated with a southern repeat of the 1860-1850Ma Warramunga Province, in particular, the Paleoproterozoic Ooradigee Formation. This is a weakly metamorphosed succession of partly tuffaceous sandstones and siltstones and turbidite shales. Locally the turbidite metasediments are variably altered by hematite and silica flooding.</li> <li>Mineralisation is mainly of the Iron Ore Copper-Gold (IOCG) type, particularly the Tennant Creek sub-type. Massive ironstone comprised of magnetite or hematite +/-quartz is interpreted</li> </ul>



to be alteration of metasediments within a structural trap.

- Copper manifests as chalcopyrite, associated with breccia fill within magnetite-quartz ironstones and Jasper/BIF that often form an alteration transition to a chlorite alteration envelope. Pervasive sub-economic copper levels can persist throughout the zone. Economic levels of copper are dominantly contained in the lower massive magnetite zone of the ironstone bodies, particularly where intense chlorite alteration replaces magnetite laterally and at depth, grading into magnetite chlorite stringer zones. Gold content is related to an increase in haematite dusted quartz veins, with bonanza grades associated with massive pyrite with subordinate bismuthite. Cobalt appears to have a direct relationship with pyrite.
- Lead and zinc mineralisation at Explorer 108 is associated with a brecciated, dolomitised metasedimentary unit, consisting of irregular, generally narrow bands or veins of semi-massive sphalerite and galena. A basal “high-grade” zone is present at the contact of the altered metasediments and lower felsic volcanoclastic unit.
- It is postulated that Explorer 108 mineralisation is an analogue of Mt Isa style base metal mineralisation.

**Drill hole Information**

- *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:*
  - *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*
  - *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.*
- Not applicable, drilling has not been undertaken

<p><b>Data aggregation methods</b></p>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Not applicable, drilling has not been undertaken</li> </ul>
<p><b>Relationship between mineralisation widths and intercept lengths</b></p>	<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 (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable, drilling has not been undertaken</li> </ul>
<p><b>Diagrams</b></p>	<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>• Diagrams are presented in the ASX release dated 21/11/2024 related to this edition of JORC Table 1.</li> </ul>
<p><b>Balanced reporting</b></p>	<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>• Not applicable, drilling has not been undertaken</li> </ul>
<p><b>Other substantive exploration data</b></p>	<ul style="list-style-type: none"> <li>• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>• Geological information related to the reported results is presented in the ASX release dated 21/11/2024 related to this edition of JORC Table 1.</li> </ul>



**Further work**

- *The nature and scale of planned further work (e.g. 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.*
- Ongoing exploration and mine planning assessment continues to take place at the Rover Project to expand the resource base.

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