

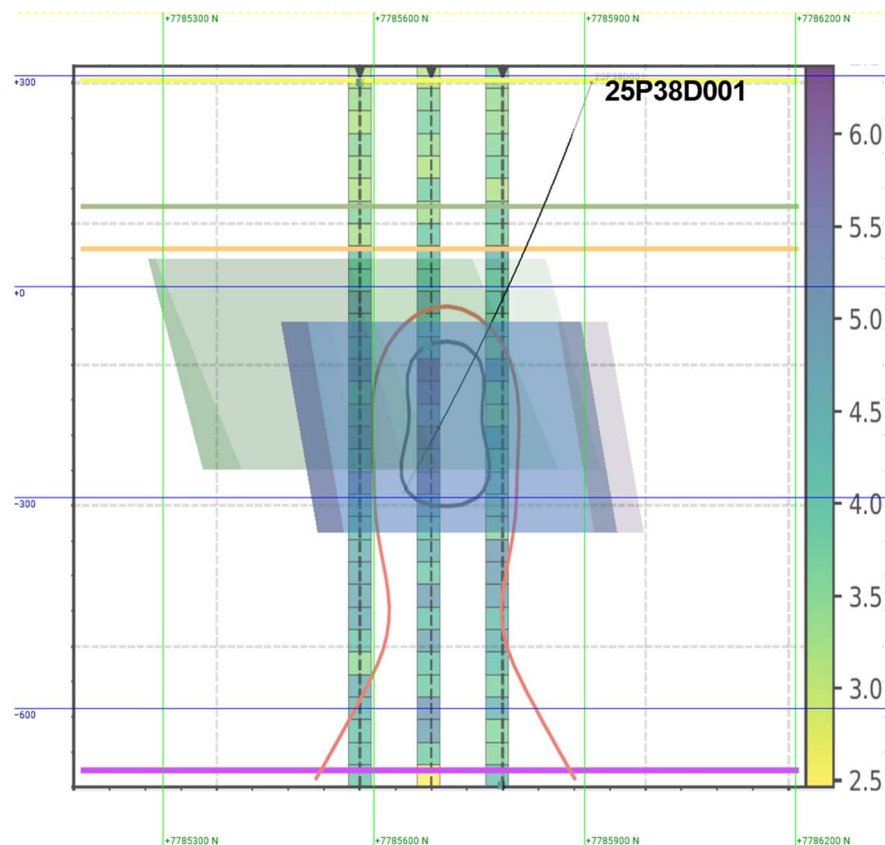
10 April 2025

## NEW TECHNOLOGY UNLOCKS ENTIRE ROVER FIELD IOCG POTENTIAL FIRST ANOMALY DETECTED USING ANT AT PATHFINDER 38 TO BE DRILLED

Castile Resources Limited (Castile' or the 'Company') is pleased to advise the market that the Ambient Noise Tomography (ANT) passive seismic survey at Pathfinder 38 has detected a significant anomaly. Hole 25P38D001 has been designed to drill test this anomaly for significant iron-oxide-copper-gold (IOCG) mineralisation with drilling scheduled to begin on 18 April 2025. The Northern Territory Geological Survey (NTGS) will co-fund the hole at Pathfinder 38 by providing a \$95,540 grant.

The ANT analysis interprets the Pathfinder 38 magnetic anomaly to have a high seismic velocity which is hypothesised to be high density material such as Iron Oxide Copper Gold deposits (IOCG's) like Castile's flagship Rover 1 Project currently being developed.

**Figure 1: Pathfinder 38 planned diamond drill hole 25P38D001 (black line). The blue area is a new remanent magnetism model. The columns are ANT sensor pair midpoints depicting modelled p-wave velocities. Note that the high velocity zone coincides with the new remanent magnetism model.**



Mark Hepburn, the Managing Director of Castile, commented:

*"Castile has been working with this incredible cutting-edge ANT technology for the last two years for this exact outcome. By mapping the Pathfinder 38 anomaly using ANT technology – we are amongst the first in the world using this technology in imaging complicated three-dimensional structures looking through unconforming cover rocks at depth."*

**CASTILE RESOURCES LIMITED**

 Suite 1B, 17 Southport Street, West Leederville WA 6007

 +61 8 6313 3969

 [info@castile.com.au](mailto:info@castile.com.au)

 [www.castile.com.au](http://www.castile.com.au)

For personal use only

We will start drilling for the centre of the Pathfinder 38 anomaly next week knowing that the ANT survey has provided confirmation of the depth and location of the target.

This is just the start of the program as we have identified over one hundred targets, using current technology, within the Rover Mineral Field that we intend to test with the ANT technology. The results of ANT testing will determine the priority order in which each target is then drilled."

**Figure 2: Plan view of Pathfinder 38 with the black line showing diamond drill hole 25P38D001 which will target the centre of the anomaly. The green area is the previous (older technology) non-remanent magnetism model. The blue area is the new remanent magnetism model.**

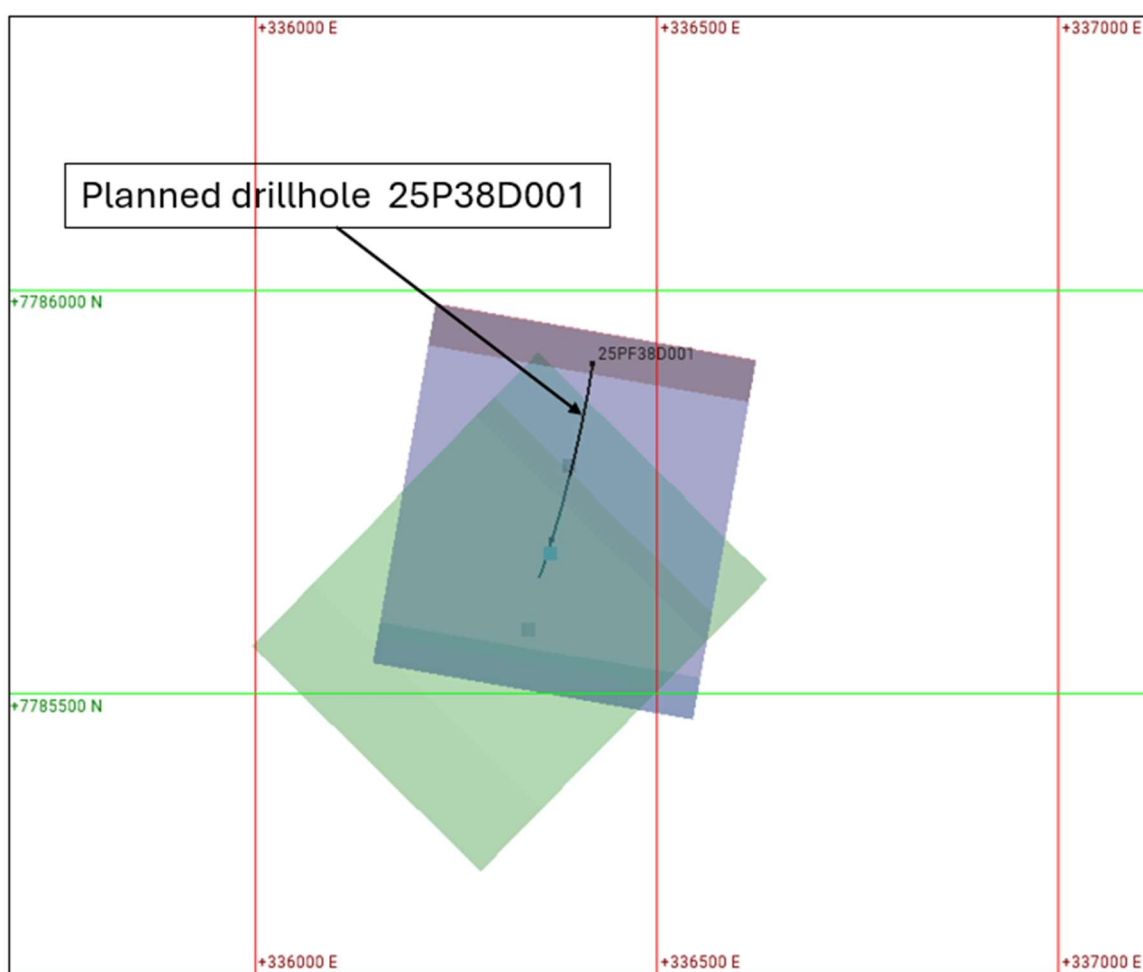


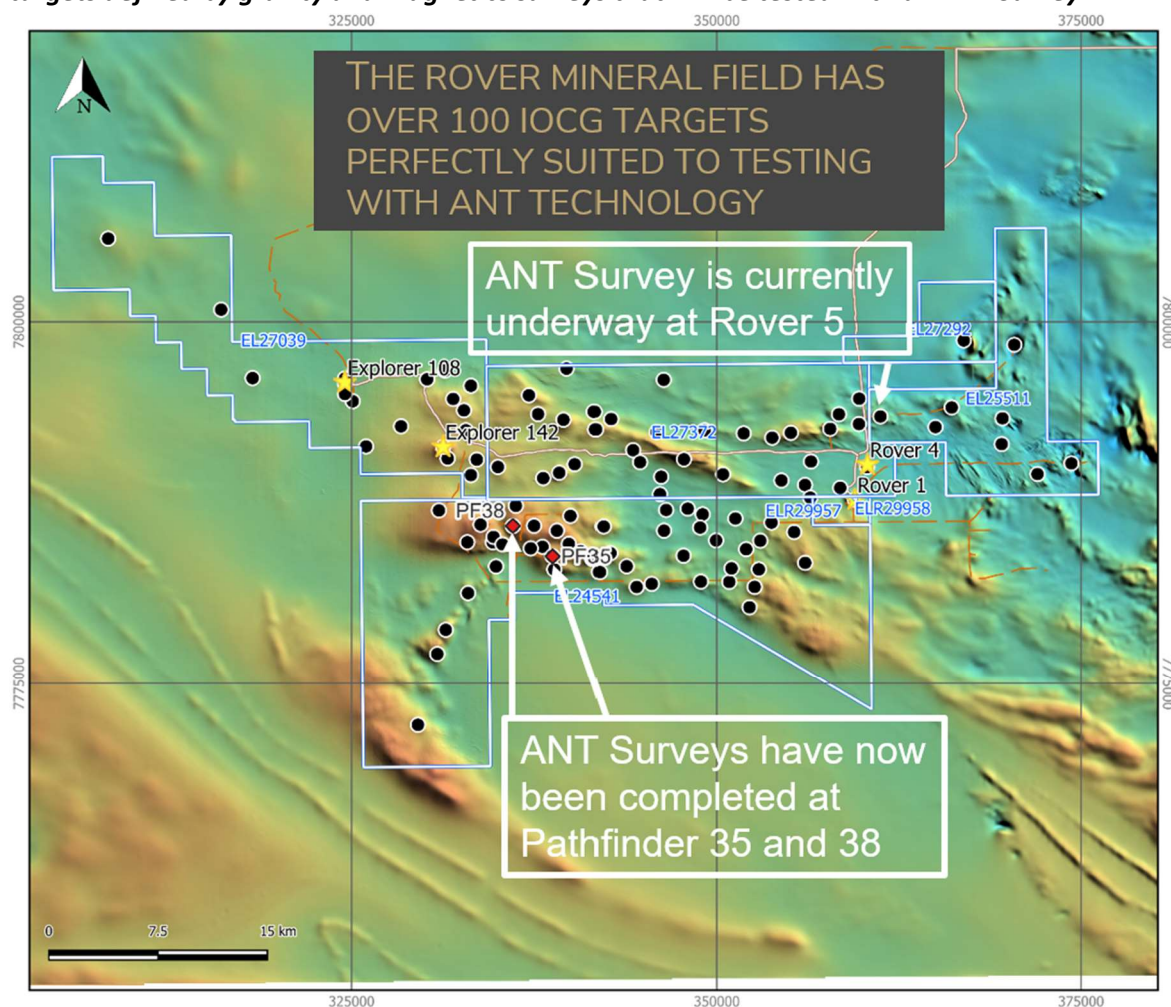
Figure 2 shows where legacy geophysical techniques such as magnetic surveys (green and blue area) have modelled the likely volume of the Pathfinder 38 anomaly source. These techniques cannot accurately determine depth or location. ANT technology provides the "third eye" view, to give a more accurate reading of anomaly depth and location (Figure 1) by revealing the part of the anomaly with the highest seismic velocity and therefore high density. This has subsequently been used for drillhole targeting.

ANT technology uses naturally occurring seismic vibrations, in this instance, ocean swell crashing into the Great Australian Bight, which pass through the Australian continent. Sensors placed in an array on the surface above the exploration target collect the vibrational data.

A tomographic inversion solves the differences between sensor pairs to model the seismic velocity of the rock mass below. Identified high seismic velocity zones are interpreted as higher density rocks which, in the context of the Rover mineral field and adjacent Tennant Creek mineral field, are likely to be ironstones and therefore potentially IOCG's.

Our recent focus has been preparing Rover 1, our flagship project, for development. We have also now defined over 100 blind but coincident magnetic and gravity anomalies (Figure 3) in the Rover Field. So far only 6 targets have been previously drilled using old geophysical technology with four discoveries made. We will now be testing all prospective targets with the ANT technology. ANT surveys have been completed at Pathfinder 35 and 38 with the sensors now placed at Rover 5 to complete a survey on this next high priority target.

**Figure 3: Map of the Rover Mineral Field locating completed ANT Surveys and over one hundred targets defined by gravity and magnetics surveys that will be tested with an ANT Survey.**





**Figure 4: Ambient Noise Tomography sensors being prepared for deployment in the field. The seven sensors shown would each be spaced approximately 250m apart making a total line or "array" of 1.5kms for the survey.**



Castile Resources staff have received training in the positioning, placement and deployment of the sensors. The sensors are left in place for approximately two weeks before being deployed to their next target. Once the data is collected and downloaded, the analysis using the proprietary algorithm takes approximately two weeks. Castile will continuously run ANT surveys to test the Rover Mineral Field anomalies in order of priority for the next two years using this remarkable new technology.

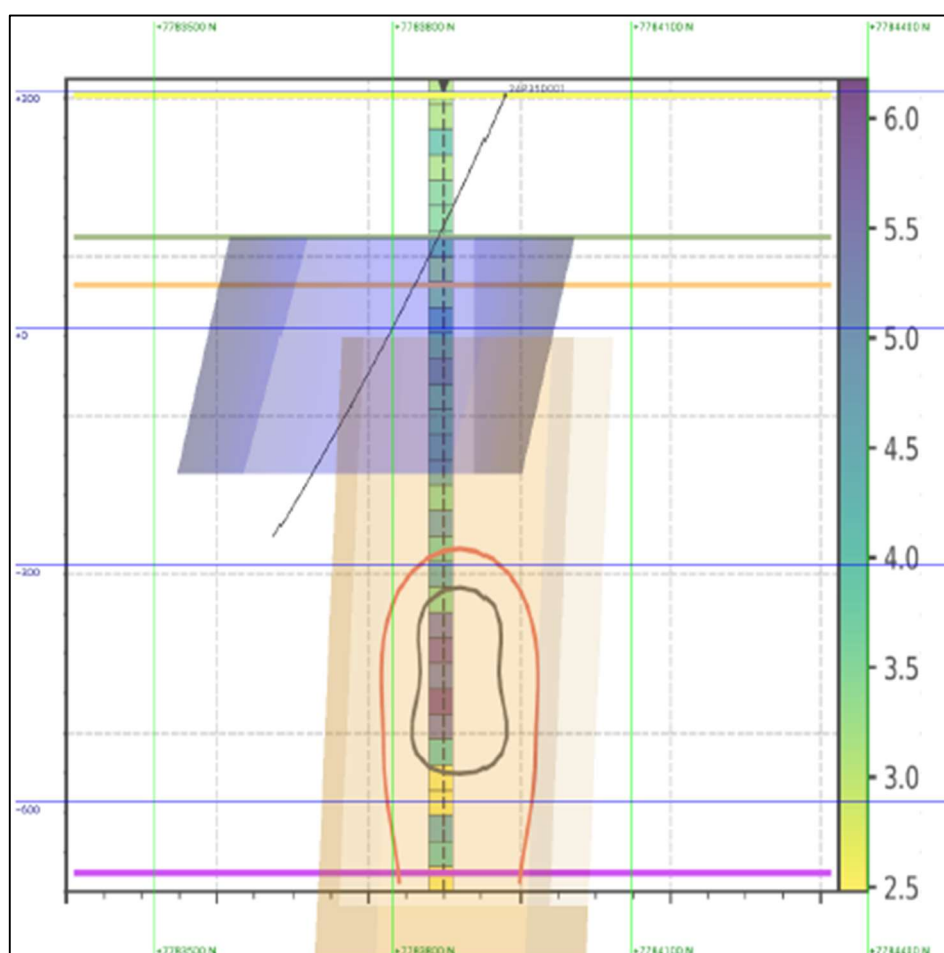
Northern Territory Geological Survey has amended the \$95,540 grant originally awarded to drill hole 24P35D001 at Pathfinder 35. The entire grant has now been awarded to co-fund hole 25P38D001 at Pathfinder 38.

Castile requested the amendment at the completion of the ANT surveys of the two prospects. The interpretation of the ANT survey over Pathfinder 35 shows a deep high velocity source, within the volume of the new remanent magnetic model (Figure 5 – orange zone). This target was then considered undesirable to drill at this time.

These results showcase the enormous value of ANT technology in assisting the decision-making process for prioritising exploration effort. If Castile had drilled the original proposed hole that was

planned using only conventional magnetic and gravity modelling (Figure 5, blue area), the real anomaly source would not have been tested. ANT now solves this issue.

**Figure 5: Pathfinder 35. Oblique section along ANT line showing station pair ANT inversions for P-wave velocity, remanent magnetic model (orange), non-remanent original proposal magnetic model (blue) and original proposed diamond hole 24P35D001 from GDC1700004 in black.**



Mark Hepburn, Managing Director  
Castile Resources Limited

For further enquiries please contact [info@castile.com.au](mailto:info@castile.com.au) or phone +61 8 6313 3969

Authorised for release by the Board of Castile Resources Limited

## Competent Persons Statements

The information contained in this report relating to Exploration Results, Minerals Resources and Ore Reserves has been previously reported by the Company as referenced in this report. The Company confirms that it is not aware of any new information or data that would materially affect the information included in the Announcements and, in the case of estimates of Mineral Resources and Ore Reserves that all material assumptions released on 5 December 2022 and technical parameters underpinning the estimates continue to apply and have not materially changed.

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> <li>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.).</li> <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> </ul>	<ul style="list-style-type: none"> <li>The seismic survey was undertaken using six 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 1.5km line at a nominal station spacing of 250m, oriented to the prevailing ambient noise direction to the south and the cross strike to the magnetic forward model. Ambient noise was recorded over two weeks.</li> <li>Preliminary to the implementation of the seismic survey discussed herein, 7 sensors were deployed for 6 weeks between November 2024 and January 2025 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.</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</li> </ul>



	<ul style="list-style-type: none"> <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>	<p>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 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>
<b>Drilling techniques</b>		<ul style="list-style-type: none"> <li>No drilling has been undertaken.</li> </ul>
<b>Drill sample recovery</b>		<ul style="list-style-type: none"> <li>No drilling has been undertaken.</li> </ul>
<b>Logging</b>	<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>Not applicable, drilling has not been undertaken.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<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> <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> </ul>	<ul style="list-style-type: none"> <li>Not applicable, drilling has not been undertaken.</li> </ul>

	<ul style="list-style-type: none"> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	
<b>Quality of assay data and laboratory tests</b>	<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>
<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>Not applicable, drilling has not been undertaken</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>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>
<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>six sensors spaced on a nominal 250m spacing for 1.5 kilometre. This set out provides appropriate pair resolution to provide across strike discrimination</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> </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 magnetic forward model.</li> </ul>



- 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.

**Sample security**

- The measures taken to ensure sample security.
- Not applicable

**Audits or reviews**

- The results of any audits or reviews of sampling techniques and data.
- Not applicable

## 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> </ul>

- 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 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
- Not applicable, drilling has not been undertaken

	report, the Competent Person should clearly explain why this is the case.	
<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 (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>
<b>Relationship between mineralisation widths and intercept lengths</b>	<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>
<b>Diagrams</b>	<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>
<b>Balanced reporting</b>	<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>
<b>Other substantive exploration data</b>	<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 10/04/2025 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.