# Cu-REE Gravity Targets at Aileron - West Arunta

- **'Bullseye' density anomaly identified at the Caird Cu-REE target ("Caird"), part of Aileron in the West Arunta region of WA**
- **600m diameter (~2 mgal) discrete, gravity anomaly is coincident with a magnetic feature**
- **Interpreted as a pipe-like intrusion or alteration system with potential for IOCG style copper and carbonatite-hosted REE mineralisation**
- **Caird is located on the major regional fault that hosts the Luni mineralised carbonatite discovered by WA1 Resources (ASX:WA1) 5km to the south-east**
- **Caird is one of several, untested, priority geophysical targets identified at Aileron**
- **Drilling of Caird, Worsley and other targets at Aileron to commence in April-June 2023**
- **8,000 line km magnetic/radiometric survey results due early December 2022**

The directors of Encounter Resources Ltd ("Encounter") are pleased to announce that gravity inversion modelling has identified an interpreted pipe-like intrusion or alteration system at Caird, part of the Aileron Cu-REE project (100% ENR) in the West Arunta region of WA.

**Commenting on the Caird target, Encounter Managing Director Will Robinson said:** *"The Caird gravity anomaly was one of the most compelling features to come out of the gravity survey over Aileron. Gravity surveys in the region appear to have a high success rate identifying mineralised intrusions. We are excited to drill Caird and other targets at the start of the 2023 field season. Furthermore, additional targets are expected to be identified from the recent 8,000 line km magnetic/radiometric survey with results due in early December 2022."*

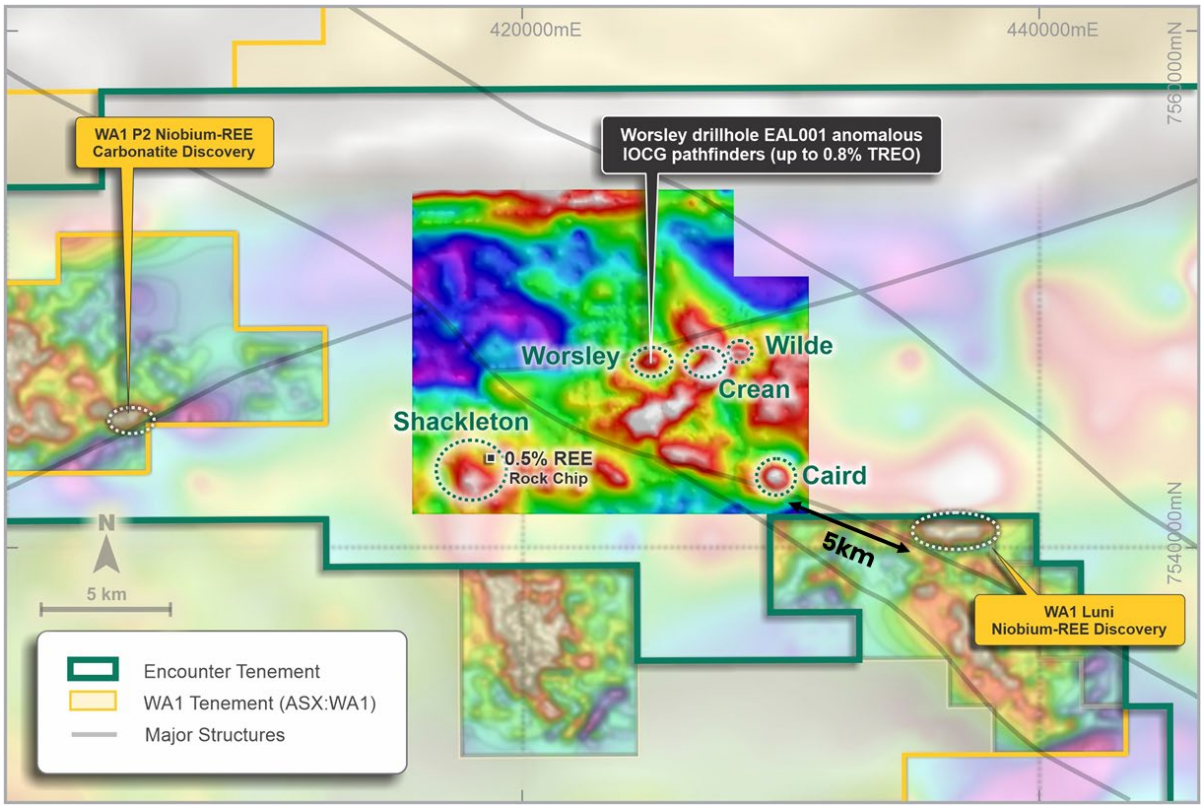
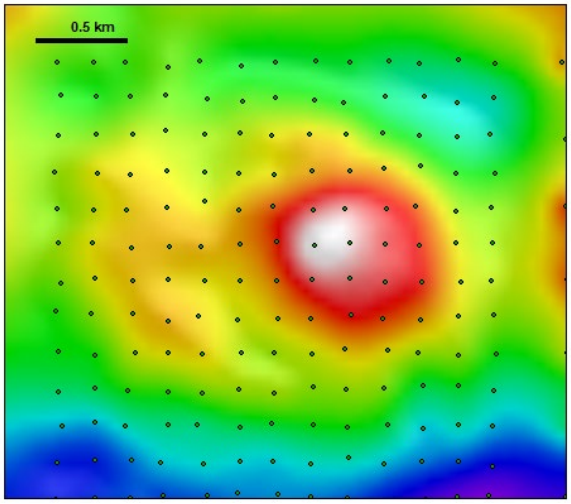


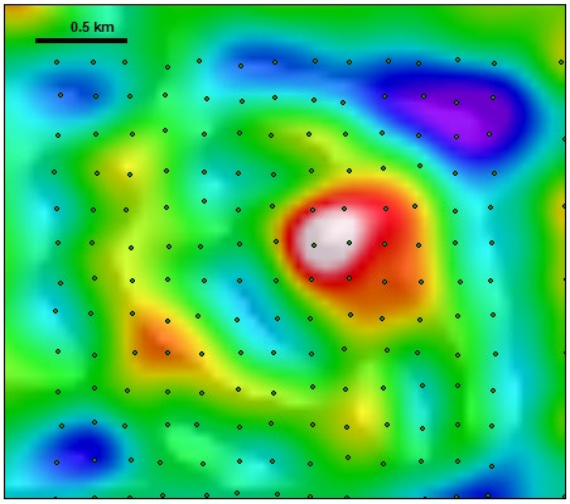

**Figure 1 - Detailed residual gravity image with interpreted structures and identified targets in the western part of >100km long Aileron project [1,2,3,4]**

**Encounter Resources Limited**
Suite 2, 1 Alvan St
Subiaco WA 6008

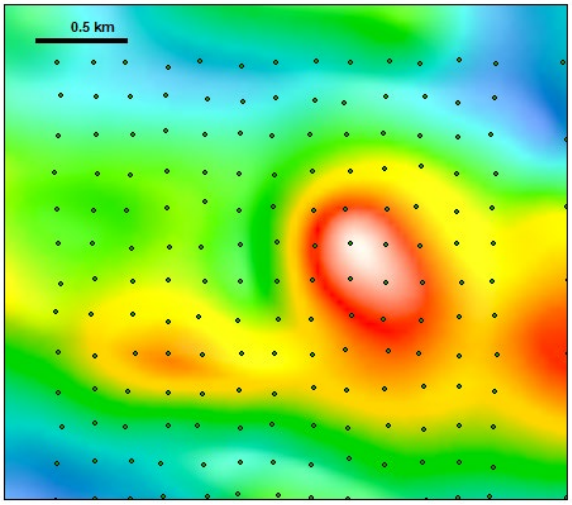
**P** +61 8 9486 9455
**E** contact@enrl.com.au
**www.enrl.com.au**



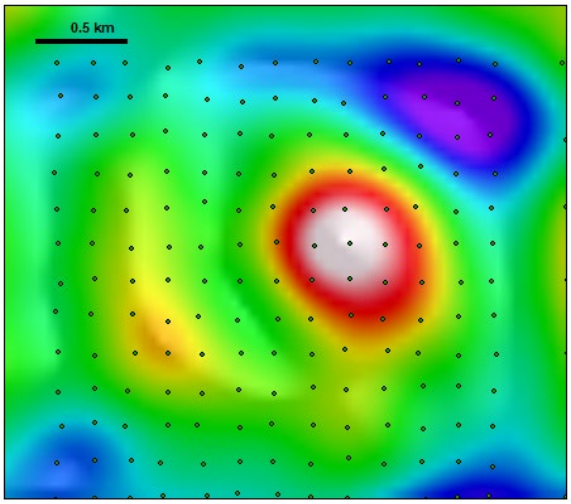

**Residual Gravity**




**Gravity inversion depth slice 300m**




**Magnetics RTP**




**Gravity inversion depth slice 500m**

**Figures 2, 3, 4 & 5 – Caird target at Aileron - Residual gravity image with inversion modelling demonstrating the sub-vertical, pipe-like nature of the anomaly. A reduction to pole magnetic image also shown.**

## Background

Aileron is located in the West Arunta region of WA ~600km west of Alice Springs. The project contains several structural and geophysical targets identified through aerial magnetic and gravity surveys.

To date, only one diamond hole, EAL001, has been drilled within the project which targeted a discrete magnetic anomaly (Worsley). EAL001 was partially completed to a depth of 158m in October 2020 and drilled through 5m of shallow cover followed by a brecciated hydrothermal hematite-chlorite-altered granite with a narrow mafic intrusion. Within these units, zones of increased brecciation and alteration correlate with increased REE anomalism with a distinctive IOCG geochemical signature. The hole ended prior to designed depth due to a mechanical failure.

Assays from EAL001 include zones of anomalism in copper (up to 0.1% Cu), gold (up to 48ppb Au), molybdenum (up to 155ppm Mo), niobium (up to 773ppm Nb) and highly elevated rare earth elements (up to 0.8% TREO) consistent with the IOCG deposit model *(refer ASX release 28 January 2021)*.

The presence of highly anomalous REE at Aileron and the mineralised carbonatite discoveries by WA1 Resources, provide encouragement that an alkaline magmatic hydrothermal system has been active in the region. Such systems are known to play an important role in the formation of both IOCG and carbonatite-hosted REE deposits.

**Gravity Survey**

In November 2021, a helicopter-supported ground gravity survey was completed at Aileron which confirmed and elevated the presence of multiple priority anomalies.

Caird is a discrete and coincident "bullseye" gravity and magnetic anomaly. Inversion modelling has defined a 600m diameter (~2 mgal) discrete, gravity anomaly at Caird. This anomaly is sub-vertical and can be clearly recognized in the 300m and 500m depth slices. The anomaly is interpreted as a pipe-like discrete intrusion or alteration system.

Caird is located immediately adjacent to the major Endurance fault system that hosts the recent Luni mineralised carbonatite discovery by WA1 Resources (ASX:WA1) 5km to the south-east.

Caird is mapped by GSWA as an area of residual regolith. However, the causative body for the geophysical anomaly is not exposed at surface. During a reconnaissance field visit, quartz veining and ferruginous duricrust were identified at surface close to the south-west margin of the anomaly. Accordingly, a systematic surface geochemistry survey will be undertaken during 2023.

**Drill Ready**

Preparations for drilling Caird and Worsley are well advanced with a heritage survey completed in May 2022 and access tracks established.

Compilation and interpretation of the geophysical data is ongoing with results from an 8,000 line km magnetic/radiometric survey expected in early December 2022.

Additional gravity surveys and surface geochemistry are planned for the start of the 2023 field season.

Drilling of Caird, Worsley and other targets will commence in April-June 2023.

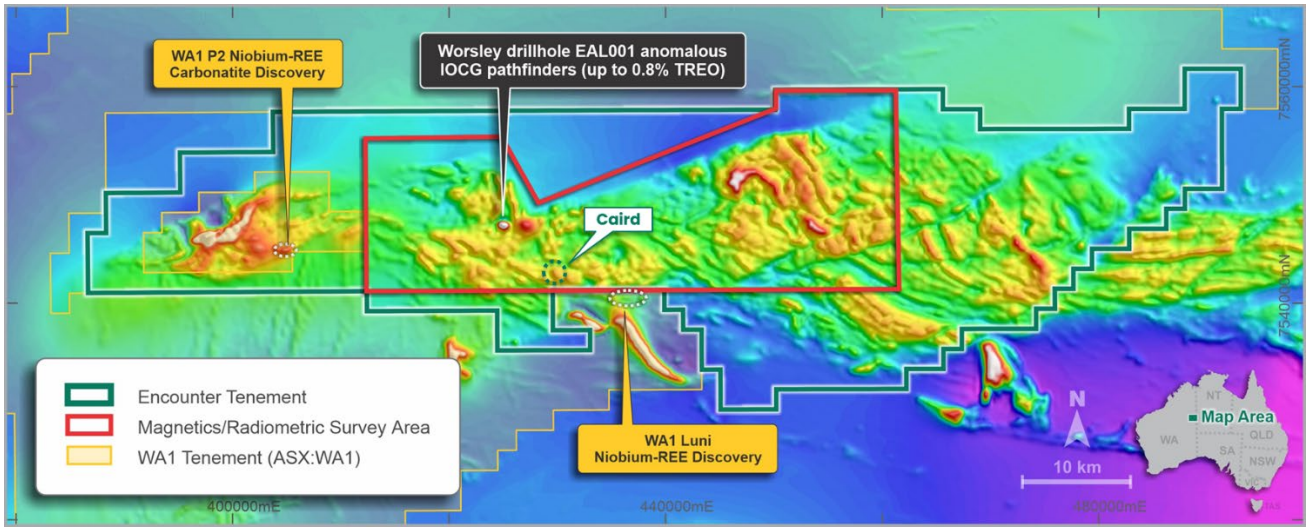
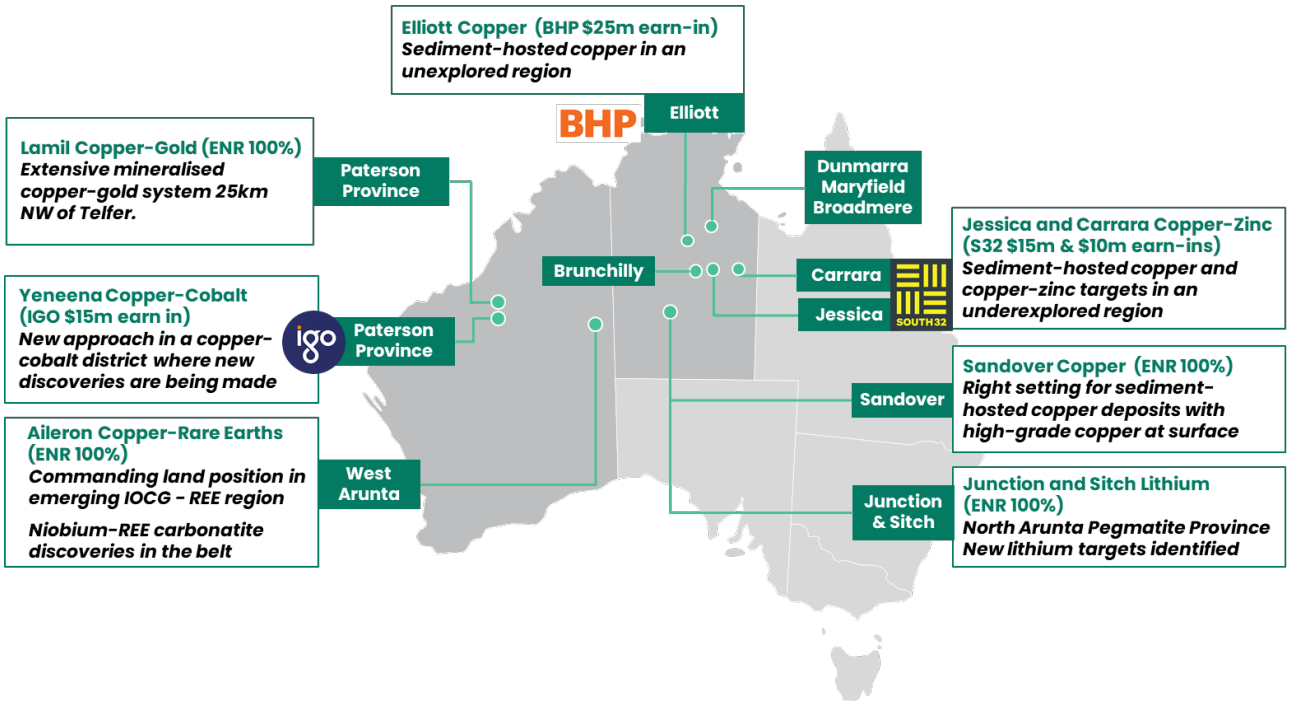



**Figure 6 - Aileron Cu-REE project – Magnetics (RTP)**

[1] **refer ASX release 28 January 2021**
[2] **refer ASX release by WA1 - 26 October 2022**
[3] **refer ASX release 14 February 2022**
[4] **refer ASX release by WA1 – 16 November 2022**

## About Encounter




Encounter is one of Australia's leading mineral exploration companies listed on the ASX. Encounter's primary focus is on discovering major copper dominant deposits in Australia.

Encounter partners with leading mid-tier and major producers to advance its extensive project pipeline with more than $25m of project funding contributed by partners over the past decade. Currently, Encounter has farm-in agreements in place with world leading resources companies to provide up to $65m in initial exploration funding. Encounter's assets include:

### 100% ENR projects

**Aileron Copper-Rare Earths Project –WA**

- IOCG style copper-gold-REE in drilling
- Olympic Dam age mineralisation events
- New niobium-REE discovery adjacent to Aileron

**Sandover Copper Project - NT**

- Key geological units and processes for sediment-hosted copper
- Bornite identified in historical drill core

**Lamil Copper-Gold Project - Paterson Province WA**

- Diamond drilling completed Sep 22
- Assay results Dec 22

**Junction Lithium Project - NT**

- North Arunta Pegmatite Province
- New lithium targets identified
- Field assessment commencing

### Farm-in partners

BHP

**Elliott Copper Project - NT**
**(up to $25m farm-in funding)**

- Targeting sediment hosted copper
- Diamond drill program Oct-Nov 2022

SOUTH32

**Jessica and Carrara Projects – NT**
**(up to $25m farm-in funding)**

- Two farm-in agreements completed Jun 22
- Eight new targets identified

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**Yeneena Project – Paterson Province WA**
**(up to $15m farm-in funding)**

- 4,000m diamond & 1,500m aircore drilling
- Six diamond drill holes completed

**For further information, please contact:**


Will Robinson
Managing Director
+61 8 9486 9455
contact@enrl.com.au

Michael Vaughan
Fivemark Partners
+61 422 602 720
michael.vaughan@fivemark.com.au


*The information in this report that relates to Exploration Results is based on information compiled by Mr. Mark Brodie who is a Member of the Australasian Institute of Mining and Metallurgy. Mr. Brodie holds shares and options in and is a full time employee of Encounter Resources Ltd and has sufficient experience which is relevant to the style of mineralisation under consideration to qualify as a Competent Person as defined in the 2012 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Brodie consents to the inclusion in the report of the matters based on the information compiled by him, in the form and context in which it appears.*

*The Company confirms that it is not aware of any new information or data that materially affects the information in the relevant ASX releases and the form and context of the announcement has not materially changed. The Company confirms that the form and context in which the Competent Persons findings are presented have not been materially modified from the original market announcements.*
*This announcement has been approved for release by the Board of Encounter Resources Limited.*

## SECTION 1 SAMPLING TECHNIQUES AND DATA

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Sampling techniques** | *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 sounds, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* | A helicopter supported 400m spaced gravity survey was completed at Aileron by Atlas Geophysics.<br>In addition, 200m spaced gravity infill data was collected to cover a series of high priority magnetic targets including the Caird target at Aileron. |
| | *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used* | At each station, the gravity operator took a minimum of two gravity readings of 15 or 20 second duration so that any seismic or wind noise could be detected. Control station readings were set to 60 second duration. Before taking the reading, the operator ensured that the instrument tilt-reading was restricted to less than 5 arc-seconds and after the reading, not higher than 20 arc-seconds. Tilt-testing prior to project commencement showed that the gravity meters performed well even at extreme tilts (better than 0.05 µm/s2 at +150/-150 arc-seconds). |
| | *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (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* | A helicopter supported 400m spaced gravity survey was completed in 2021. In addition, 200m spaced gravity infill data was collected to cover a series of high priority magnetic targets at Aileron. |
| **Drilling techniques** | *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).* | No new drilling is being reported in this announcement. |
| **Drill sample recovery** | *Method of recording and assessing core and chip sample recoveries and results assessed* | No new core or chip samples are being reported in this announcement |
| | *Measures taken to maximise sample recovery and ensure representative nature of the samples* | No new drilling is being reported in this announcement |
| | *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.* | No new drilling is being reported in this announcement |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Logging** | *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.* | N/A- no new drilling is being reported in this announcement |
| | *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* | N/A- no new logging is being reported in this announcement |
| | *The total length and percentage of the relevant intersections logged* | N/A- no new logging is being reported in this announcement |
| **Sub-sampling techniques and sample preparation** | *If core, whether cut or sawn and whether quarter, half or all core taken.* | N/A- no new core drilling is being reported in this announcement |
| | *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* | N/A- no new geochemical sampling is being reported in this announcement |
| | *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* | N/A – no sampling preparations were completed in this program |
| | *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* | N/A – no sampling was completed in this program |
| | *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.* | N/A – no sampling was completed in this program |
| | *Whether sample sizes are appropriate to the grain size of the material being sampled.* | N/A- not relevant to the geophysics being reported. |
| **Quality of assay data and laboratory tests** | *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* | N/A- no assaying or laboratory techniques are being reported in this announcement |
| | *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.* | Gravity data were acquired concurrently with GNSS data using two Scintrex CG-5 gravity meters and two Scintrex CG-6 gravity meters. Data were acquired in single shifts of up to ten hours duration, with each shift consisting of a single loop controlled by observations at the gravity control station.<br><br>At each station, the gravity operator took a minimum of two gravity readings of 15 or 20 second duration so that any seismic or wind noise could be detected. Control station readings were set to 60 second duration. Before taking the reading, the operator ensured that the instrument tilt-reading was restricted to less than 5 arc-seconds and after the reading, not higher than 20 arc-seconds. Tilt-testing prior to project commencement showed that the gravity meters performed well even at extreme tilts (better than 0.05 µm/s2 at +150/-150 arc-seconds). |
| | *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.* | Each loop contained a minimum of two repeated readings so that an interlocking network of closed loops was formed. A total of 10.09% repeats were acquired for quality control purposes. Repeat readings were evenly distributed on a time-basis throughout each of the gravity loops. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Verification of sampling and assaying** | *The verification of significant intersections by either independent or alternative company personnel.* | Data was reviewed by Atlas Geophysics and Terry Hoschke on completion of the survey. |
| | *The use of twinned holes.* | N/A - no new drillholes are being reported in this announcement |
| | *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* | Data was reviewed by Atlas Geophysics in the field. Terry Hoschke then processed the final data and returned a range of gravity products to Encounter in the form of images which are stored on Encounter's severs. |
| | *Discuss any adjustment to assay data.* | The field gravity observations have been processed using standard formulae and constants as documented in the completion report to produce a Bouguer Anomaly for each gravity station. |
| **Location of data points** | *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.* | Dual-frequency Leica Geosystems GPS1200 GNSS receivers have been utilised on the project to allow for post-processed kinematic (PPK) centimetre level accuracy 3D positions. |
| | *Specification of the grid system used.* | Final position coordinates were established for all control stations, and this allowed all position and height information obtained from the gravity survey to be tied to the Geocentric Datum of Australia (GDA94) and Australian Height Datum (AHD), calculated using AusGeoid09. |
| | *Quality and adequacy of topographic control.* | Dual-frequency Leica Geosystems GPS1200 GNSS receivers have been utilised on the project to allow for post-processed kinematic (PPK) centimetre level accuracy 3D positions |
| **Data spacing and distribution** | *Data spacing for reporting of Exploration Results.* | Stations were 400m spaced.<br>More detailed 200m spaced stations were collected covering a series of high priority magnetic targets at Aileron including the Caird target. |
| | *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.* | Mineralisation has not yet demonstrated to be sufficient in both geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications to be applied. |
| | *Whether sample compositing has been applied.* | N/A – not relevant to gravity survey |
| **Orientation of data in relation to geological structure** | *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* | The gravity data was collected 400m spaced and lines with infill to 200m covering a series of high priority magnetic targets at Aileron including the Caird target. |
| | *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.* | N/A - no new drilling results are being announced |
| **Sample security** | *The measures taken to ensure sample security.* | N/A - no new drilling results are being announced |

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| **Audits or reviews** | *The results of any audits or reviews of sampling techniques and data.* | No audits have been conducted however the data was reviewed by Atlas Geophysics and Terry Hoschke on completion of the survey. |

## SECTION 2 REPORTING OF EXPLORATION RESULTS

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Mineral tenement and land tenure status** | *Type, reference name/number, location and ownership including agreements or material issues with third parties including joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* | The Aileron project is located within the tenements E80/5169, E80/5469,E80/5470 and E80/5522 which are held 100% by Encounter Resources<br><br>This tenement is contained completely within Aboriginal Reserve land where native title rights are held by the Parna Ngururrpa.<br><br>No historical or environmentally sensitive sites have been identified in the work area. |
| **Exploration done by other parties** | *Acknowledgment and appraisal of exploration by other parties.* | Prior to Encounter Resources, no previous on ground exploration has been conducted on the tenement other than government precompetitive data. |
| **Geology** | *Deposit type, geological setting and style of mineralisation* | The Aileron project is situated in the Proterozoic West Arunta Province of Western Australia. The geology of the area is poorly understood due to the lack of outcrop and previous exploration. The interpreted geology summarises the area to be Paleo – Proterozoic in age and it is considered prospective for IOGC style and carbonatite-hosted REE deposits. |
| **Drill hole information** | *A summary of all information material to the understanding of the exploration results including tabulation of the following information for all Material drill holes:*<br>• *Easting and northing of the drill hole collar*<br>• *Elevation or RL (Reduced Level – elevation above sea level in meters) of the drill hole collar*<br>• *Dip and azimuth of the hole*<br>• *Down hole length and interception depth*<br>• *Hole length* | N/A - No new drilling results are being reported in this announcement |
| ***Criteria*** | ***JORC Code explanation*** | **Commentary** |
| **Data aggregation methods** | *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.* | N/A - No new drilling results are being reported in this announcement |
| | *Where aggregated 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.* | N/A- No new assay results are being reported in the announcement |
| | *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | N/A- No metal equivalents are being reported in this announcement |
| **Relationship between mineralisation widths and intercept lengths** | *These relationships are particularly important in the reporting of exploration results.*<br>*If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole* | N/A - No new exploration drill results are reported in this announcement |

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|---|---|---|
| | *lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').* | |
| **Diagrams** | *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 plane view of drill hole collar locations and appropriate sectional views.* | N/A - No new exploration drill results are reported in this announcement |
| **Balanced Reporting** | *Where comprehensive reporting of all Exploration Results is not practical, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.* | N/A - No new exploration drill results are reported in this announcement |
| **Other substantive exploration data** | *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observation; 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.* | N/A – no other meaningful and material results to report |
| **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).*<br>*Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | The targets will be refined and prioritised in the coming months with diamond or RC drilling targeted to commence in April-June 2023. |