Sampling Identifies Rare Earths at Aileron

- **Gravity surveying and reconnaissance surface geochemical sampling have upgraded the Aileron IOCG targets and established rare earth element ("REE") potential in the region**
- **Helicopter supported ground gravity, geological reconnaissance and limited surface sampling were completed in November 2021**
- **Highly elevated total rare earth oxides up to 0.5% TREO, (including 0.1% neodymium-praseodymium, Nd_2O_3+Pr_6O_{11}) were identified**
- **Discrete, coincident gravity-magnetic anomalies were defined in the gravity survey**
- **Reconnaissance data is being integrated with the geophysical inversion models to prioritise targets with future work likely to include ground IP, surface sampling and diamond drilling**

The directors of Encounter Resources Ltd ("Encounter") are pleased to announce the identification of highly elevated rare earth elements collected in surface geochemical reconnaissance at the Aileron project in the West Arunta region of Western Australia.

Commenting on the identification of REE at Aileron, Encounter Managing Director Will Robinson said:

"The identification of neodymium-praseodymium rare earths is significant for Aileron. The West Arunta is one of the most prospective and underexplored regions in Australia for IOCG deposits. Numerous IOCG deposits in South Australia, including Carrapateena, Prominent Hill and Olympic Dam, contain rare earths associated with the copper and gold mineralisation.

Accordingly, REE are important potential pathfinders to IOCG deposits and could also be significant in their own right.

The identification of highly elevated neodymium-praseodymium at Aileron suggest an alkaline magmatic hydrothermal system has been active in the region. This is an important development as these alkaline systems can be key drivers in the formation of IOCG and REE deposits including carbonatite-hosted REE deposits.

The first and only hole drilled at Aileron in October 2020, drilled without the benefit of detailed gravity data, intersected a distinctive IOCG geochemical signature.

The integration of the recently acquired gravity data with magnetics and other geophysical datasets will prioritise REE and IOCG targets with future work likely to include ground IP, surface sampling and diamond drilling."

Photo 1. Helicopter supported geological reconnaissance completed November 2021, Exploration Manager, Mark Brodie.

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Background

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

To date, one diamond hole, EAL001, has been drilled targeting a discrete magnetic anomaly. EAL001 was partially completed to a depth of 158m in October 2020 and intersected hydrothermal hematite-altered mafic intrusions and granite with a distinctive IOCG geochemical signature under shallow cover. 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) and highly elevated rare earth elements (up to 0.8% TREO) consistent with the targeted IOCG deposit model *(refer ASX announcement 28 January 2021)*.

The metal anomalism in the hole is associated with the most intense hematite altered zones (up to 15% Fe). IOCG mineralisation often has a strong density contrast to background and may be identifiable through the application of gravity surveys.

In November 2021**,** a helicopter-supported ground gravity survey (Phase 2) and geological reconnaissance activities, including a surface sampling trial were completed at Aileron.

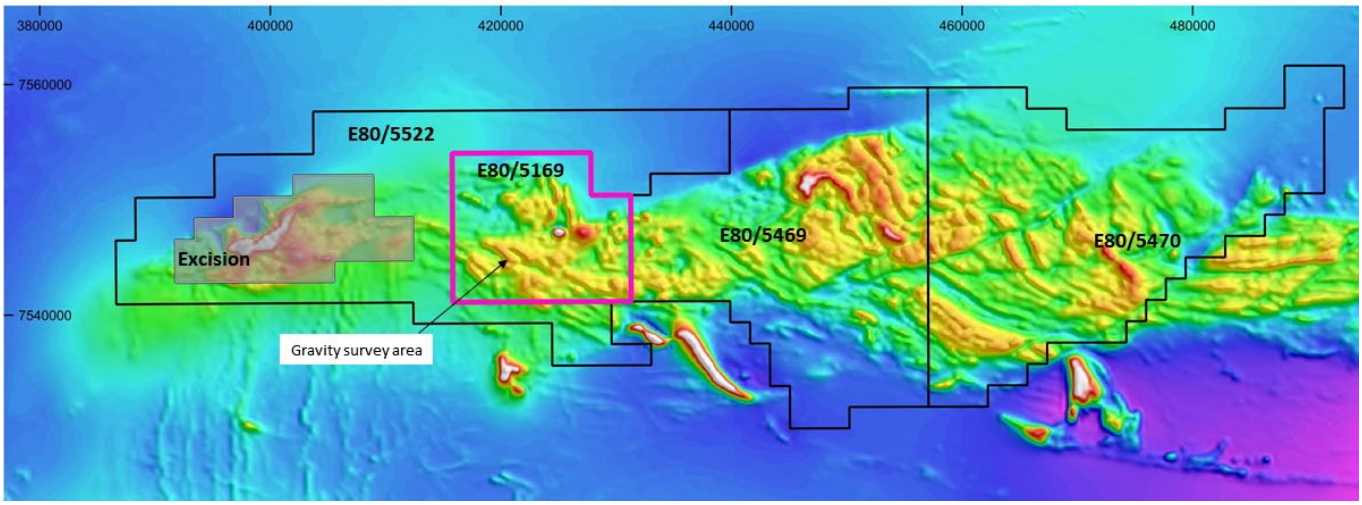


Figure 1 – Aileron IOCG project – August-November 2021 gravity survey location plan on TMI background

Geological and Surface Sampling Reconnaissance

The geological reconnaissance was conducted in areas of interest including at newly defined gravity anomalies (Figure 2). A limited surface sampling was completed to assess surface geology, regolith conditions and amenability of target areas to surface sampling. Rock chips were collected from isolated weathered granite and quartzite outcrops.

An area of pervasive iron alteration within a 2km long outcropping quartzite was identified from the air. A single rock chip, EG116398B (Photo 2), was taken from a ferruginous quartz vein within this altered quartzite and returned 0.5% TREO (including 0.1% Nd_2O_3+Pr_6O_{11}).

The presence of highly anomalous REE is encouraging for future exploration at Aileron suggesting an alkaline magmatic hydrothermal system has been active in the region. Alkaline magmatic systems are known to play an important role in the formation of both IOCG and REE deposits.

Photo 2. Rock chip sample EG116398B containing 0.5% TREO (including 0.1% Nd_2O_3+Pr_6O_{11}). This sample was taken from an area of outcropping iron altered quartzite north of gravity Anomaly 5.

Samples were taken to trial the effectiveness of soil geochemistry (1-2mm size fraction) from an area of interest identified in radiometric and ASTER data 1.6km to the south-east of 2020 drillhole EAL0001.

Assay results demonstrated amenable contrast to background in Au ppb values and included anomalism up to 20ppb Au in EG116407. These results provide further encouragement that regolith conditions are amenable to systematic surface sampling but also indicate the presence of notable surface Au anomalism. It is expected that systematic surface sampling will provide an effective and economic means of exploration at Aileron.

Gravity Survey Targets

Newly acquired gravity data has successfully defined new target areas of interest within the survey area and gravity anomalies were visited during the geological reconnaissance (Figure 2).

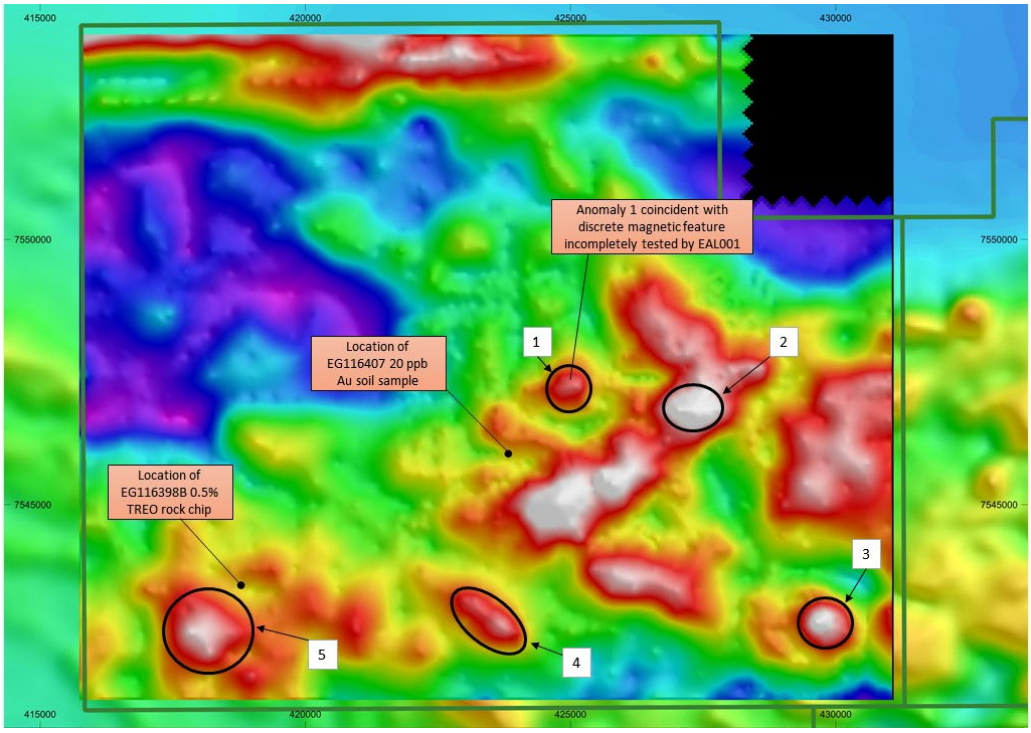


Figure 2 – Aileron project – residual gravity image with location of REE and IOCG anomalies visited during geological reconnaissance in November 2021

To date, five priority anomalies have been identified as summarised below:

Anomaly 1: A gravity anomaly has been identified coincident with the discrete magnetic feature that was incompletely tested with drillhole EAL001 in October 2020. The hole was terminated at 158m above the target due to drill rig breakdown. New gravity data has defined a discrete sub-vertical gravity anomaly that has been modelled from a depth of ~200m below surface (Figure 3).

Anomaly 2: is a strong semi-coincident gravity and magnetic anomaly 1.8km to the east of Anomaly 1. Geological reconnaissance determined the area consisted of patchy silcrete and minor aeolian sand over interpreted residual regolith.

Anomaly 3: is a discrete gravity high with a coincident moderate magnetic anomaly. Geological reconnaissance noted that the gravity high was covered by aeolian sand and was surrounded by a semi-circular series of low lying ferruginous duricrust hills. This environment would be amendable to a systematic surface geochemistry survey.

Anomaly 4: is a moderate amplitude gravity feature which is located at the intersection of a major interpreted NE-SW and NW-SE striking structures. Geological reconnaissance noted no outcrop or sub-crop in the area.

Anomaly 5: is a moderate amplitude gravity anomaly over which no outcrop was identified during geological reconnaissance. To the north of Anomaly 5 there is a large low lying quartzite outcrop, containing the area of iron alteration and REE anomalous quartz vein sample EG116398B.

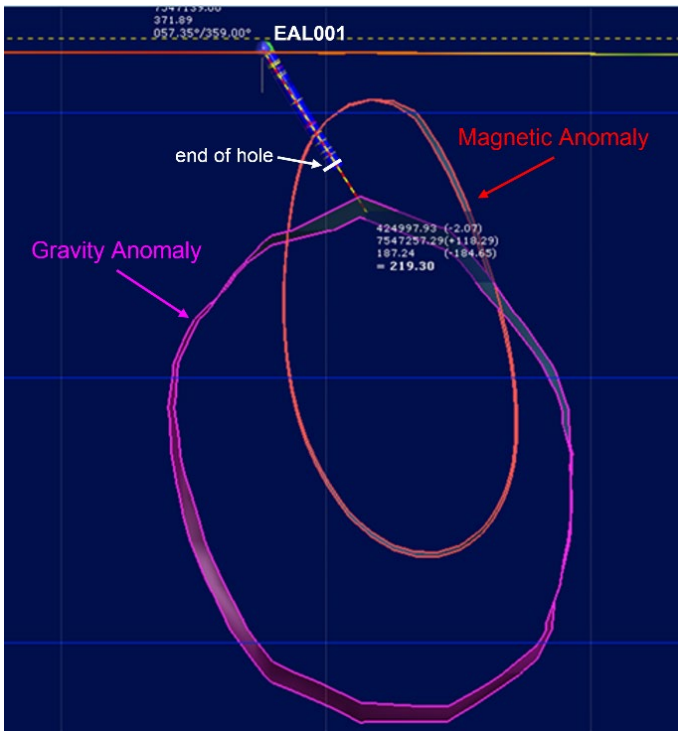
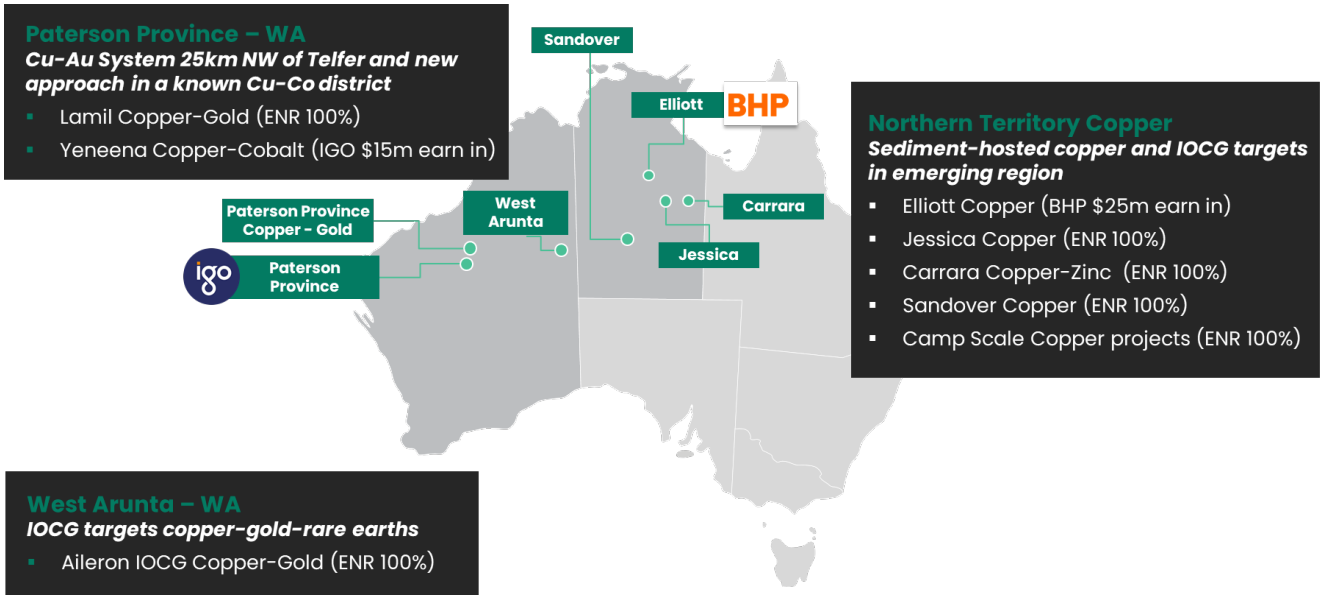


Figure 3 – Anomaly 1 cross section with coincident gravity anomaly (+0.1cc/g above background) and magnetic shell and incomplete diamond drillhole EAL001

Next Steps.
Reconnaissance data is being collated with the geophysical inversion models and insights from EAL001. The outcomes of this work will be used to prioritise and rank these anomalies. Future work will likely include surface sampling, ground IP and diamond drilling.

SampleID	Sample Type	MGA_North	MGA_East	Au ppb	TREO %	$Nd_2O_3+Pr_6O_{11}$ %
EG116398B	Rock Chip	7543477	418786	2	0.54	0.11
EG116407	Soil	7545957	423826	20	n/a	n/a

Table 1. Anomalous samples above 0.1% TREO or above 15ppb Au from recent reconnaissance geochemical sampling at Aileron



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's assets include:

- A large project portfolio in the Paterson Province of WA where it is exploring for copper-gold deposits at its 100% owned Lamil Project and for copper-cobalt deposits at the Yeneena project with IGO Limited (ASX:IGO);
- A series of camp scale, first mover copper opportunities in the Northern Territory. This includes the Elliott copper project which is being advanced in partnership with BHP via a $25m earn-in and joint venture; and
- The Aileron IOCG / REE project in the West Arunta region of WA.

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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.*	Rock chip were sampled by Encounter staff from isolated areas of outcrop/subcrop. Rock chips are random, subject to bias and often unrepresentative for the typical widths required for economic consideration. They are by nature difficult to duplicate with any acceptable form of precision or accuracy. Soil samples were taken by Encounter staff from areas of cover and were spaced 50m apart.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	Sample locations were recorded by handheld GPS, which has an estimated accuracy of +/- 5m. Rock chips were analysed in full Soil samples were split and the 1-2mm sized fraction was analysed
	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	Rock chip samples were sent to Bureau Veritas Minerals Pty Ltd Laboratories in Perth, where they were dried, crushed, pulverised, and split to produce a sub – sample for ICP (OES) (MS) 4 Mixed Acid Digest. Soil samples were split into 1-2mm fraction and sent to Bureau Veritas Minerals Pty Ltd Laboratories in Perth, where they were dried, crushed, pulverised and split to produce a sub – sample for ICP (OES) (MS) 4 Mixed Acid Digest.
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).*	N/A - no drilling was completed in this program
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed*	N/A - no core or chip samples were collected in this program
	Measures taken to maximise sample recovery and ensure representative nature of the samples	N/A - no core or chip samples were collected in this program
	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.	N/A - no core or chip samples were collected in this program

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.*	A geological description was recorded, and photograph taken of each surface sample prior to submission to the lab for analysis.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Geological logging is qualitative in nature and records interpreted lithology, alteration, mineralisation, structure, veining and other features of the samples.
	The total length and percentage of the relevant intersections logged	All sampled have been logged by Encounter geologists
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	N/A - no core was collected in this program
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	N/A - no drilling was completed in this program
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Soil samples were split and the <1mm fraction retained for future analysis. The 1-2mm fraction was submitted for analysis and sample preparation was completed at Bureau Veritas Minerals Pty Ltd Laboratories in Perth. Samples were dried, crushed, pulverised (90% passing at a ≤75µM size fraction) and split into a sub – sample for ICP (OES) (MS) 4 Mixed Acid Digest. Rock chip samples were submitted to Bureau Veritas Minerals Pty Ltd Laboratories in Perth where sample preparation was completed. Samples were dried, crushed, pulverised (90% passing at a ≤75µM size fraction) and split into a sub – sample for ICP (OES) (MS) 4 Mixed Acid Digest.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Field QC procedures involve the use of commercial certified reference materials (CRMs) and in house blanks. The insertion rate of these will be at an average of 1:33.
	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.	No duplicate samples were taken.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The samples collected during this program were being analysed to determine the appropriate sizes and soil fraction to use in future exploration programs.
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.*	The samples have been analysed by ICP using a 4 mixed acid digest including Hydrofluoric, Nitric, Hydrochloric and Perchloric Acids. This extended digest approaches a total digest for many elements however some refractory minerals are not completely digested. Assays have been determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry (OES)(Al, Ca, Cu, Fe, Mg, Mn, Ni, P, S, Cr, Ti, V, Sc, K, Na) and ICP – Mass Spectrometry(MS) (Ag, As, Co, Bi, Mo, Pb, U, Sr, W, Te, Sn, Sb, Ga, Hf, La, Nb, Rb, Ta, Th, Tl, Y, Ce, Pr, Nd, Sm, Gd, Dy, Ho, Er, Tb, Tm, Yb, Lu, Li, Eu, Ba). Au, Pt, Pd were determined via Fire Assay

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.	No geophysical or hand held tools were used in this program.
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.	Standard laboratory QAQC procedures were used including insertion of blanks and duplicates.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	The assay results included in this report have been verified by Sarah James (Exploration Manager)
	The use of twinned holes.	N/A - no drilling was completed in this program
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary location data was collected for Aileron by a field GPS. Data collected including logging and assays are sent offsite to Encounter's Database (Datashed software), which is backed up daily.
	Discuss any adjustment to assay data.	Adjustments made to the assay data were limited to the conversion of reported elemental assays for a range of elements to the equivalent oxide compound as applicable to rare earth oxides. In all instances the original elemental data will be stored in the database and the equivalent oxide values loaded into appropriately labelled fields identifying them as calculated values. The oxides were calculated from the element according to the following factors: CeO_2 – 1.2284, Dy_2O_3 – 1.1477, Er_2O_3 – 1.1435, Eu_2O_3 – 1.1579, Gd_2O_3 – 1.1526, Ho_2O_3 – 1.1455, La_2O_3 – 1.1728, Lu_2O_3 – 1.1371, Nd_2O_3 – 1.1664, Pr_6O_{11} – 1.2082, Sm_2O_3 – 1.1596, Tb_4O_7 – 1.1421, Tm_2O_3 – 1.1421, Y_2O_3 – 1.2699, Yb_2O_3 – 1.1387. Rare earth oxide is the industry accepted form for reporting rare earths. The TREO (Total Rare Earth Oxide) is calculated from addition of La_2O3, CeO_2, Pr_6O_{11}, Nd_2O_3, Sm_2O_3, Eu_2O_3, Gd_2O_3, Tb_4O_7, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, Y_2O_3, and Lu_2O_3. Note that Y_2O_3 is included in the TREO calculation.
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.*	The location of surface samples were determined using handheld GPS units. It is estimated that the sample accuracy is in the order of +/-5m
	Specification of the grid system used.	The grid system used is MGA_GDA94, zone 52.
	Quality and adequacy of topographic control.	Estimated RLs were assigned to be corrected at a later stage using a more detailed DTM.

Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	Rock chips at the Aileron project were collected over 5 target areas and were sampled on an ad hoc basis. A 500m line of soils was conducted on a 50m spaced traverse.
	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 - no drilling was completed in this program
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.*	This is early stage exploration and the orientation of the sampling to the mineralisation is not known.
	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 drilling was completed in this program
Sample security	*The measures taken to ensure sample security.*	The chain of custody is managed by Encounter. Samples were delivered by Encounter personnel to the assay laboratory.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	Sampling techniques and procedures are regularly reviewed internally, as is data. To date, no external audits have been completed on Aileron data.

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 areas sampled is located within the tenement E80/5169 which is held 100% by Encounter subsidiary Encounter Aileron Pty Ltd This tenement is contained completely within Aboriginal Reserve land where native title rights are held by the Parna Ngururrpa. No historical or environmentally sensitive sites have been identified in the area of work.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	No previous exploration has been conducted on the tenement other than government pre competitive 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 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:* • *Easting and northing of the drill hole collar* • *Elevation or RL (Reduced Level – elevation above sea level in meters) of the drill hole collar* • *Dip and azimuth of the hole* • *Down hole length and interception depth* • *Hole length*	Refer to tabulation in the body of 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.*	No upper cuts or averaging was applied to the samples results.
	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.	No aggregated intercepts are being reported.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents have been reported in this announcement.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of exploration results.* *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 lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	N/A - no drilling was completed in this program
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.*	Refer to body of 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.*	All meaningful and material information has been included in the body of the text.
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.*	All meaningful and material information has been included in the body of the text. No metallurgical or mineralogical assessments have been completed.
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*	The next phase of work will be designed following integration of geophysics, geochemistry and geological data.

this information is not commercially sensitive.