

JUNE 1, 2023



## LARGE REE SOIL GEOCHEMISTRY ANOMALY IDENTIFIED AT THE ARKUN PROJECT WA

- A large Rare Earth Element (REE) soil geochemistry anomaly about 10 kilometers long, up to 2,000 meters wide, and comprising Light and Heavy REE has been identified in the NE of the Arkun Project.
- The anomaly, called the Horseshoe Prospect, occurs in the contact zone of an intrusion adjacent to a major regional fault, a prime location for REE.
- Further surveys are in progress to follow up on numerous other REE (and other metal) anomalies identified in reconnaissance roadside soil geochemistry surveys.
- Southwest WA is starting to emerge as an REE Province similar to the Gascoyne and Esperance areas.
- Interpretation of nickel-copper-PGM and lithium soil geochemistry data, HeliTEM and DGPR data are in progress.

A significant and large soil geochemistry anomaly for Rare Earth Elements (REE) and called the Horseshoe Prospect, has been identified at Impact Minerals Limited's (ASX: IPT) 100% owned Arkun project in the emerging mineral province of southwest Western Australia (Figure 1).

The anomaly is about 10 kilometers long, up to 2,000 meters wide and comprises both the more valuable Heavy Rare Earth Elements (HREE) and the Light Rare Earth Elements (LREE) (Figures 2 and 3).

The anomaly is arcuate and centered around a prominent magnetic low adjacent to a major regional fault visible in regional magnetic data. In addition, it coincides with an elevated potassium response in regional radiometric data (Figure 4).

This is all interpreted to indicate that the REE may be associated with a zone of potassic alteration related to the immediate contact zone (goldilocks zone) of a weakly magnetic felsic or possibly alkaline/carbonatite intrusion that may have migrated from depth along a major fault. Field checking and rock chip sampling are now required to test this further and help identify specific drill targets.

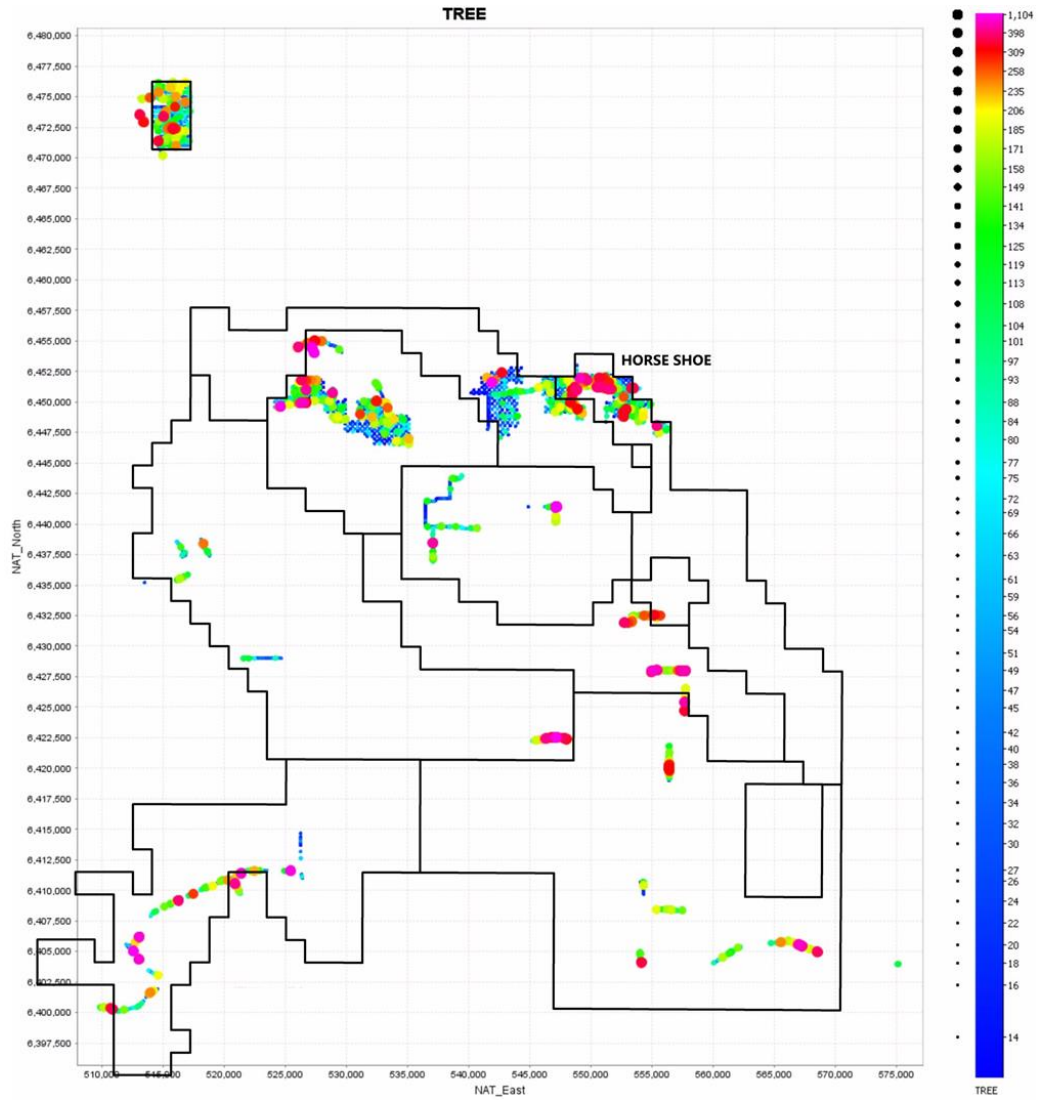
Impact Minerals' Managing Director, Dr Mike Jones, said, *"The new and exciting Horseshoe Prospect is in a prime location for REE being associated with the contact zone of an intrusion adjacent to a major fault zone. In addition, the area is also very weathered, so there is also the potential for REE ionic clay deposits. We are looking forward to getting our follow-up fieldwork underway to check this."*

*Horseshoe is just one of numerous REE anomalies we have identified in roadside sampling, and so we look forward to further results from infill soil surveys that are underway. This and other recent discoveries in the region suggest that southwest Western Australia could also become an REE province like the Gascoyne Province and the Albany-Fraser Belt near Esperance. We are happy to have such a significant ground-holding in this region.*

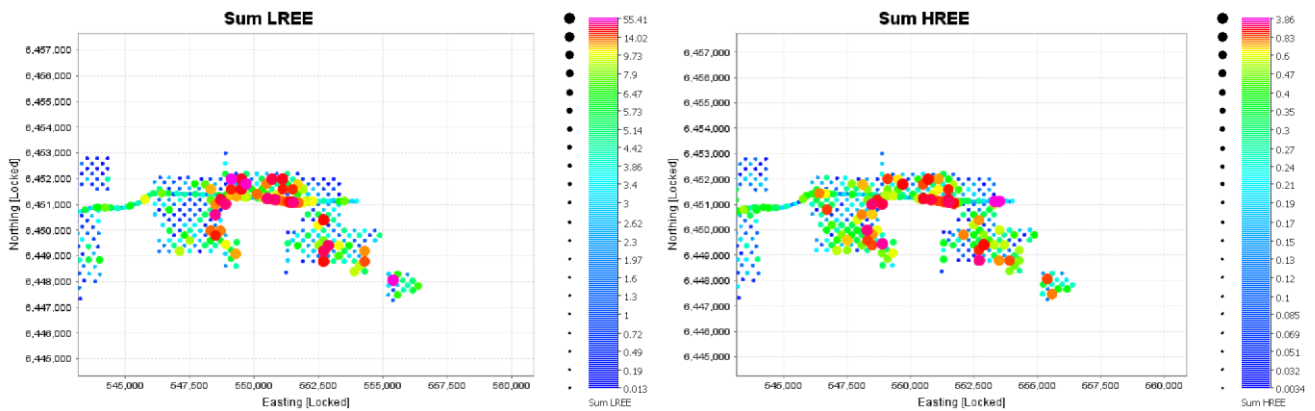
*We are also interpreting the soil geochemistry results for nickel-copper-PGM and lithium and look forward to announcing those results when completed.'*



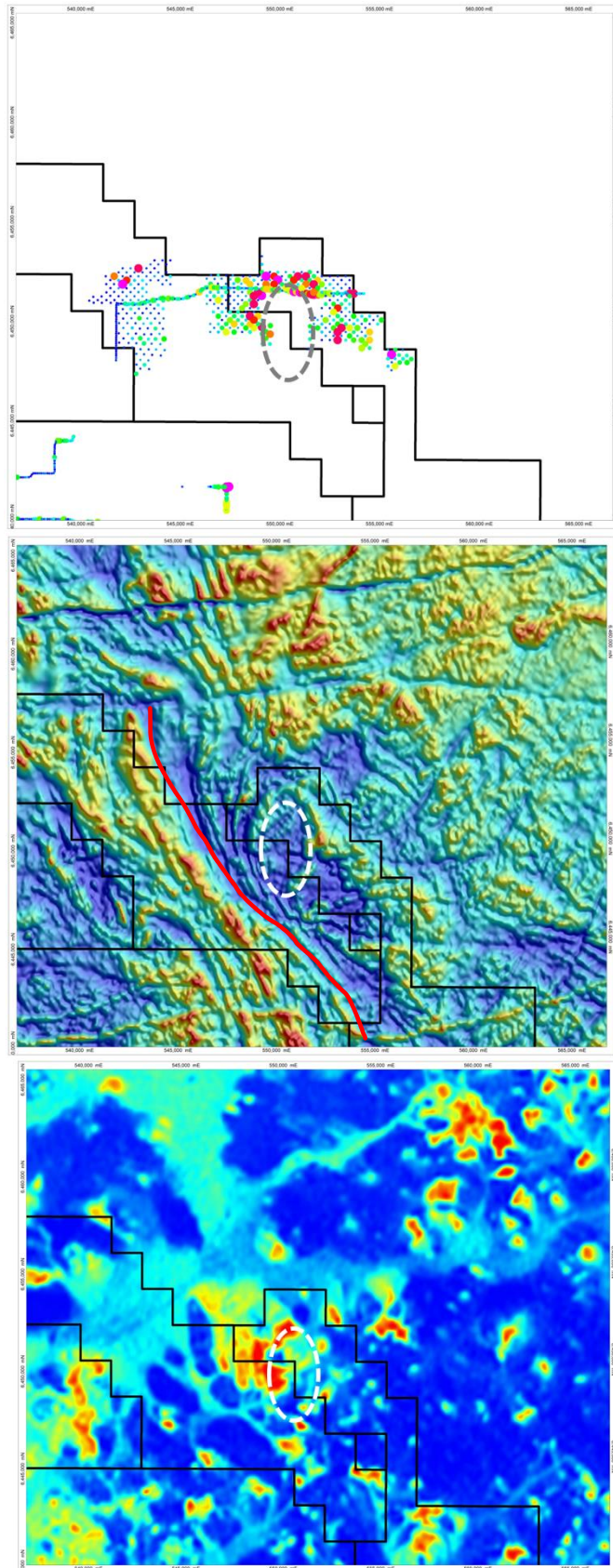
Figure 1. Location and geology of Impact's projects in Western Australia, including the Arkun Project and the company's flagship Lake Hope HPA project.



**Figure 2.** Additive response ratios for Total Rare Earth Elements (TREE) across the greater Arkun-Jumbo-Beau project area, highlighting the Horseshoe anomaly. Grids of close-spaced sample points identify the areas covered by the new detailed soil geochemistry surveys reported here. The linear zones of samples mark the location of previously reported soil geochemistry samples taken on roadside traverses with numerous areas of anomalous REE identified, all requiring detailed follow-up surveys (ASX Releases 27th October 2021 and 8th March 2022). The Horseshoe Prospect was originally identified as anomalous in REE from the roadside traverses, and it is possible that other significant anomalies similar to Horseshoe may be identified as soil geochemistry surveys progress throughout the project area.



**Figure 3.** Summed absolute soil assay values at the Horseshoe Prospect showing combined anomalism in heavy (HREE) and light (LREE) rare earth elements.



**Figure 4.** The Horseshoe REE anomaly (top) showing its relationship to a magnetic low (ellipse) and major regional structure (red line) in an image of regional magnetic data (middle) and potassium in an image of regional radiometric data (bottom).

## NEXT STEPS

The Horseshoe REE Prospect is a new and exciting target area for follow-up work which will include field checking and rock chip sampling. This work will commence in the next Quarter.

Numerous other REE anomalies identified in the previous reconnaissance roadside soil geochemistry have yet to be followed up. Follow-up soil geochemistry surveys are in progress, with about 1,000 samples planned, to test some of these areas and other areas identified as prospective for nickel-copper-PGM and lithium mineralisation. Results are due late next Quarter.

An interpretation of the nickel-copper-PGM and lithium results from the surveys reported here is still in progress.

In addition, the re-processing of the 2022 HeliTEM survey over priority target areas for nickel-copper-PGM mineralisation in the Arkun-Beau area has also been completed. A DGPR survey has also been conducted at Beau, and interpretation of this data for lithium pegmatites is also in progress.

Impact has also engaged with SensOre (ASX: S3N) to help reprocess the HELITEM data and prospectivity mapping for Nickel and Lithium. They apply integrated AI/machine learning algorithms to large datasets to fingerprint and “predict” locations for mineral deposits.

All of this data will be synthesised to identify drill targets with the aim of completing a maiden drill program in late 2023 or early 2024, depending on the harvest season.

## ABOUT THE SOIL GEOCHEMISTRY SURVEY

Previous work by Impact across the Arkun and Beau project areas using a proprietary geophysical-geochemical technology owned by Southern Sky Energy Pty Ltd identified 17 broad areas of interest for follow-up work, principally for nickel-copper-platinum group metals (PGM) (ASX Release 10th June 2021).

Reconnaissance roadside soil geochemistry traverses over 15 of these areas identified 22 more specific targets for not only nickel-copper-PGM but also, for the first time, lithium (LCT) pegmatites and Rare Earth Elements (REE) and rubidium (ASX Releases 21st September 2021 and 27th October 2021 respectively). A similar workflow at the adjacent Jumbo joint venture project also identified numerous targets for the same suites of metals (ASX Releases 8th December 2021 and 8th March 2022).

Following significant time spent completing land access negotiations, which are still ongoing, a further 972 soil samples were collected over several of the initial targets at Arkun. These are the first-ever detailed soil geochemistry programs undertaken within the Arkun project area.

The samples were taken at a spacing of 200 metres by either 200 metres or 400 metres and submitted for the ionic leach method at ALS Laboratories in Perth. This so-called “partial digest” technique uses very dilute chemical solutions that only extract weakly bound ions from the sample for analysis.

Many case studies have shown that partial digests tend to give better discrimination of soil geochemical anomalies over background values. However, the weak nature of the chemical solutions used means that the absolute values of metals returned in the analysis are much lower than those returned from more aggressive digestion techniques such as aqua regia and four acid digests. It is the background-to-anomaly ratio that is the critical factor to consider.

A response ratio is a simple measure of how anomalous a soil geochemical value for a particular element is above that element's local background value, which is conventionally calculated as the mean of the lowest quartile of data. The magnitude of each analytical result is then expressed as a response ratio, a “times background” value, calculated by dividing each result by the background value. Thus, a response ratio of 3 is three times the background.

This procedure normalises the data and allows the response ratios for individual metals that occur within assemblages specific to nickel-copper-PGM-gold or lithium-caesium-tantalum mineralisation to be added together to amplify the metal associations. Background values and maximum and minimum assay values for the elements of interest are provided for reference in Table 1.

The results of the soil geochemistry survey are presented as additive response ratios in Figure 2.

## COMPLIANCE STATEMENT

This report contains new Exploration Results for soil geochemistry samples across the Arkun Project.

This announcement has been approved for release to the ASX by Dr Michael Jones, the Managing Director of Impact Minerals Limited.

Dr Michael G Jones  
Managing Director

## Competent Person’s Statement

*The review of exploration activities and results in this report is based on information compiled by Dr Mike Jones, a Member of the Australian Institute of Geoscientists. He is a director of the company and works for Impact Minerals Limited. He has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Dr Jones has consented to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

Response Ratio	LCT	TREE
Minimum	3	14
Maximum	215	1104
Background	18.2	92.3

**Table 1:** Minimum, maximum and background values for combined response ratios mentioned in this report.

Response Ratio	Cs_ppb	Ta_ppb	La_ppb	Ce_ppb	Pr_ppb	Nd_ppb	Sm_ppb	Eu_ppb	Gd_ppb	Tb_ppb	Dy_ppb	Ho_ppb	Er_ppb	Tm_ppb	Yb_ppb	Lu_ppb
Minimum	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Maximum	22	49	138	245	144	108	85	75	78	74	68	75	60	63	88	96
Background	4.1	5.1	9.1	16.8	7.5	6.2	4.8	4.5	4.5	4.4	4.6	4.7	4.9	5.1	5.4	5.3

**Table 2:** Minimum, maximum and background response ratio values for metals mentioned in this report.

## JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

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>Description of 'industry standard' work</li> </ul>	<ul style="list-style-type: none"> <li>Soil samples of a weight of about 250 grams were taken from a depth of about 15-20 cm below surface. They were sieved on site to -2 mm and placed in plastic snap seal bags for transport to the laboratory.</li> <li>The soil samples were taken at between 400 m and 200 m spacings within paddocks. There are sufficient samples to calculate estimates of the background values for the metals of interest.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <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> </ul>	N/A
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> <li>The survey was completed on a grid to ensure representative sampling.</li> <li>No sample bias is likely.</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>N/A</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> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> <li>N/A</li> <li>The size and distribution of the soil samples is appropriate for first pass exploration.</li> <li>Laboratory QC procedures for soil samples involve the use of internal certified reference material as assay standards, along with blanks, duplicates and replicates.</li> <li>No field duplicates were taken as this is not warranted at this early stage of exploration.</li> <li>Sample sizes are appropriate.</li> </ul>

Criteria	JORC Code explanation	Commentary
<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>Samples were submitted to ALS Laboratories in Perth for analysis by the ionic leach method ME-MS23 with ICP-MS finish for 61 elements including: Ag, Au, Bi, Cd, Co, Cr, Cs, Cu, Li, Mo, Ni, Pb, Pd, Pt, Sn, Ta, W, Zn. Sample preparation involved weighing out of 50 g of the soil sample and adding a fixed aliquot of the digest.</li> <li>Internal laboratory checks were within acceptable variability</li> <li>This level of QAQC is commensurate with the early-stage nature of investigations</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>The results have not been verified by independent or alternative companies. This is not required at this stage of exploration.</li> <li>Primary Assay data was entered into Excel templates for plotting in QGIS and IOGAS.</li> <li>There are no adjustments to the assay data.</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>Commercial handheld GPS</li> <li>Datum is MGA 2020 Zone 51 South</li> <li>Topographic control on RL is adequate for exploration results</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>Spacing is a nominal offset 200m x 200m to 400m grid</li> <li>N/A</li> <li>N/A</li> <li>There was no sample compositing.</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> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>An offset grid of sample locations was used to help reduce bias.</li> <li>N/A</li> </ul>
<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>Samples were delivered to the laboratory by company personnel</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>At this stage of exploration a review of the sampling techniques and data by an external party is not warranted.</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 Arkun-Beau-Jumbo Project currently comprises 9 exploration licences covering about 2,100 km<sup>2</sup>. The tenements are held 100% by Aurigen Pty Ltd a 100% owned subsidiary of Impact Minerals Limited. Impact has signed Land Access agreements in place with the various Native Title claimants that cover the area and with selected landowners. No known impediment to exploration is known</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>Nil</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>REE mineralisation in veins and as ionic clays</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>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: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<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>N/A</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>N/A</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>A map showing tenement locations has been included</li> <li>Maps showing exploration results are provided</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>Summary assay data is reported in the tables.</li> </ul>

Criteria	JORC Code explanation	Commentary
<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>N/A</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Follow up soil geochemistry surveys.</li> </ul>