



JANUARY 24, 2024

## Caligula – A Significant Copper Target at the Arkun Project, WA

- A large and significant target for porphyry copper mineralisation has been identified in soil geochemistry data and Mobile Magneto-Telluric (MMT) data at the Caligula Prospect.
- A 5 km by 1 km soil geochemistry anomaly contains the key metal assemblage of copper-silver-cobalt+/-tellurium-bismuth-molybdenum, all indicators of porphyry copper mineralisation such as is found at Boddington and Calingiri in the same region of Western Australia. Gold assays are expected in February.
- The geochemistry anomaly coincides with numerous conductors identified in the MMT data that may represent disseminated or massive sulphides.
- Infill and extensional soil geochemistry surveys, together with a detailed interpretation of the MMT data, are underway to define the extent of Caligula and identify specific drill targets more fully.
- A follow-up aircore drill programme is to be undertaken as soon as practicable, which will also include the recently discovered Hyperion and Swordfish REE prospects.

A large and significant target for porphyry copper-gold mineralisation has been identified at Impact Minerals Limited's (ASX:IPT) 100% owned Arkun Project located 150 km east of Perth in the emerging mineral province of southwest Western Australia (Figure 1).

The newly named Caligula prospect, initially identified in roadside and subsequent follow-up soil geochemistry surveys (Anomaly D: ASX Release 9<sup>th</sup> August 2023), has been significantly enhanced by the presence of several significant conductors within the geochemistry anomaly that may represent disseminated or massive sulphides.

The conductors were identified in recently acquired helicopter-borne Mobile Magneto-Telluric (MMT) data from one of the first surveys of this cutting-edge technology to be flown in Australia.

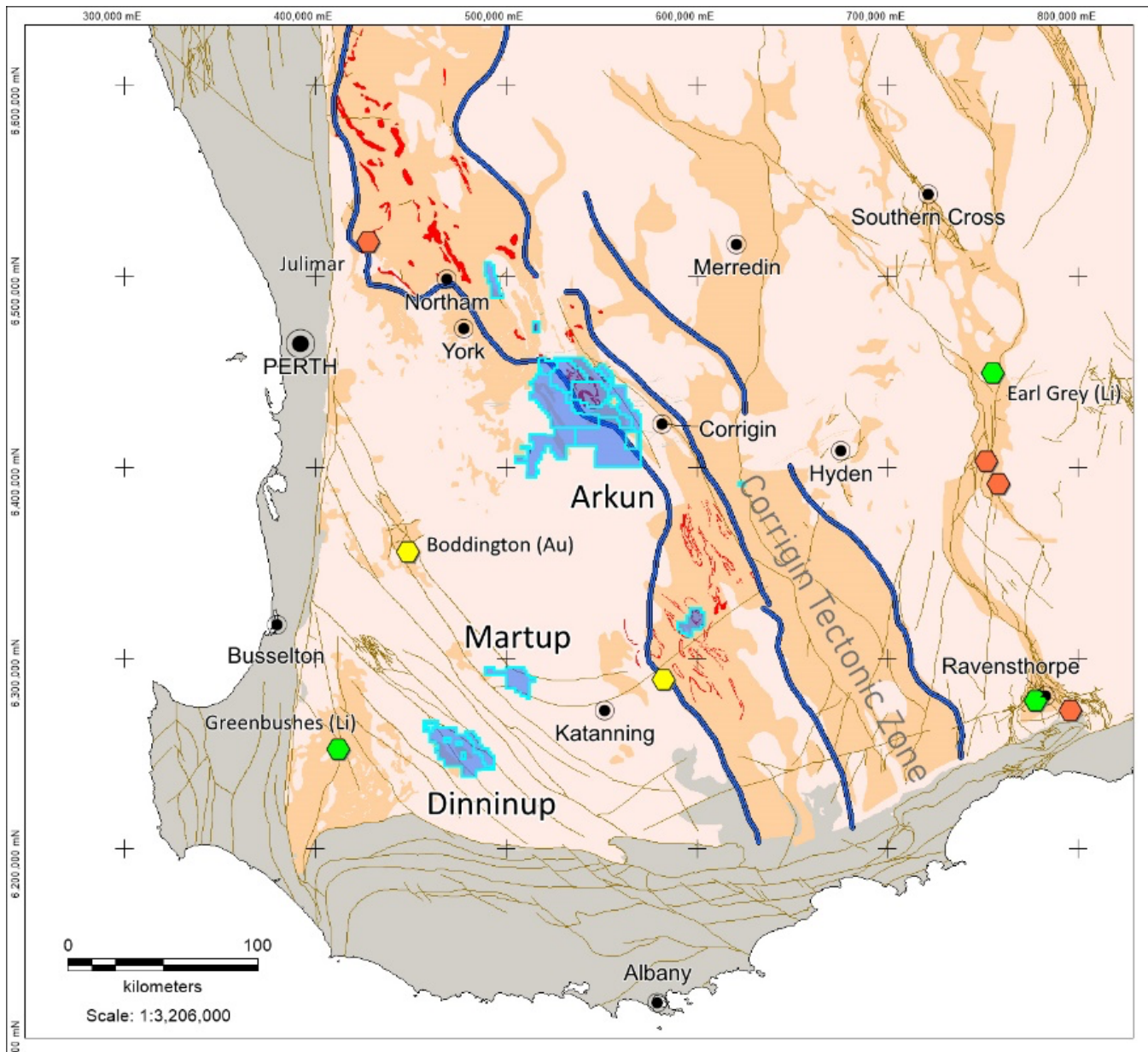
Caligula adds to Impact's previously reported large Rare Earth Element soil geochemistry anomalies identified at Hyperion, located 15 km to the west, and Horseshoe, located 20 km to the east, and emphasises the significant exploration potential for a range of battery and strategic metals at the Arkun project (Figure 4 and ASX Releases 4<sup>th</sup> January 2024 and 1st June 2023).



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Impact Minerals' Managing Director, Dr Mike Jones, said, "The discovery of the Caligula Prospect is yet another significant and exciting breakthrough in our exploration at Arkun following the recent discovery of the Hyperion and Swordfish Rare Earth Element Prospects. It is one of the first of the many geochemical and geophysical targets we have at the project where we have actually been able to define the size and scale of the anomalies more fully and, given we have at least a dozen more similar areas to follow up, I am confident of more significant anomalies to come at Arkun. We are working towards a maiden drill programme as quickly as possible, and we will aim to cover as many targets as possible, including Hyperion and Swordfish. We are very encouraged by our results so far."

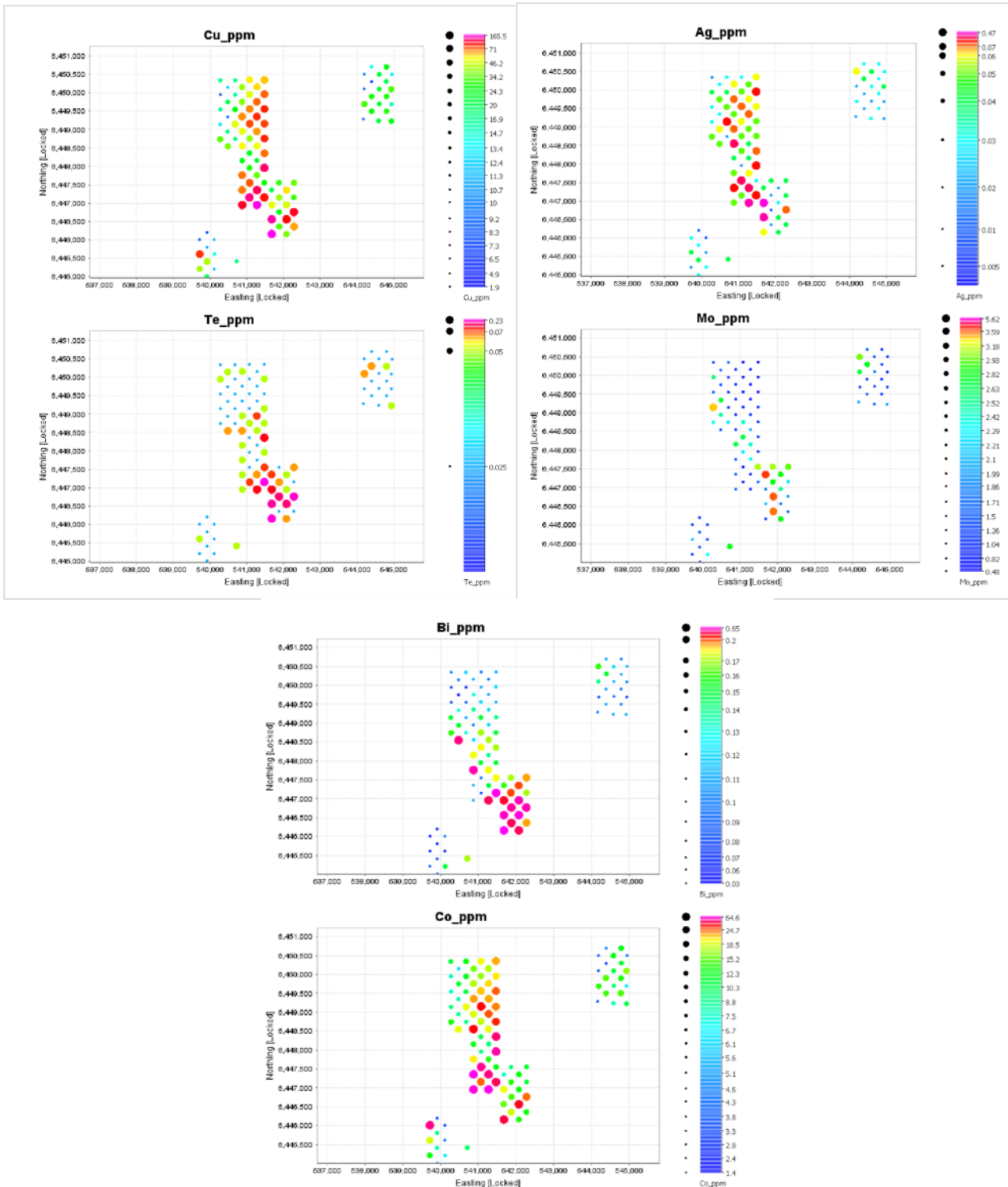


**Figure 1.** Location and regional geological setting of Impact's Arkun and other projects shown in blue in the emerging mineral province of southwest Western Australia. Significant nickel deposits are shown in orange, lithium deposits in green and gold deposits in yellow.

## Soil Geochemistry Results

The soil geochemistry results have defined an area of anomalous copper-in-soils that extends over about 5,000 metres north-south and up to at least 2,000 metres east-west. It is open to the east and the southwest (Figure 2 and Figure 4). The copper is associated with anomalous silver and cobalt and, in the southern part of the anomaly, also has a strong association with bismuth, tellurium and lesser molybdenum (Figure 2). Maximum and minimum values for the metals are given in Table 1.

This metal assemblage is characteristic of metals associated with porphyry copper deposits and this is encouraging for future exploration.



**Figure 2.** Soil geochemistry results for copper (Cu)-silver (Ag)-Cobalt (Co)-Bismuth (Bi)-Tellurium (Te)-Molybdenum (Mo) in soils at Caligula.

Although gold is commonly associated with porphyry copper deposits, gold was not assayed because of an initial focus on Rare Earth Elements after discovering the Hyperion, Swordfish and Horseshoe anomalies (ASX Releases 1<sup>st</sup> June 2023 and 4<sup>th</sup> January 2024). The soil samples will be re-assayed for gold.

A follow-up infill and extensional soil geochemistry survey is already in progress to help define the full extent of the Caligula anomaly.

Caligula was first identified as one of 17 broad areas of interest at Arkun identified using a proprietary geophysical-geochemical technology owned by Southern Sky Energy Pty Ltd.

Reconnaissance roadside soil geochemistry traverses over 15 of these areas identified 22 more specific areas for follow-up, four of which, including Caligula, returned significant copper-nickel-PGM-gold results in broad-spaced follow-up soil geochemistry surveys (Anomaly D in ASX Release 9th August 2023).

Caligula is the first of the four areas to be more fully defined by detailed soil geochemistry surveys, and this is encouraging for further work on the other partly tested and untested anomalies within the Arkun project.

### **Mobile Magneto-Telluric (MMT) Survey**

A helicopter-borne MMT survey, one of the first to be flown in Australia, was completed over the central Arkun project area in late 2023 to follow up on several airborne EM targets and a machine-learning target identified by Sensore Ltd for nickel.

MMT is a cutting-edge airborne geophysical technique that can measure resistivity/conductivity to significant depths of about 1 km below the surface, depending on the rock units present.

A detailed interpretation of the MMT data is in progress. However, several conductive anomalies coincident or close to the Caligula copper anomaly have been identified, with an example shown in Figure 3.

The conductors may represent disseminated or even massive sulphides. A more prominent conductor has also been identified in the MMT data a few kilometres east of Caligula, adjacent to a major fault recognised in regional airborne magnetic data. This area has yet to be explored and is a priority for follow-up work.

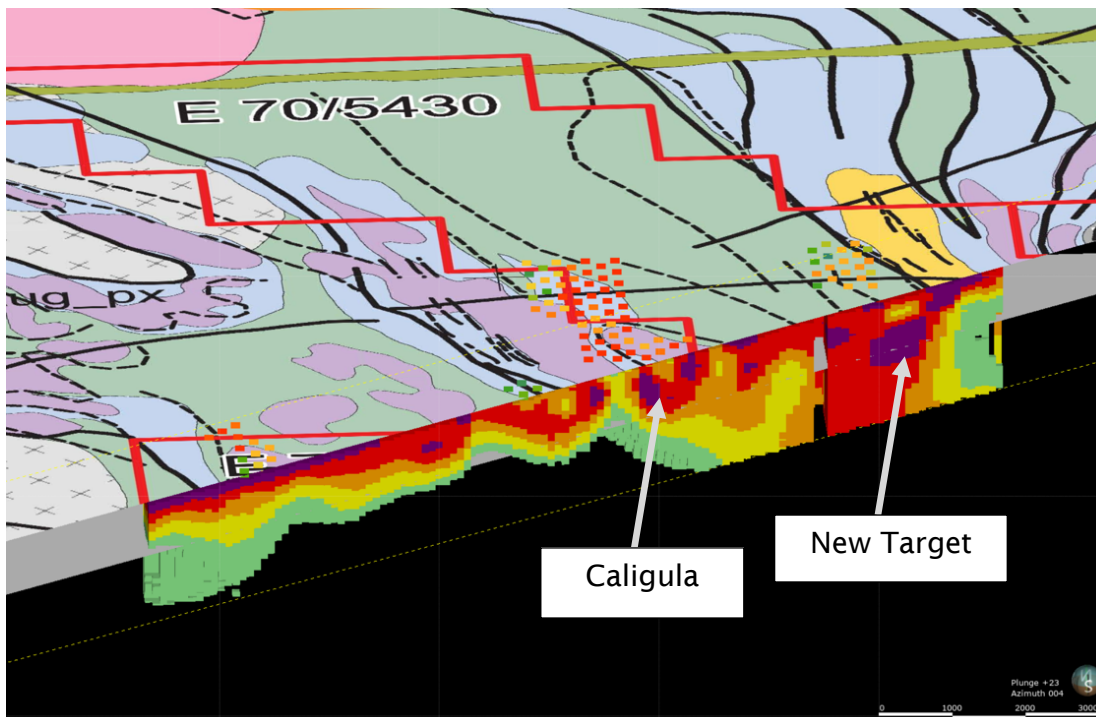
### **Next Steps**

The identification of the Caligula prospect with its potential for a large porphyry copper+/- gold deposit is an exciting breakthrough at Arkun, given the surrounding region hosts one world-class porphyry gold-copper deposit at Boddington (>25 million oz gold and about 1 million tonnes of copper: Newmont Corp) and one very large porphyry copper-molybdenum deposit at Calingiri, (>3 million tonnes of copper: ASX: Caravel Minerals Limited).

Impact is now expediting work programmes to identify specific drill targets. An infill and extensional soil geochemistry survey is in progress to better define the scale and size of Caligula, and, in addition, a detailed interpretation of the airborne magnetic, EM and MMT data is also in progress.

Impact intends to drill Caligula and other significant targets such as Hyperion, Swordfish and other target areas as soon as practicable in 2024 (Figure 4).

The drilling timing will depend on statutory approvals and, in particular, landholder consent, but it is planned for Q2 to Q3 this year.



**Figure 3.** A tilted 3D view of an image of the bedrock geology of the Caligula area showing the soil geochemistry anomaly (coloured squares) and a section line of the MMT data. Purple areas are zones of high conductivity, and two such zones coincide with the geochemistry. A large conductive anomaly close to a major structure occurs at the eastern end of the section line. This is a priority area for further exploration. Figure 4 shows the location of the MMT survey and the Legend for the bedrock geology map.

### About the Soil Geochemistry Survey

A total of 98 soil geochemistry samples were taken on a broad-spaced grid of 400 m by 400 m between samples and sieved to -2mm with a 200 g aliquot submitted to ALS Geochemistry, Malaga, Western Australia, for assay by the four-acid digest method. This method digests almost all of the sample and derives an assay close to the total contained elements reported. The full methodology and sampling details are presented in Table 1.

**Table 1.** Geochemical statistics for key elements at the Caligula Prospect (4-acid digest).

	Cu_ppm	Ag_ppm	Bi_ppm	Te_ppm	Mo_ppm	Co_ppm
Minimum	1.9	0.005	0.03	0.025	0.48	1.4
Maximum	165.5	0.47	0.65	0.23	5.62	64.6
Mean	20.74	0.03	0.12	0.03	2.19	9.04
Median	12.4	0.03	0.12	0.025	2.21	6.1

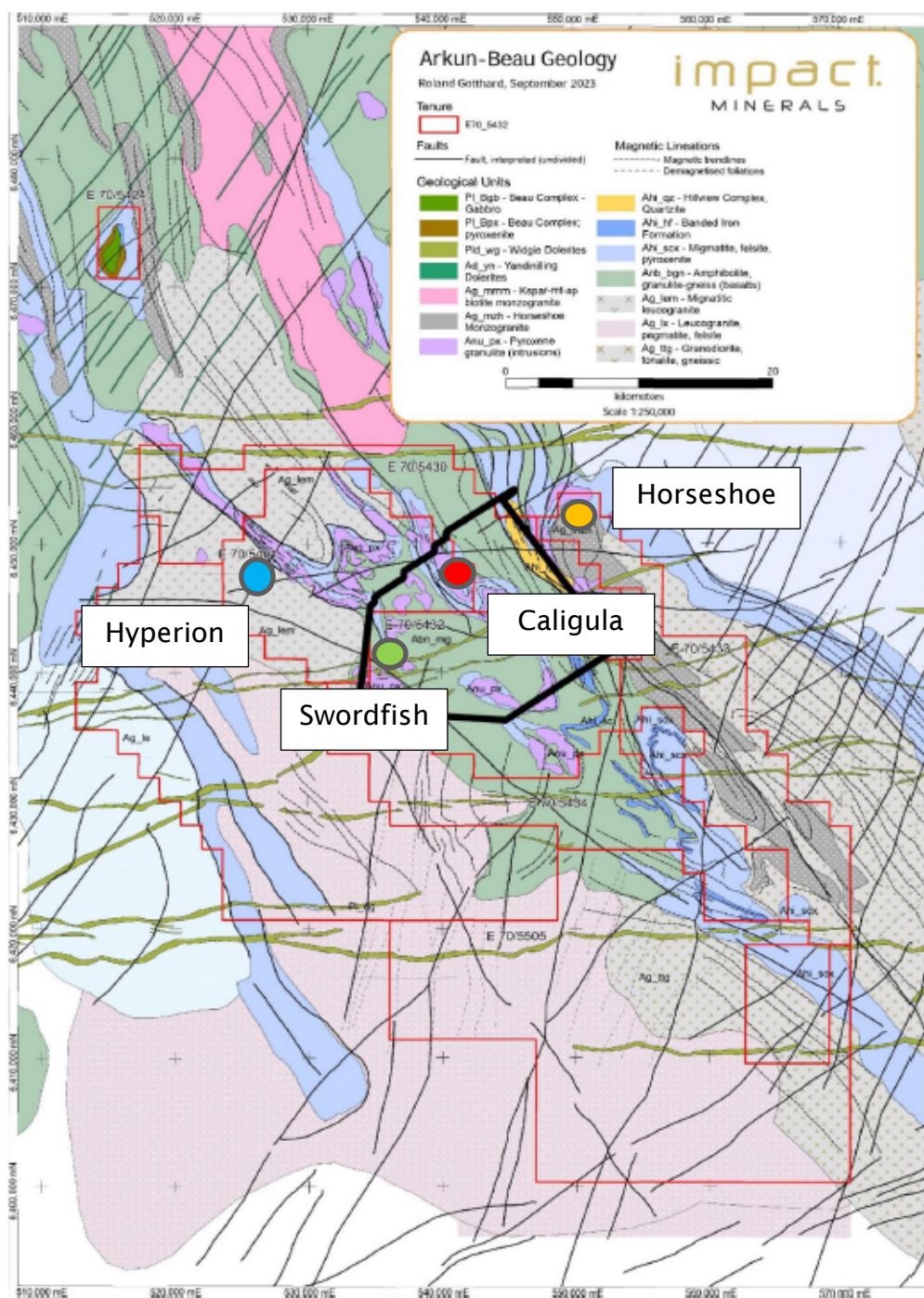
### About the Mobile Magneto-Telluric Survey

Mobile MT (Mobile MagnetoTellurics) is a newly developed helicopter-borne electromagnetic data acquisition technology proprietary to Expert Geophysics Limited (EGL). It is a passive airborne electromagnetic technique that records magnetic (in the air) and electric (on the ground) fields generated by natural electromagnetic primary field sources in the audio frequency range from 25 Hz to 30 kHz (ELF+VLF).

Field data are acquired using stationary orthogonal pairs of electrical field sensors (grounded wire dipoles) and towed magnetic field detectors (three orthogonal induction coils).

The MMT data helps map bedrock structures and lithologies and has the potential for direct detection of alteration and mineralization zones from the apparent conductivity. Inversion of the data allows an estimate of the resistivity at depth and uses VLF EM and magnetic data to study the properties of the bedrock units.

A total of 4 production flights were flown at Arkun to complete 508 line kilometres of the survey over a 254 sq. km area, as shown in Figure 4. The survey lines were oriented SW - NE (N 55° E) at 400 m spacing. An example of the 3D Voxel output is shown in Figure 5.



**Figure 4.** Image of the interpreted bedrock geology of the Arkun project showing the location of the MMT Survey in black in the northeastern part of the Arkun Project and key targets.

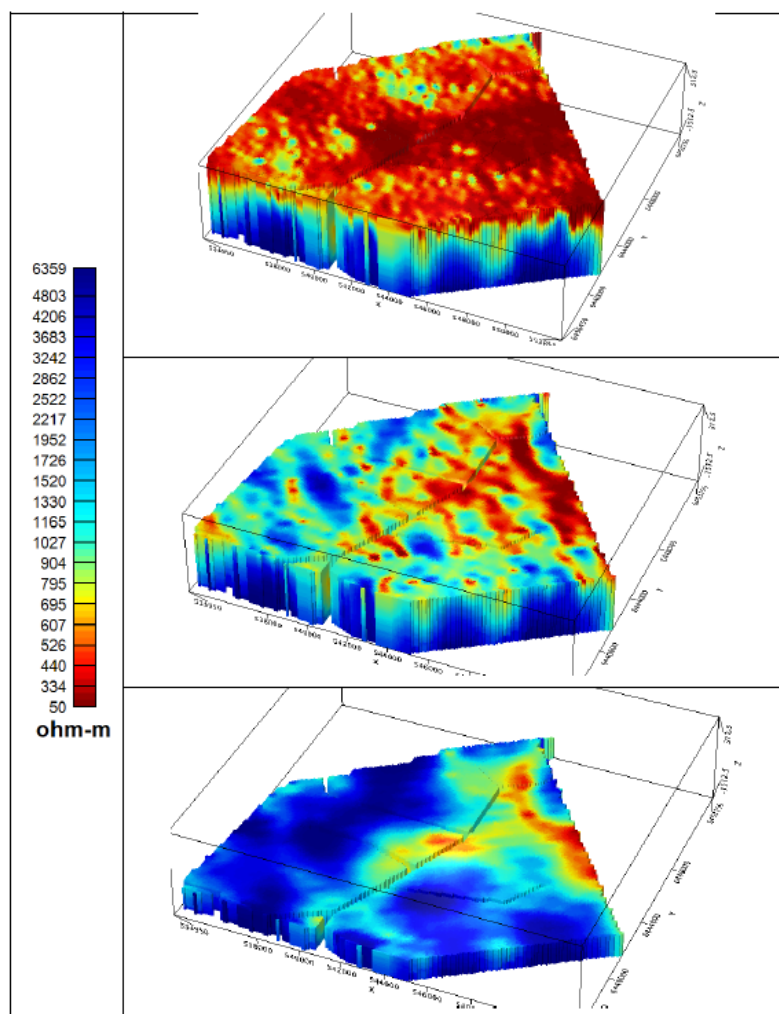
## About the Arkun Project

Impact's Arkun Project is centred about 200 km southeast of Perth and comprises eight tenements covering a total area of 1,900 km<sup>2</sup> between the towns of Quairading, Corrigin and Brookton (Figure 1).

The Project covers a significant part of the Corrigin Tectonic Zone, a prominent crustal-scale feature interpreted as an exhumed granulite-metamorphosed granite-greenstone terrane intruded by various younger mid-crustal granites.

The Corrigin Tectonic Zone is a tectonic assemblage of different geological domains associated with significant mineral deposits such as the very large Julimar PGE-Ni-Cu deposit (>10 Moz of palladium plus nickel and copper), the Katanning gold deposit (>3 Moz gold) and the giant Greenbushes lithium-tantalum deposit.

Arkun was initially staked within the Zone as it was interpreted to contain strong nickel, copper and platinum group element prospectivity associated with a suite of mafic and ultramafic intrusions similar to the host rocks at Julimar (ASX: CHN) and Yarawindah Brook (ASX: CPN). The Zone is also prospective for iron, rare earth elements and vanadium.



**Figure 5.** 3D view of a resistivity voxel model of the MMT Survey area. Warm colours represent more conductive areas near the surface (top image), about 300 metres below the surface (middle) and about 1,000 metres below the surface (bottom). The MMT data shows excellent potential to elucidate deeper features of exploration interest at Arkun, and further interpretation of the data is in progress.

## **COMPLIANCE STATEMENT**

This report contains new Exploration Results for 98 soil geochemistry samples and images of the Mobile MT survey.

Dr Michael G Jones

Managing Director

### **Competent Persons Statement**

*The review of results in this report is based on information compiled by Dr Mike Jones, a Member of the Australasian Institute of Geoscientists and a full-time employee of 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 that 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 including the matters in the report based on his information in the form and context in which it appears.*



# JORC Code, 2012 Edition – Table 1

## Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<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 sampling for geochemical exploration purposes</li> <li>Soil samples taken from 15-25cm depth</li> </ul>
Drilling techniques	<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>	<ul style="list-style-type: none"> <li>No drilling</li> </ul>
Drill sample recovery	<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>No drilling</li> </ul>
Logging	<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 to exploration geochemical sampling</li> </ul>
Sub-sampling techniques and sample preparation	<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>Soils were collected by experienced field staff who assessed the sample site and determined whether there was any undue anthropogenic influence</li> <li>No field duplicates or standards were submitted with the soil sampling</li> <li>Samples were dried, crushed to 1mm and then riffle split to give a 200g sub sample that was then pulverised to 80% passing 75 microns. This is considered sufficient to homogenise the sample and is appropriate to the material being analysed.</li> <li>Limited pulverizing QAQC has been undertaken to ensure laboratory homogenization of the samples.</li> <li>Moist or wet samples were dried prior to laboratory submission.</li> <li>Sample sizes are appropriate to grain size of the material being sampled</li> </ul>
Quality of assay data and laboratory tests	<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 assayed by ALS Geochemistry using a four acid digestion. This is a near-total digestion.</li> <li>Four acid assaying of soils is appropriate for determining the in-situ REE content</li> <li>Impact relies on internal laboratory blanks and checks to monitor QAQC for soil sampling programmes</li> <li>No determination of sample bias or laboratory precision has been established</li> </ul>
Verification of sampling and assaying	<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>Assay data was verified by company personnel</li> <li>Key geochemical ratios were assessed to determine the likely nature and validity of the rare earth element results and it was concluded that the results were, in all balance of probability, real results</li> <li>Sample points collected on handheld GPS in the field</li> <li>No adjustments have been made to the data</li> </ul>
Location of data points	<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>Sample locations recorded with handheld GPS accurate to within 1m</li> <li>MGA Zone 50 South</li> <li>Topographic control is via Sattelite Radar Topographic Model (SRTM)</li> </ul>
Data spacing and distribution	<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>400m x 400m offset grid</li> </ul>
Orientation of data in relation to geological structure	<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>Not applicable</li> </ul>

Criteria	JORC Code explanation	Commentary
Sample security	<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 sealed in individually numbered plastic bags</li> <li>Samples were delivered to the laboratory directly by company personnel to ensure complete chain of custody</li> </ul>
Audits or reviews	<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>No reviews are required at this stage of exploration</li> </ul>

## Section 2 Reporting of Exploration Results

Criteria listed in the preceding section also apply to this section.

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<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>Native Title Agreements are in place with Native Title parties</li> <li>Access is granted on an individual basis with freehold land holders for individual lots</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Limited soil sampling performed by previous explorers on sections of the Arkun Project with broadly unreliable location data and unreliable quality has been located</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<p>The Southwest Yilgarn Province is an Archaean terrane dominated by granite plutons and minor, predominantly sedimentary, gneissic greenstone belts. Subordinate mafic and/or ultramafic intrusions, dolerites and mafic volcanic units are recognized, forming a supracrustal association.</p> <p>Impact interprets the geology of the Arkun Project to comprise a complex assemblage of pre-tectonic basement granitoids many of which are migmatized, sedimentary gneiss and migmatite, pyroxene granulite potentially representing mafic-ultramafic intrusions, and post-tectonic granitoids and Proerozoic dykes.</p>
Drill hole Information	<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>No drilling</li> </ul>
Data aggregation methods	<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>No data aggregation is required</li> </ul>
Relationship between mineralisation widths and intercept lengths	<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 (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>Due to the poor outcrop coverage in the prospect area, width of mineralisation is currently unknown.</li> </ul>
Diagrams	<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>Refer to diagrams in body of the report.</li> </ul>
Balanced reporting	<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>It is impractical to report all sample data and all assays for soil sampling results</li> </ul>
Other substantive exploration data	<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>Impact has flown seven grids of airborne EM and one area for Mobile Magneto-tellurics</li> <li>Impact has taken a selection of rock chip samples</li> <li>Impact has undertaken regolith mapping and a project-wide geology interpretation</li> </ul>

Criteria	JORC Code explanation	Commentary
Further work	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg 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>Metallurgical Drilling</li> <li>Passive seismic</li> <li>Metallurgical sighter tests to determine if REE can be leached from clays</li> </ul>