



AVIRA RESOURCES  
LIMITED

15 February 2023

The Manager  
Market Announcements Office  
Level 40, Central Park  
152-158 St Georges Terrace  
PERTH WA 6000

## FLEM GEOPHYSICAL SURVEY IDENTIFIES MULTIPLE STRONG CONDUCTORS AT THE PUOLALAKI NI-CU PROJECT

### HIGHLIGHTS

- **Results and interpretation of the fixed-loop EM (FLEM) and downhole EM survey data shows that multiple strong (+10,000S) conductors are present within the project area.**
- **The EM conductors are located 50-600m from historically reported massive sulphide intersections. Based on this, and the strong conductance (10,000-40,000S), Avira believes the conductors are prospective targets for massive nickel sulphide mineralisation.**
- **FLEM was effective down to ~500m and the DHEM was excellent in providing detailed resolution of discrete targets.**
- **Five priority diamond drill targets identified. The deeper target (T5) is very large (750 x 150m) and a potentially significant feature (10,000S).**

Avira Resources Limited (**ASX: AVW**) (**Avira** or the **Company**) is pleased to announce that it has now received the results of the fixed-loop EM (FLEM) and downhole EM (DHEM) surveys recently completed at the Puolalaki Ni-Cu Project located in northern Sweden. The final results and processed data from the UAV-borne magnetic survey are however still pending. The results from these surveys have identified a number of high priority drill targets with a mix of relatively discrete, highly conductive bodies at shallow depths (30-100m) and an additional large target at depth (400-500m).

Commenting on the geophysical results, Managing Director David Deloub said, ***“The initial interpretation and results from the recent EM surveys are extremely pleasing. The combination of fixed-loop EM and aerial magnetics (preliminary) has provided us with some immediate and highly prospective drill targets both near surface and at depth. Based on these results we intend to mobilise an appropriate drill rig to test these results as soon as practicable”***

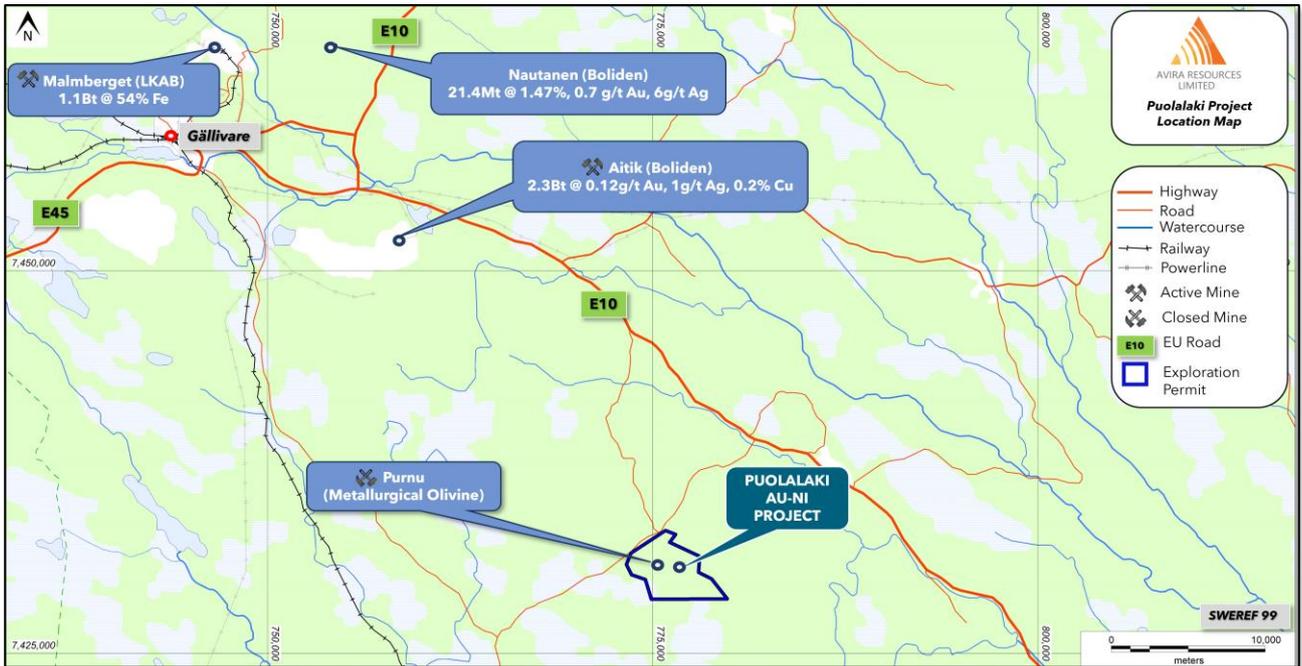


Figure 1: Regional location and mineralisation setting for the Swedish-based Puolalaki Project.

### SURVEY LAYOUT AND SPECIFICATIONS

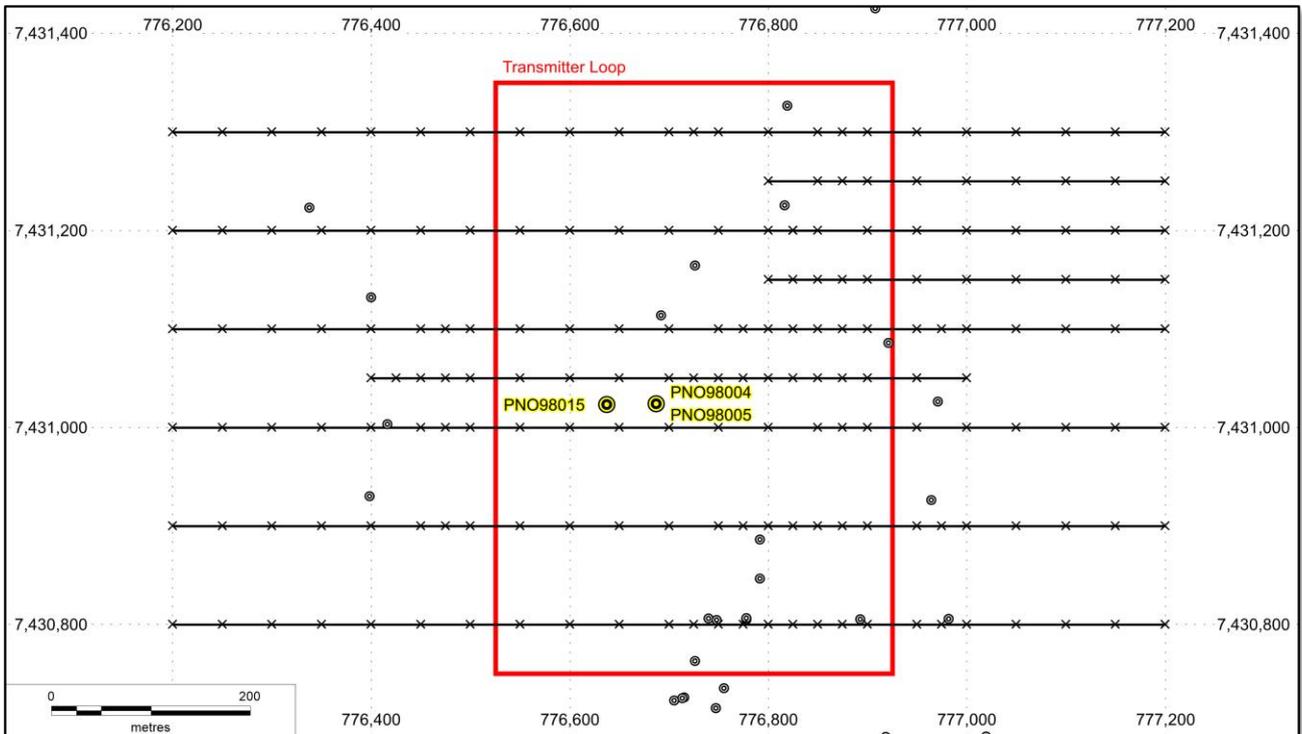
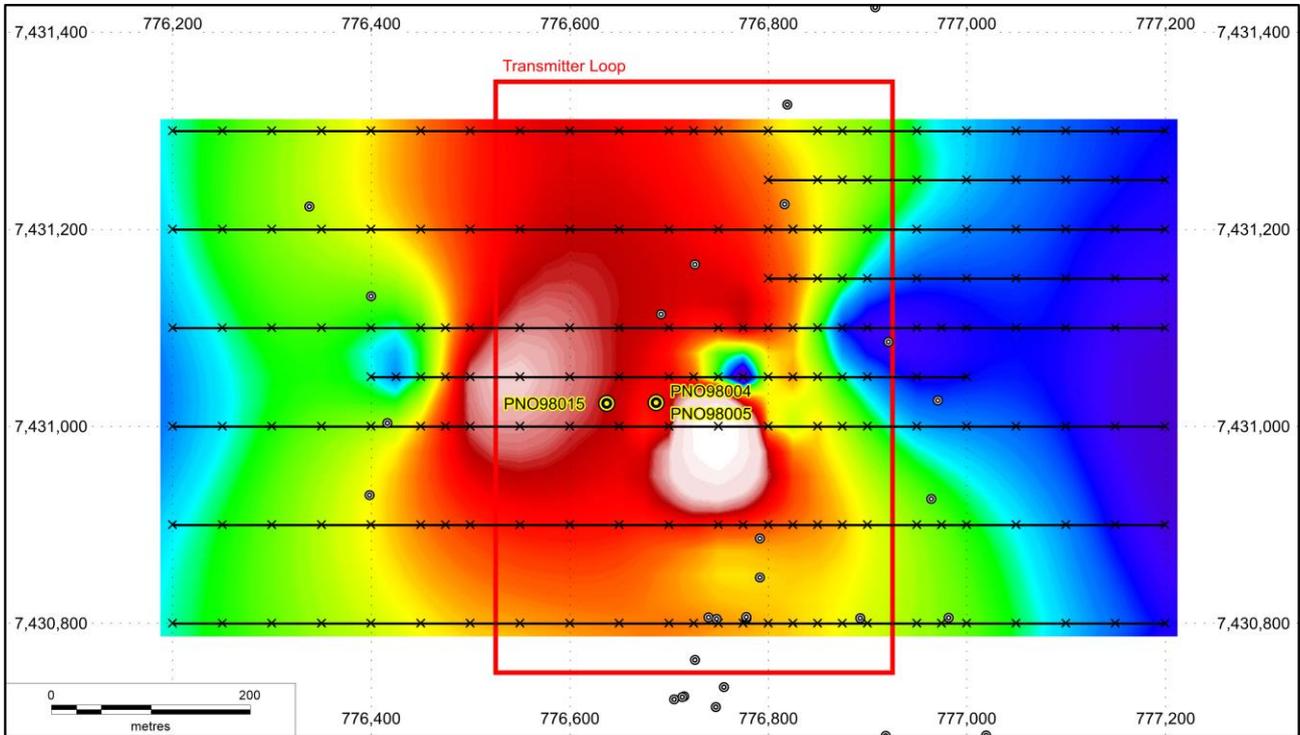


Figure 2: FLEM/DHEM survey design. Historical drill collars shown in black and those in yellow were surveyed with DHEM.



### FIXED-LOOP EM RESULTS

The geophysical surveys were completed in February 2023 by GRM Services (Finland) using the SWEREF99 co-ordinate system. A total of 186 FLEM stations covering 7.5 line-kilometres were recorded.



**Figure 3.** Late time (Channel 35) data only showing the strongest EM responses.

Three high priority target zones have been identified from the FLEM survey (T1, T2 and T3). Each represents relatively discrete, highly conductive bodies at shallow depths. Modelled conductance levels are all +10,000 Siemens representing potential massive sulphide targets. These targets are located within or near the contact of the host gabbro body.

Target T4 has been ranked as a lower priority target given it is located to the east of the known nickel mineralisation within graphitic and pyrrhotitic metasediments and gneisses and the conductance is also much lower than the other 4 targets at 2500S.

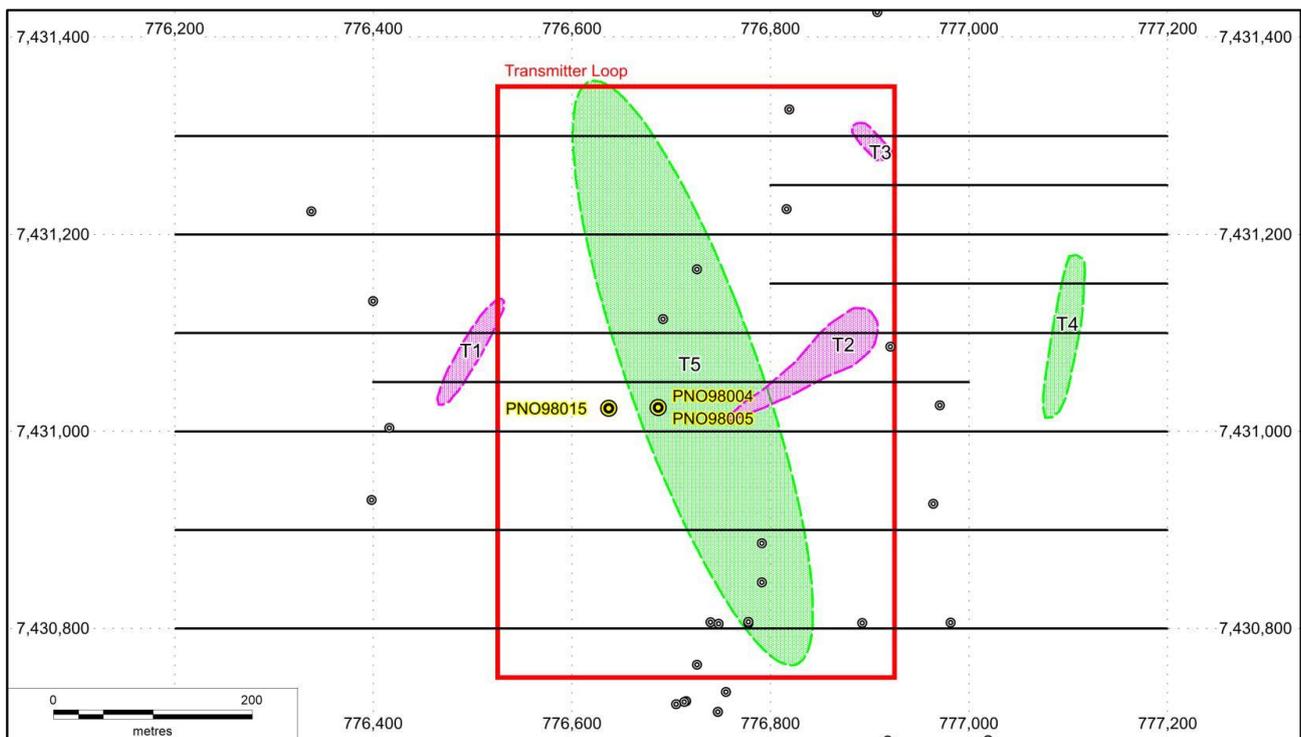
The T5 target is located well within the host gabbro at a depth of 400m-500m below surface and has a conductance of 10,000 Siemens. Given the depth and complexity of modelling this large conductor it has been ranked as a secondary priority.

Target	Description	Size	Conductance (Siemens)	Depth to Top	Host Lithology	Priority
T1	Strong, relatively discrete, late-time FLEM response. Narrow plunging 'shoot' type model.	25m x 200m	20,000	50m	Gabbro	High
T2	Strong, complex/multi-zone, late-time FLEM response. Discrete shallow zone, possibly disjointed from lower zone.	20m x 20m (upper)	40,000 (upper) 20,000 (lower)	30m (upper) 65-100m (lower)	Gabbro Contact?	High



Target	Description	Size	Conductance (Siemens)	Depth to Top	Host Lithology	Priority
		25m x 100m (lower)				
T3	Moderate, relatively discrete, late-time FLEM response. Potentially limited size/extent.	40m x 20m	10,000	50m	Gabbro Contact?	High
T4	Weaker, subdued late-time FLEM response. Potentially a stratigraphic conductor.	150m x 100m	2500	100m	Metasediments	Low
T5	Broad/extensive late-time FLEM response possibly associated with a large conductor at depth.	750m x 150m	10,000	400-500m	Gabbro	Medium

**Table 1:** Summary of priority EM targets at the Puolalaki Project.



**Figure 4:** High priority target zones.

## DOWNHOLE EM RESULTS

Three historic drillholes were successfully surveyed with downhole EM; drillholes PNO98004, 98005 and 98015.

PNO98004 detected an off-hole anomaly between 50-70m from a highly conductive body sitting slightly above the drillhole. Results are consistent with the FLEM models of a small, localised conductor located sub-parallel to the drillhole.

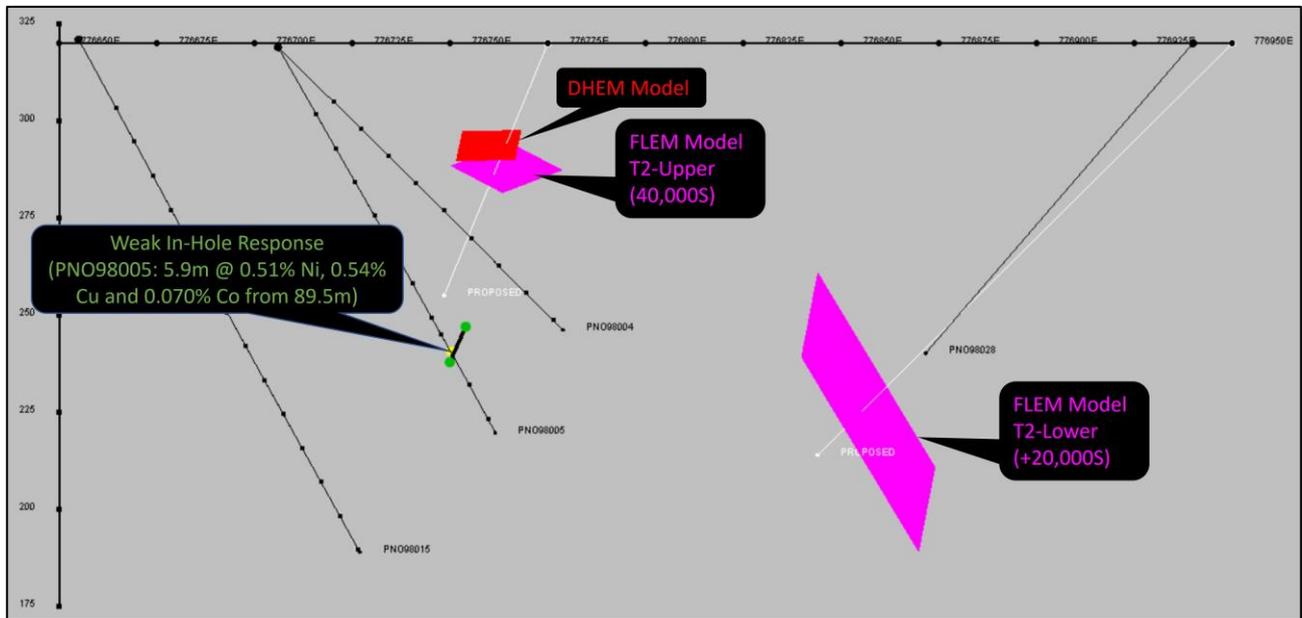
PNO98005 detected an off-hole anomaly at 40m downhole, with the conductor centred above the drillhole consistent with PNO98004 and the FLEM model. There was a minor in-



AVIRA RESOURCES  
LIMITED

hole response observed at 90m which coincides with the Ni-Cu mineralisation (5.9m @ 0.51% Ni from 89.5m). There is, however, no support for this section continuing off-hole.

PNO98015 only shows a broad background response consistent with the known distant conductors (weak off-hole responses).



**Figure 5:** DHEM cross-section (looking north) showing both the off-hole DHEM anomaly and T2 FLEM anomalies.

## NEXT STEPS

Avira believes the EM conductors are prospective targets for massive nickel sulphide mineralisation due to the strong conductance (+10,000S) of the anomalies and their close proximity to historic Ni-Cu sulphide mineralisation.

The early breakthrough at Puolalaki has produced five priority diamond drill targets (~1000m). This initial drilling campaign will focus on delineation of the shallower targets as well as the significant deeper T5 target. DHEM surveying of these new drill holes will confirm targets have been successfully tested and to assist with any follow-up drilling requirements. A drill rig will be mobilised to site as soon as practicable.

For, and on behalf of, the Board of the Company, and authorised for release.

David Deloub  
Executive Director  
Avira Resources Limited

Shareholders and other interested parties can speak to Mr Sonu Cheema if they have any queries in relation to this announcement: +618 6489 1600.



AVIRA RESOURCES  
LIMITED

### **About Avira Resources Limited**

Avira Resources (AVW) is an ASX listed mining exploration company. In addition to the Wyloo Project tenement exploration licence applications located in the Ashburton Basin, the Company holds two tenement packages within the Paterson Range province which is host to a number of substantial gold, copper and manganese mines and deposits, including the Telfer gold-copper mine. The Avira projects are situated in the Yeneena basin sedimentary rock formation that hosts both the Nifty and Maroochydore copper deposits and the Woody Woody Manganese mine.

### **Forward looking statements**

This announcement contains forward-looking statements which are identified by words such as 'may', 'could', 'believes', 'estimates', 'targets', 'expects', or 'intends' and other similar words that involve risks and uncertainties. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions regarding future events and actions that, as at the date of this announcement, are expected to take place. Such forward-looking statements does not guarantee future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, the directors and our management. We cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this prospectus will actually occur and investors are cautioned not to place undue reliance on these forward-looking statements. We have no intention to update or revise forward-looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this announcement, except where required by law. These forward-looking statements are subject to various risk factors that could cause our actual results to differ materially from the results expressed or anticipated in these statements.

### **Competent Persons Statement**

The information in this document that relates to exploration results is based on information compiled by Amanda Scott, a Competent Person who is a Fellow of the Australian Institute of Mining and Metallurgy (Membership No.990895). Amanda Scott is a full-time employee of Scott Geological AB. Taiga Metals AB, of which Amanda Scott is a director holds shares in Avira. Amanda Scott has sufficient experience, which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which has been undertaken 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 (JORC Code). Amanda Scott consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

Avira Resources Limited

Suite 9, Level 2, 330 Churchill Avenue Subiaco WA 6008 Australia  
T: 61 8 6489 1600 F: 61 8 6489 1601 [www.aviraresourcesltd.com.au](http://www.aviraresourcesltd.com.au)  
ABN: 38 131 715 645

## JORC CODE, 2012 EDITION – TABLE 1

### Section 1 sampling techniques and data

(Criteria in this section apply to all succeeding sections.)

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> </ul> <p>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.</p>	<ul style="list-style-type: none"> <li>Ground electromagnetic surveys and a UAV-borne magnetic survey completed by GRM Services (Finland).</li> <li>Fixed-loop EM (FLEM) survey data collected using a single 600x400m transmitter loop, with 50m or 100m line spacing and a station spacing of 25-50m.</li> <li>EM survey parameters/specifications: <ul style="list-style-type: none"> <li>EMIT SMARTEM24 receiver</li> <li>EMIT SMARTx4 transmitter</li> <li>Supracon High Temp SQUID sensor</li> <li>Transmitter current 23Amps</li> <li>Base frequency 1Hz</li> <li>3 readings per station</li> <li>EMIT Digi-Atlantis DHEM probe</li> <li>5-10m station intervals for DHEM</li> </ul> </li> <li>UAV-borne magnetic survey parameters/specifications: <ul style="list-style-type: none"> <li>Quadcopter with GEM-GSMP35 potassium magnetometer</li> <li>GEM GSM19 Overhauser magnetometer base station</li> <li>25m spaced flight lines</li> <li>30m flight altitude</li> </ul> </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 has been reported</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 has been reported</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>No drilling has been reported</li> </ul>

Criteria	JORC Code explanation	Commentary
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>No drilling has been reported</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>No drilling has been reported</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>• No drilling has been reported</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>• The data was collected in SWEREF TM99 coordinate system.</li></ul>

Criteria	JORC Code explanation	Commentary
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>No drilling has been reported</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>The survey profiles were aligned to cross the majority of the known structures, stratigraphy and mineralisation.</li> </ul>
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>No drilling has been reported</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 drilling has been reported</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>	<p>The Puolalaki Project is located in the Gällivare mining district of Sweden and approximately 50m SE of the town of Gällivare.</p> <p>The project comprises a single, granted exploration Permit (Puolalaki nr 100) owned 50% by Scott Geological AB and 50% by Outlier Geoscience Pty Ltd.</p> <p>The exploration permit is currently in good standing with no known impediments to exploration.</p>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<p>The bulk of the historic exploration at the project was completed by Swedish mining company LKAB during the 1980's through to the early 1990s. During its tenure, LKAB completed diamond drilling, surface geophysics, trenching, BOT drilling, soil sampling and trial mining/metallurgical studies. In 1998, Canadian exploration company NAN completed diamond drilling at the project. In 2003, Swedish exploration company Geoforum AB completed C-horizon soil sampling.</p>



Criteria	JORC Code explanation	Commentary
Geology	<ul style="list-style-type: none"> <li>• Deposit type, geological setting and style of mineralisation.</li> </ul>	<p>The Puolalaki Project is located within Palaeoproterozoic rocks of the Fennoscandian Shield.</p> <p>The Precambrian bedrock in northern Sweden includes a ~2.8Ga Archaean granitoid-gneiss basement, which is unconformably overlain by greenstones, porphyries and sedimentary successions aged 2.2-1.9Ga and with 1.9-1.8Ga intrusions.</p> <p>The Puolalaki Project is centred on a package of Paleoproterozoic metavolcanic and metasedimentary rocks which were deposited, deformed and metamorphosed during the Svecofennian orogeny at c. 1.9 Ga.</p> <p>A crustal-scale, ductile-brittle deformation zone (Nautanen Deformation Zone) transects the area and hosts numerous occurrences of copper ±gold ±iron mineralisation.</p> <p>The bedrock in the project area is dominated by Lina granite, felsic-intermediate-mafic volcanics, sedimentary gneisses and mafic and intermediate intrusives. Dolerite and pegmatite dykes are common.</p> <p>The early Svecokarelian (ca. 1.96-1.87Ga) mafic-ultramafic intrusives largely comprise amphibolised gabbro, pyroxenite and peridotite-harzburgite. At Puolalaki, the intrusives have been partially serpentinitised. Felsic-intermediate intrusives of the same suite largely comprise inhomogeneous, medium-grained granodiorite-diorite-tonalite lithologies.</p> <p>The Svecofennian (ca. 1.96-1.86Ga) supracrustal rocks (Kiruna-Arvidsjaur Group) in the Puolalaki area comprise gneissic metasediments and felsic-intermediate-mafic volcanics.</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:</li> <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> <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 has been reported</li> </ul>



Criteria	JORC Code explanation	Commentary
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 drilling has been reported</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 (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>No drilling has been reported</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>Appropriate maps and sections are included in the main 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>All results received to date have been reported.</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>All relevant historical exploration data and activities have been reported previously.</li> </ul>
Further work	<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>Diamond drilling to test the EM targets at Puolalaki.</li> </ul>