

12 December 2023

## Soil Sampling Confirms Gold, Nickel and Lithium Potential at Mt Jackson

- **Results from 818 soil samples have increased the prospectivity of the Mt Jackson Project**
- **Highlights of the follow-up program include:**
  - **Confirmation of several gold anomalies up to 7km long**
  - **Three zones of coincident nickel, copper, platinum and palladium anomalism**
  - **Several zones of anomalous lithium**
- **Planning underway for a ground EM survey to test the base metal anomalies**
- **Follow up soil sampling in Q1 2024 to further test the extent of the lithium anomalies**
- **Aircore drilling on the Mt Jackson permit expected mid-2024**

Falcon Metals Limited (ASX: FAL) (“Falcon” or “the Company”) advises that it has received results for 818 soil samples taken at the Company’s Mt Jackson Project, 110km north of Southern Cross in Western Australia. The Mt Jackson Project is interpreted to contain the concealed northern extension of the Southern Cross Greenstone Belt. The soil sampling was following up results previously announced (see ASX Announcement dated 14 September 2023 ‘*Exploration Update – Pyramid Hill & Mt Jackson*’) infilling several gold and nickel targets to a sample density of 100m x 100m. The sampling provides increased confidence in several orogenic gold, komatiitic nickel and lithium pegmatite targets that warrant further exploration, including ground Electromagnetic (EM) surveys, further soil sampling and aircore drilling.

### Mt Jackson Soil Sampling

The Mt Jackson Project is located at the convergence of the Southern Cross Greenstone Belt, the major crustal-scale Youanmi Shear Zone and the regional scale Koolyanobbing Shear Zone at the northern end of the belt (See Figure 1). The Southern Cross Greenstone Belt is a well-endowed mineral province and has collectively produced >15Moz of historical gold<sup>1</sup>. In addition, the Forrestania Greenstone Belt forms the southern extension of the Southern Cross Greenstone Belt and has historical nickel production of ~384kt<sup>2</sup> and is also host to the Earl Grey Mt Holland Lithium Project with a pre-production resource of 189mt @ 1.5% Li<sub>2</sub>O that is being developed by Covalent Lithium Pty Ltd, a joint venture between Wesfarmers (ASX: WES) and SQM<sup>3</sup>.

The Mt Jackson Project was initially targeted on a 5km long magnetic anomaly in an area of shallow sand cover that was interpreted to be the northern extension of the Southern Cross Greenstone Belt. Earlier wide-spaced soil sampling confirmed the likely presence of mafic and/or ultramafic rocks with several low-level gold anomalies identified.

<sup>1</sup> ASX announcement RRL 03/08/2022, “Diggers and Dealers Mining Forum”

<sup>2</sup> ASX announcement: IGO 30/08/2022, “FY22 Cosmos and Forrestania Mineral Resources and Ore Reserves”, p32

<sup>3</sup> Zoe Phelps-Barber, Allan Trench & David I. Groves (2022) Recent pegmatite-hosted spodumene discoveries in Western Australia: insights for lithium exploration in Australia and globally. *Applied Earth Science*, 131:2, 100-113. DOI: 10.1080/25726838.2022.2065450





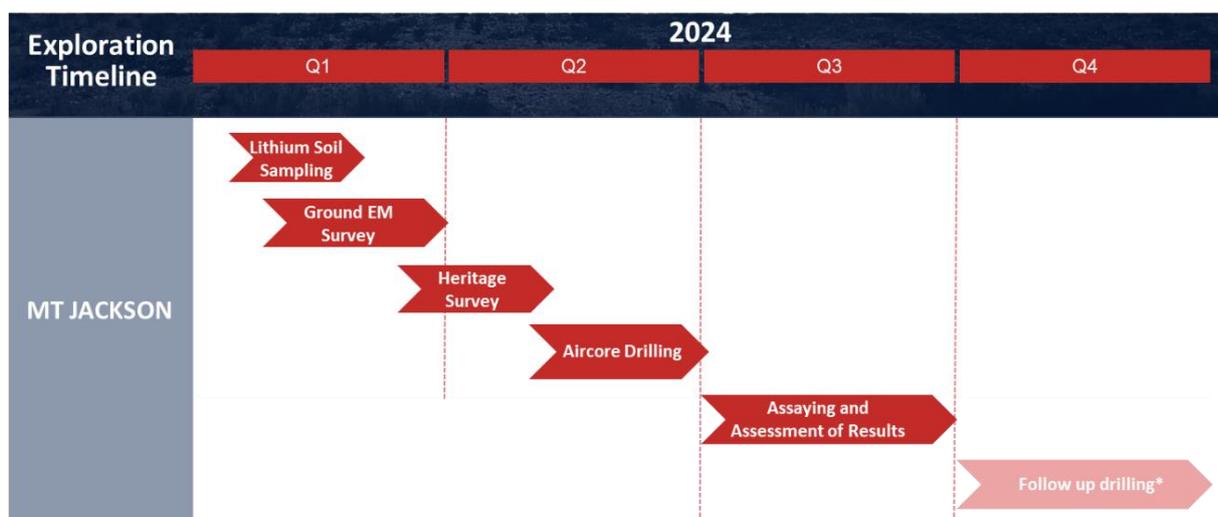
These new results have further refined several of the gold targets (see Figure 2) with the highlight being a 1km long north-south trending target >3ppb Au with a peak value of 17.5ppb Au that is coincident with the interpreted Southern Cross Greenstone Belt. In addition to this, a 7km long northeast-southwest anomaly has been confirmed in a demagnetised zone that is interpreted to be associated with the Youanmi Shear Zone and is open to the south. This anomaly is >2ppb Au and is a more subtle response given the extensive aeolian cover interpreted to be developed in this location on the eastern side of a salt lake system.

The analytical method that was used for Au was a 10g cyanide leach of -50µm material that is sieved under lab conditions. This was designed for defining low-level gold anomalism in areas of transported aeolian cover. It allows confidence in low-level gold interpretation because it has a detection limit of 0.01 ppb Au and no samples from this program were below the detection limit. Further to the north there are also several other anomalous zones on a parallel structure, and what appear to be conjugate northwest-southeast trending structures. These targets will be tested with aircore drilling in 2024.

In addition, three zones with coincident nickel, copper, platinum and palladium anomalism along the interpreted Southern Cross Greenstone Belt have been prioritised. Moving Loop Electromagnetic (MLEM) surveying is planned to test for nickel sulphide mineralisation (See Figure 3). Drill planning for these targets will be dependent on the outcomes of the MLEM surveys.

Although the soil sampling programs were designed to test largely for gold and base metals, several anomalous lithium zones (see Figure 4) were also detected. The sampling and assaying methodology is not considered optimal for lithium exploration and specific orientation programs will be required if encouraging results are obtained from the current work programs. The analytical method used for this was a 0.5g Aqua Regia digest of -50 µm material. This is considered a partial digest so can report lower values than more aggressive methods such as a four-acid digest or sodium-peroxide fusion. Although the level of lithium anomalism is low, they have formed discrete anomalies relative to the background and these zones are considered targets requiring further soil sampling and potential aircore drilling. The Southern Cross region is prospective for lithium given it hosts the Earl Grey Mt Holland Lithium Deposit. A large LCT pegmatite system has also been identified directly southwest of permit E77/2577 by Midas Minerals (ASX: MM1, see ASX announcement dated 16 January 2023 'Midas defines priority lithium and gold target zones over 20km strike at Newington, WA').

Planning is now underway for an aircore drilling program in 2024 which will be the first exploration drilling undertaken in the highly prospective Mt Jackson Project area for any commodity.



\*Follow up drilling will be dependent on the results of the first phase aircore drilling

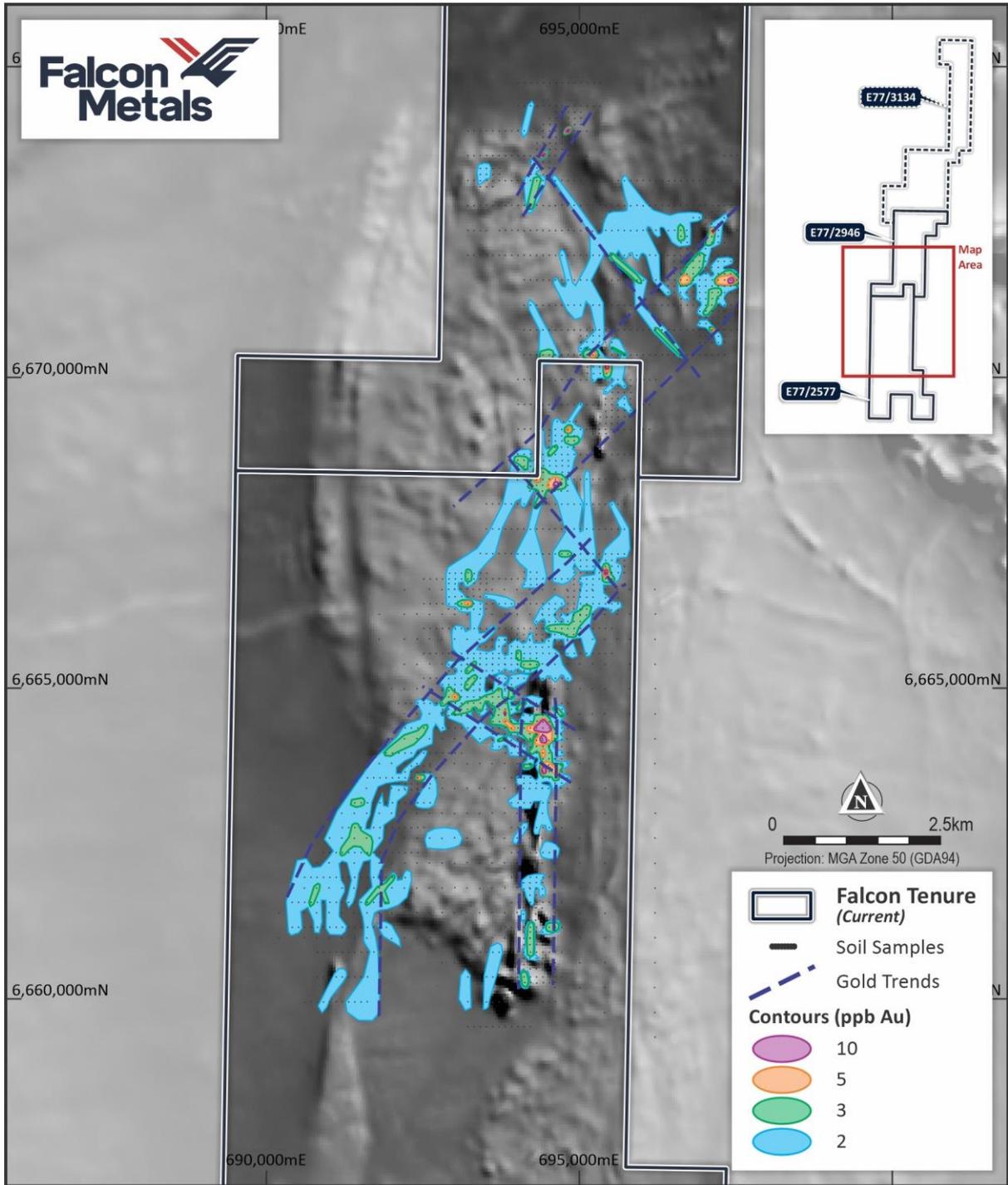


Figure 2 Plan map of Mt Jackson showing the Au soil sampling results

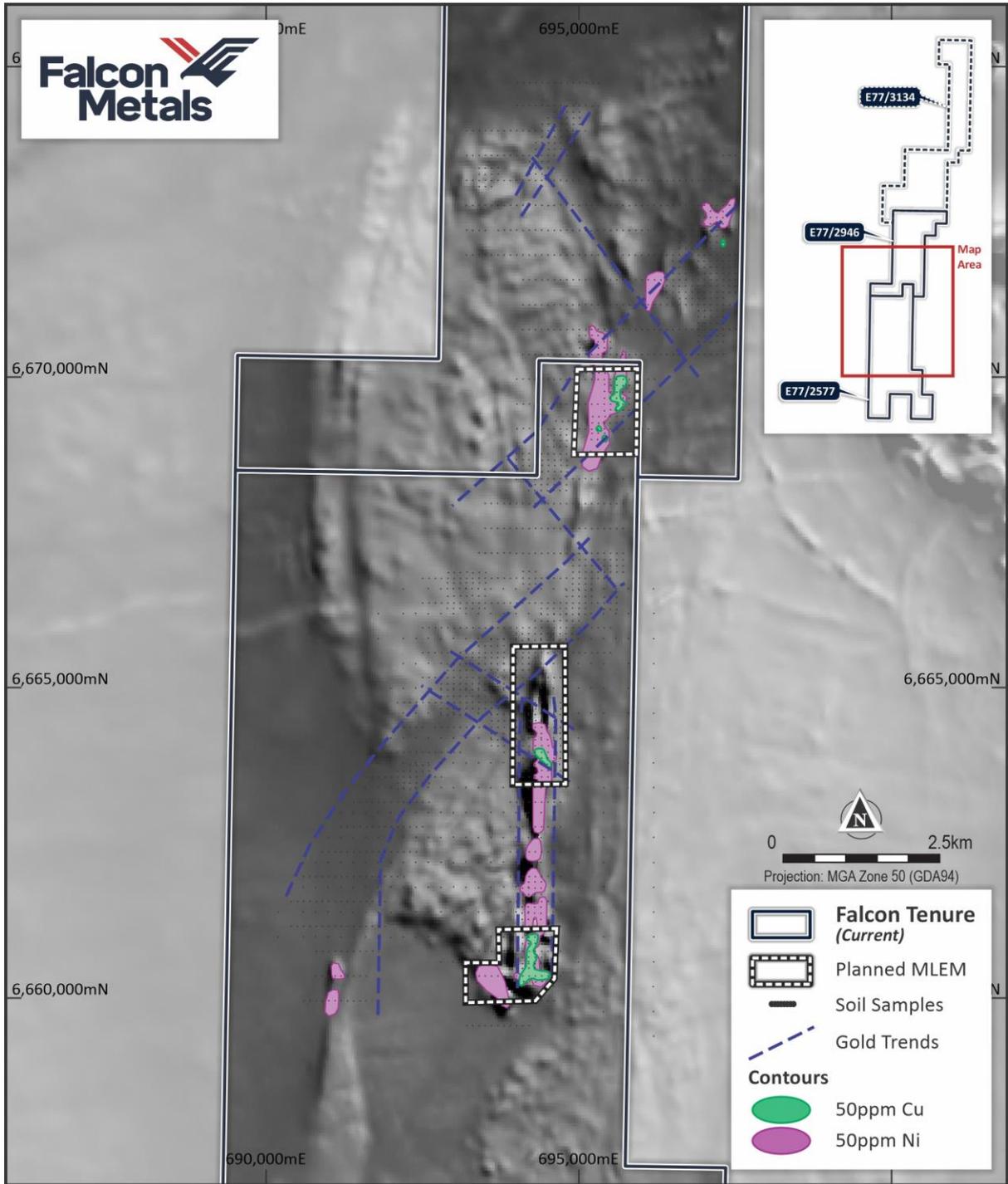


Figure 3 Plan map of Mt Jackson showing Ni and Cu soil sampling results

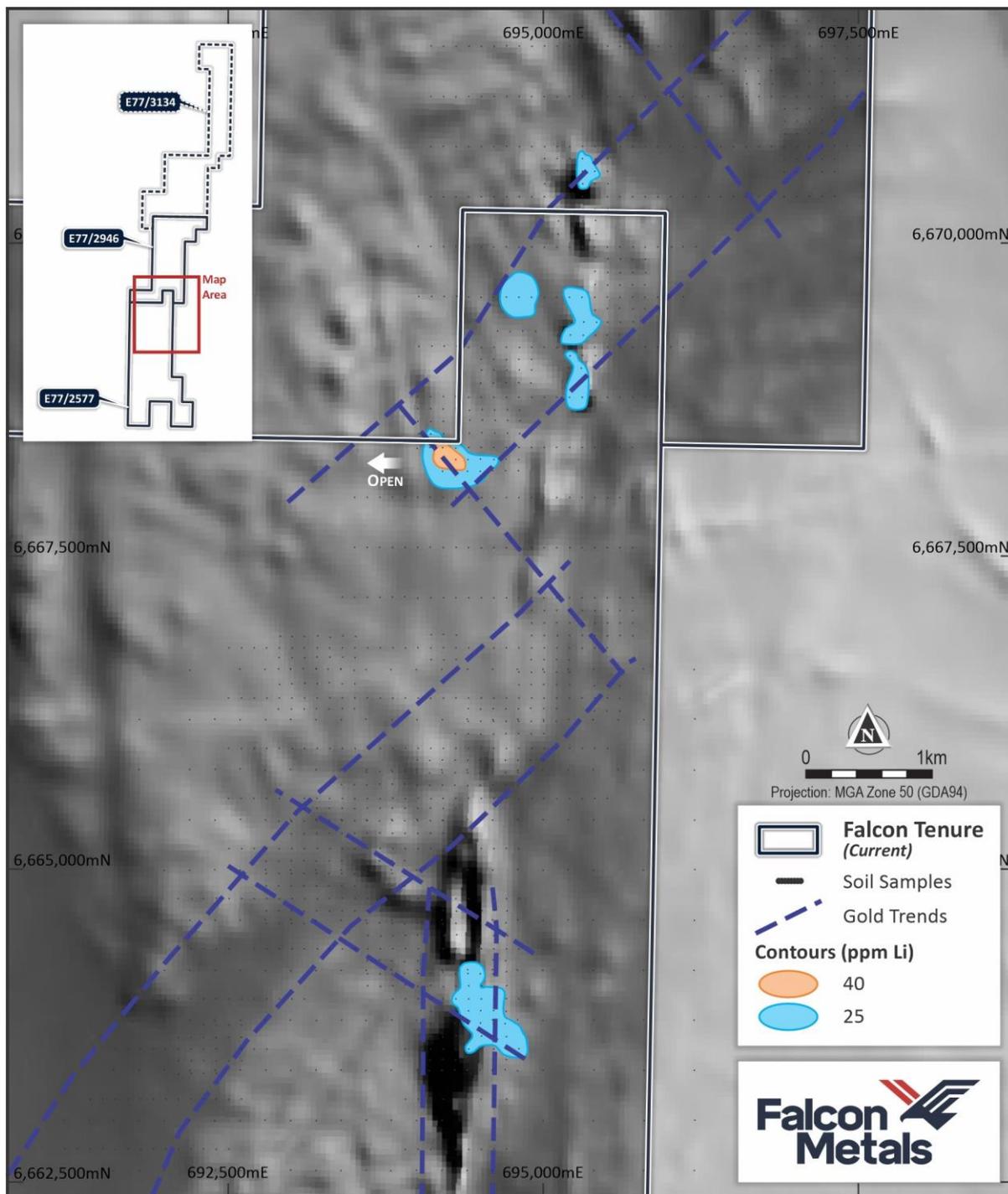


Figure 4 Plan map of Mt Jackson showing Li soil sampling results

This announcement has been approved for release by the Board of Falcon Metals.

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**COMPETENT PERSON STATEMENT:**

*The information contained within this announcement relates to exploration results based on and fairly represents information compiled and reviewed by Mr Doug Winzar who is a Member of the Australian Institute of Geoscientists. Mr Winzar is a full-time employee of Falcon Metals Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the "Australian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves". Mr Winzar consents to the inclusion in the documents of the matters based on this information in the form and context in which it appears.*

**FORWARD LOOKING STATEMENT:**

*This announcement may contain certain forward-looking statements, guidance, forecasts, estimates, prospects, projections or statements in relation to future matters that may involve risks or uncertainties and may involve significant items of subjective judgement and assumptions of future events that may or may not eventuate (Forward Statements). Forward Statements can generally be identified by the use of forward looking words such as "anticipate", "estimates", "will", "should", "could", "may", "expects", "plans", "forecast", "target" or similar expressions and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production and expected costs. Indications of, and guidance on future earnings, cash flows, costs, financial position and performance are also forward looking statements. Forward looking statements, opinions and estimates included in this announcement are based on assumptions and contingencies which are subject to change, without notice, as are statements about market and industry trends, which are based on interpretation of current market conditions. Forward looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance.*



## APPENDIX : JORC Table 1 – Mt Jackson Project

### 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 (eg. 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>In cases where ‘industry standard’ work has been done this would be relatively simple (eg. ‘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 (eg. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>The recent soil samples were collected from 0- 25 cm and sieved to -0.3mm in the field with approximately 500g collected. The samples are then dried and sieved to -50um (0.05mm) at the laboratory and 30g of this material is used for assay.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg. 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>Not applicable.</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>Not applicable.</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.</li> </ul>



Criteria	JORC Code explanation	Commentary
<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>The recent sampling involved sieving the material to -50um to remove the diluting effect of sand from the clay that was targeted. This was done in the laboratory once the sample was dried.</li> <li>The sample size was appropriate to ensure enough -50um material was available for analysis.</li> </ul>
<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 (eg. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>Soil samples were processed by Intertek Genalysis in Maddington, WA.</li> <li>The samples were analysed using a 10g Cyanide Leach for Au (CN10/MS), specifically designed for fine fraction soil sampling. This is a partial digest. The sample was also analysed with a 0.5 g Aqua Regia digest with a 53-element package and analysed on a triple quad ICPMS to allow for low level detection (AR005/MSQ53). This is considered a partial digest.</li> <li>Falcon used 1 standard every 100 samples.</li> <li>The lab uses their own certified standards and blanks, and this data is also provided to Falcon.</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>Results were checked by the Falcon Metals Exploration Manager.</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>Sample locations have been picked up using a handheld global positioning system (GPS) with a <math>\pm 5</math> m error.</li> <li>The grid system used for the location of all drillholes is MGA, GDA94 (Zone 50).</li> <li>The reliability of RL data is unknown.</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>Sample spacing was 100m x 100m, this was designed to increase the resolution of previously defined anomalous zones.</li> <li>This spacing is not considered suitable for establishing geological or grade continuity but to aid in the drill planning.</li> <li>No sample compositing has been applied.</li> </ul>



Criteria	JORC Code explanation	Commentary
<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>• The infill sampling on a 100m x 100m grid was designed to remove any bias.</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 the contractors who collected the samples.</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>• No review has been carried out to date.</li></ul>



## Section 2 Reporting of Exploration Results

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>Surface sampling has been carried out within E77/2577 and E77/2946. The tenement areas are wholly owned by Falcon Metals (WA) Pty Ltd</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>Southern Cross Goldfields took eight rock chip samples at the south end of the project area in 2009. No gold values were noted in the digital data file. No anomalous pathfinder results were noted in the multi-elements. In 2018, Fleet Street Holdings took 63 soil samples within the southwest corner of the project area. A peak gold value of 7 ppb was returned, and no significant gold pathfinder results are noted.</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>Two mineralisation styles are being explored for:               <ol style="list-style-type: none"> <li>orogenic style gold similar to that seen across the goldfields of the Yilgarn Craton.</li> <li>Komatiite hosted Ni-Cu-PGE</li> </ol> </li> <li>In addition to this the area is also prospective for LCT pegmatites and this will be assessed as part of the exploration.</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>Not applicable.</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 (eg. 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>Not Applicable.</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 (eg. 'down hole length, true width not known').</li></ul>	<ul style="list-style-type: none"><li>• Not applicable.</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>• The results of the soil sampling results for the targeted elements are shown in the figures and discussed in the text.</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>• The contouring has been done to 2ppb Au, 5ppb Pt, 50 ppm Cu, 50ppm Ni and 25ppm Li. This is appropriate for the identification of anomalous areas for further sampling.</li></ul>
<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>• Not applicable.</li></ul>
<b>Further work</b>	<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>• Additional infill sampling at 100m x 100m over anomalous Li areas that have not been closed out is required.</li><li>• Refer to figures in the body of the report for interpreted mineralised trends.</li></ul>