

29th November 2023

# New LCT pegmatite targets identified at Yalgoo Lithium Project

Australian battery minerals explorer Firetail Resources Limited ("Firetail" or "the Company") (ASX: FTL) is pleased to provide an update on exploration activities at its Yalgoo Lithium Project ("Yalgoo") in Western Australia.

A review and interpretation of remote sensing data, which has been integrated with a new geophysical interpretation of the area, has identified a number of new potential Lithium-Caesium-Tantalum ("**LCT**") pegmatite targets for on-ground follow-up.

### **Highlights include:**

- Analysis of hyperspectral imagery has identified numerous potential new lithium-bearing pegmatites at the Yalgoo Lithium Project.
- Known lithium pegmatites within the project area were used as a reference for identifying additional potential lithium pegmatites.
- Generative work also included a review and interpretation of open file geophysics from Yalgoo Project area.
- Ground truthing, mapping and rock chip sampling of new targets to commence this week
- Similar work program now underway for Dalgaranga Project, with historical data compilation already completed.
- Follow-up drilling planned for Yalgoo region in the first quarter of 2024
- Firetail is committed to exploration in the under-explored Mid-West region of Western Australia, where industry peers have identified critical minerals systems proximate to the FTL tenure.

### **Executive Chairman, Brett Grosvenor, commented:**

"Whilst the drilling campaign at Picha has been the recent focus for the FTL team, we remain committed to progressing exploration across the Yalgoo and Dalgaranga Projects, as we have growing confidence that this region and is primed for a significant discovery of critical minerals.

"The previously under-explored Mid-West region of WA is undergoing a period of growing exploration activity. Industry peers have increased their focus in the region with critical minerals systems defined by Krakatoa Resources<sup>1</sup> (ASX:KTA) and Aldoro Resources<sup>2</sup> (ASX:ARN) at their neighbouring projects.

"Our systematic approach to exploration at Yalgoo and Dalgaranga has enabled FTL to effectively deploy funds with a targeted approach, with the potential to start a more significant drilling program in the first quarter of 2024 across this highly prospective tenure."

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<sup>&</sup>lt;sup>1</sup> Refer to KTA ASX Announcement dated 9 November 2023 – "Thick Pegmatites Intersected at King Tamba"

<sup>&</sup>lt;sup>2</sup> Refer to ARN ASX Announcement dated 12 October 2022 – "Niobe Rubidium & Lithium Maiden Resource Achieved"



### Yalgoo Lithium Project

### Hyperspectral data interpretation

Hyperspectral data over the Yalgoo Lithium Project has been acquired, processed and interpreted by the exploration consulting group Terra Resources ("**Terra**"). This data has also been intergrated with an interpretation of open file geophysical data over the Project area. Sentinel-2 and ASTER data were processed and imaged to highlight potential lithium-bearing pegmatites. Known lithium bearing pegmatites in the region were used to characterise the spectral signature and inform the process of identifying targets for on-ground follow-up.

A Sentinel-2 composite image was primarily used to target pegmatites, with ASTER imagery used to generate additional targets. Satellite imagery and geology were also used to assist in the targeting and to help prioritise targets. Numerous targets were identified and have been prioritised, in part according to the geological setting in relation to the typical geological setting for LCT pegmatites (refer to Figure 1 for targets).

Ground-truthing of these targets is now required, which will comprise geological mapping and rock chip sampling. Some of the targets have been discounted as they have been sampled in previous Firetail exploration programs, however a number of new areas remain untested. The initial focus will be on the Priority 1 and 2 targets only. High priority target locations tend to cluster in particular areas as shown by the cluster of Priority 1 targets in the north and central areas.

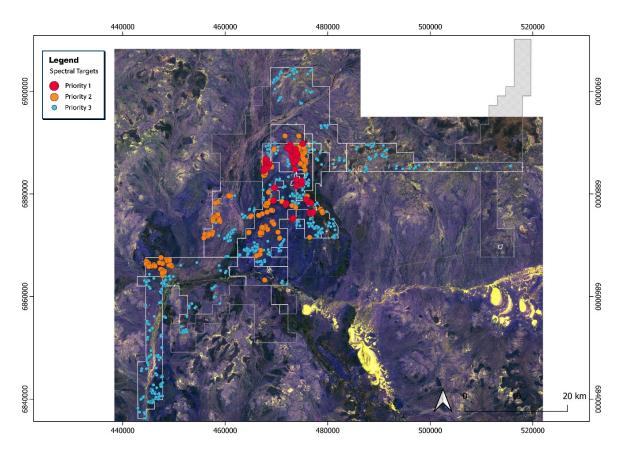


Figure 1: Yalgoo Project - Sentinel-2 composite image with ranked pegmatite targets (Red – Priority 1, Orange – Priority 2, Blue – Priority 3)



### **Johnson Well Prospect**

An RC drilling program was completed at the Yalgoo Project, Johnson Well Prospect in June 2023, following up from geological mapping and rock chip sampling<sup>3</sup>. The drilling program comprised 22 holes for 589m with drilling completed on four traverses approximately 80m apart and drill holes 20m or 40m apart (refer to Figure 2).

Three of the four drill traverses intersected pegmatites indicating continuity over a strike length of at least 150m and also open down-dip.

Assay results<sup>2</sup> confirmed the pegmatites intersected are Lithium-Caesium-Tantalum (LCT) pegmatites, with a best result of 3m @ 0.83% Li<sub>2</sub>O from 32m in JWRC-0005 including 1m @ 1.16% Li<sub>2</sub>O from 34m. Lithium minerals observed in the pegmatites were predominantly lepidolite and zinnwaldite, associated with potassium feldspar, albite, muscovite and biotite.

Further drilling is planned for early 2024 to test the down-dip extension of this mineralisation, with drill-holes planned to step-out to the northeast.

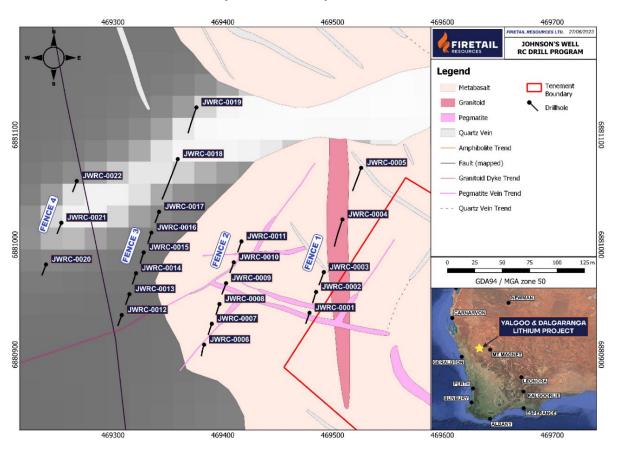


Figure 2: Johnson's Well Prospect, Yalgoo Lithium Project – RC Drilling, drill hole locations and geological interpretation

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<sup>&</sup>lt;sup>3</sup> Refer to ASX Announcement dated 23 May 2023 "Rock chips confirm fertile system at Yalgoo Lithium Project"

<sup>&</sup>lt;sup>2</sup> Refer to ASX Annoucement dated 23 August 2023 "Yalgoo Drill program confirms continuity of LCT pegmatites"



### Dalgaranga Project

Generative exploration work has commenced on the Dalgaranga Lithium Project located just north of the Yalgoo Lithium Project and just to the south of the historical Dalgaranga Tantalum mine. A rigorous historical data compilation has been completed which has indicated several intersections of pegmatites in historical drill holes. These drill hole locations require initial onground follow-up to check for any outcropping pegmatites.

Hyperspectral data analysis and interpretation will be completed for the Dalgaranga Project in the coming weeks. This data will be integrated with a new interpretation of open file geophysical data to highlight potential lithium-bearing pegmatites. This will be followed up with ground truthing and rock chip sampling of any outcropping pegmatites.

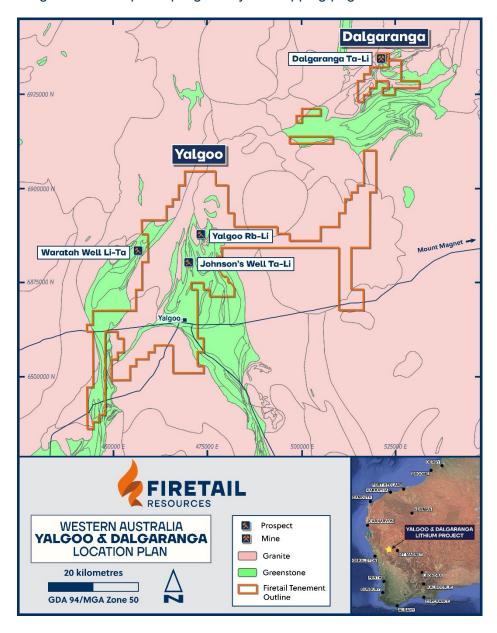


Figure 3: Yalgoo and Dalgaranga Project Location



# **Next Steps**

Firetail is now preparing to execute on-ground exploration activities at the Yalgoo and Dalgaranga Lithium Projects in the coming months:

- Follow-up on ground of regional targets generated at Dalgaranga and Yalgoo Projects

   review of geochemical, geological mapping and geophysical targets completed or
   underway.
- RC Drilling campaign planned to follow-up on results from first drill program at the Johnson Well Prospect, testing the down-dip extent of the pegmatites.
- Geochemical soil sampling over the potential new regional LCT pegmatite targets identified at both Yalgoo and Dalgaranga Projects.
- Samples from Yalgoo Project have been submitted for detailed mineralogical LIBS analysis to help identify the Li-bearing mineral assemblages and to better understand the LCT pegmatite system in the project area.

This announcement has been authorised for release on ASX by the Company's Board of Directors.

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### **Competent Person Statement**

The information in this announcement that relates to exploration activities is based on information compiled by Mr Robin Wilson who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Wilson is a consultant to Firetail Resources and has sufficient experience 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 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code). Mr Wilson consents to the inclusion of this information in the form and context in which it appears.

### **Forward-looking statements**

This announcement may contain certain "forward-looking statements". Forward looking statements can generally be identified by the use of forward-looking words such as, "expect", "should", "could", "may", "predict", "plan", "will", "believe", "forecast", "estimate", "target" and other similar expressions. Indications of, and guidance on, future earnings and financial position and performance are also forward-looking statements. Forward-looking statements, opinions and estimates provided in this presentation 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 interpretations of current market conditions. Forward-looking statements including projections, guidance on future earnings and estimates are provided as a general guide only and should not be relied upon as an indication or quarantee of future performance.

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### **About Firetail Resources**

Firetail Resources (ASX:FTL) is a battery minerals company with an exciting project portfolio with exposure to multiple battery mineral commodities

Firetail has commenced drilling in Peru, where the Company's tenure includes mining concessions comprising the Picha Copper Silver Project and Charaque Copper Project. Picha is an exciting copper-silver project with multiple drill-ready targets being tested in the current drill program; and Charaque hosts a farm-in deal completed with leading global mining company, Barrick Gold Corporation.

The Company also holds well-located Western Australian and Queensland projects, which range from early exploration stage at the Paterson and Yalgoo-Dalgaranga Projects through to advanced exploration-early resource stage at the Mt Slopeaway Project.

With a portfolio of highly prospective assets plus the experience of a strong technical team, the Company is well positioned to rapidly explore and develop its battery mineral projects and become a significant contributor to the green energy revolution.

### **Peru Projects**

# Lima CHARAQUE PROJECT

### **Australia Projects**





# Appendix 2 - JORC Code, 2012 Edition Table 1

## **Section 1 Sampling Techniques and Data**

(Criteria In this section applies to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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> <li>The hyperspectral data used was ASTER and Sentinel-2 satellite imagery processed by an independent specialist consultant, Terra Resources.</li> <li>Not applicable – no drilling or sampling being reported.</li> <li>Not applicable - no mineralisation reported.</li> <li>Imagery enhancements using ASTER and Sentinel-2 data are an attempt to highlight features due to reflectance characteristics of certain minerals. The imagery utilised includes visible / near infrared (VNIR), shortwave infrared (SWIR) and thermal infrared (TIR) satellite imagery.</li> </ul>
Drilling techniques	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, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>Not applicable – no drilling or sampling being reported.</li> </ul>
Drill sample recovery	<ul> <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> <li>Not applicable – no drilling or sampling being reported.</li> <li>Not applicable – no drilling or sampling being reported.</li> <li>Not applicable – no drilling or sampling being reported.</li> </ul>
Logging	<ul> <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> </ul>	<ul> <li>Not applicable – no drilling or sampling being reported.</li> <li>Not applicable – no drilling or sampling being reported.</li> <li>Not applicable – no drilling or sampling being</li> </ul>

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Criteria	JORC Code explanation	Commentary
	<ul> <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> <li>reported.</li> <li>Not applicable – no drilling or sampling being reported.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <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> <li>Not applicable – no drilling or sampling being reported.</li> <li>Not applicable – no drilling or sampling being reported.</li> <li>Not applicable – no drilling or sampling being reported.</li> <li>Not applicable – no drilling or sampling being reported.</li> <li>Not applicable – no drilling or sampling being reported.</li> <li>Not applicable – no drilling or sampling being reported.</li> <li>Not applicable – no drilling or sampling being reported.</li> </ul>
Quality of assay data and laboratory tests	<ul> <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> <li>Not applicable – no drilling or sampling being reported.</li> <li>Not applicable – no drilling or sampling being reported.</li> <li>Not applicable – no drilling or sampling being reported.</li> </ul>
Verification of sampling and assaying	<ul> <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> <li>Not applicable – no drilling or sampling being reported.</li> <li>Not applicable – no drilling or sampling being reported.</li> <li>Not applicable – no drilling or sampling being reported.</li> <li>Not applicable – no drilling or sampling being reported.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and downhole 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</li> </ul>	<ul> <li>Not applicable – no drilling or sampling being reported.</li> <li>All coordinates used by the company are based on MGA zone 50 reference grid based on geodetical datum GDA94.</li> <li>Topographic control is +/-10m</li> </ul>

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Criteria	JORC Code explanation	Commentary
	control.	
Data spacing and distribution	<ul> <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> <li>Resolution of the satellite imagery used is variable.</li> <li>Not applicable – no Mineral Resource reported.</li> <li>No sample compositing applied.</li> </ul>
Orientation of data in relation to geological structure	<ul> <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> <li>Not applicable – no sampling reported.</li> <li>Not applicable – No drilling or sampling reported.</li> </ul>
Sample security	The measures taken to ensure sample security.	Not applicable – no drilling or sampling being reported.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Not considered applicable.

# **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> <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> <li>Firetail Resources has the Lithium Rights over the Yalgoo and Dalgaranga Projects, as part of an agreement with the landholder, Spartan Resources (formerly Gascoyne Resources) (refer to the Company Prospectus released to ASX 11th April 2022).</li> <li>The Yalgoo Project is situated north of the township of Yalgoo and is approximately 110 km west of Mt Magnet. The Dalgaranga Project is situated approximately 70km NW of Mount Magnet. Both are situated in the Murchison region of Western Australia.</li> <li>The Yalgoo Project is located within the Yalgoo Mineral Field and includes the historical mining centres of Noongal, Yalgoo and Carlaminda.</li> <li>All tenements are 100% held by Spartan Resources (or its subsidiaries) and are in good standing with no known impediment to future granting of a mining lease.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	Exploration and mining activity in the region commenced in 1894 with relatively small-scale gold production. This was followed by several phases in the 1890s to early 1900s, and then again in the 1930s when subsequent gold mining additionally occurred. Modern gold exploration commenced in the 1980s, and several small mining enterprises conducted predominantly small-scale underground gold

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Critoria	IOPC Code explanation	Commontany
Geology	Deposit type, geological setting, and style of mineralisation      Deposit type, geological setting, and style of mineralisation.	mining.  Historical Mindex records identified lithium (Li), tantalum (Ta), tin (Sn), beryllium (Be) and rubidium (Rb) - along with precious and base metal - occurrences within the boundary of the tenements. In terms of pegmatite-focused exploration, prospecting style activities include small pits and excavations focused on beryl, bismuth, tungsten, topaz, and lithium.  Tenure surrounds the Johnson Well Mine which is host to lithium, caesium, and rubidium; currently operating to recover gemquality lepidolite.  Tenure surrounding the Dalgaranga project is host to multiple Ta, Li, Rb, Sn, Niobium (Nb) and Caesium (Cs) occurrences, namely the Dalgaranga pegmatite to the West (Krakatoa Resources) and the Niobe project (Aldoro Resources) to the East.  A limited rock chip sampling program targeting pegmatites was conducted in 2016 within the E59/2077 tenement. Sampling was conducted across 'Lithium Show' Pegmatite between granite and greenstone units.  Other than a limited rock chip sampling program conducted in 2016, no systematic exploration has previously been undertaken to target the lithium potential of the Yalgoo or Dalgaranga Projects.  The Yalgoo & Dalgaranga Projects are located within the Yalgoo Greenstone Relt of
	style of mineralisation.	located within the Yalgoo Greenstone Belt of the Murchison Province, which occupies the western portion of the Yilgarn Craton. Major regional shear zones bound the greenstone belt to the east and west. The geology of the Yalgoo & Dalgaranga Projects comprises dominantly mafic rocks and metasediments bounded by granites. The principal economic mineralisation in the area historically has been gold, and there has also been some exploration for copper and nickel. Complex pegmatites and porphyries associated with the Lydia Granite include scheelite, beryl, and lepidolite. The Yalgoo region is considered prospective for LCT type pegmatite deposits. Tenure surrounds the Johnson Well Mine, which is host to lithium, caesium, and rubidium mineralisation hosted within
Drill hole Information	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:  a easting and northing of the drill hole collar  elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar  dip and azimuth of the hole  down hole length and interception depth  hole length.	pegmatites.  Not applicable – no drilling being reported here.

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Criteria	JORC Code explanation	Commentary
	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.	
Data aggregation methods	<ul> <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> <li>Not applicable – no assays being reported.</li> <li>Not applicable – no assays being reported.</li> <li>No metal equivalent values reported herein.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <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>	Not applicable – no drilling or sampling being reported.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Maps are included in the body of the announcement.
Balanced reporting	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.	All results have been reported.
Other substantive exploration data	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.	All exploration data relevant to this release has been reported.
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> </ul>	<ul> <li>On-ground follow-up of the targets identified from the hyperspectral analysis is currently underway, which consists of rock chip sampling and geological mapping. Further</li> </ul>

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# **ASX Announcement**



Criteria	JORC Code explanation	Commentary
	<ul> <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>	work will include follow-up drilling at Johnsons Well to test down-dip grade potential. A Project wide historical data compilation and review is currently underway