Encouraging Hyperspectral Mapping supports lithium prospectivity of the Ceiling Project

Highlights

- Hyperspectral mapping using Sentinel-2 data supports the lithium prospectivity of the Wemindji Greenstone Belt and the Ceiling Lithium Project.
- The encouraging results of the supervised classification are supported by independent spectral band ratios which have been used successfully to detect lithium in the Iberian Belt, Spain[1].
- There is good coincidence between the new hyperspectral mapping data and the digital outcrop mapping previously reported, supporting Rubix's exploration design.
- Follow-up field work and rock chip testing are required to verify the results.

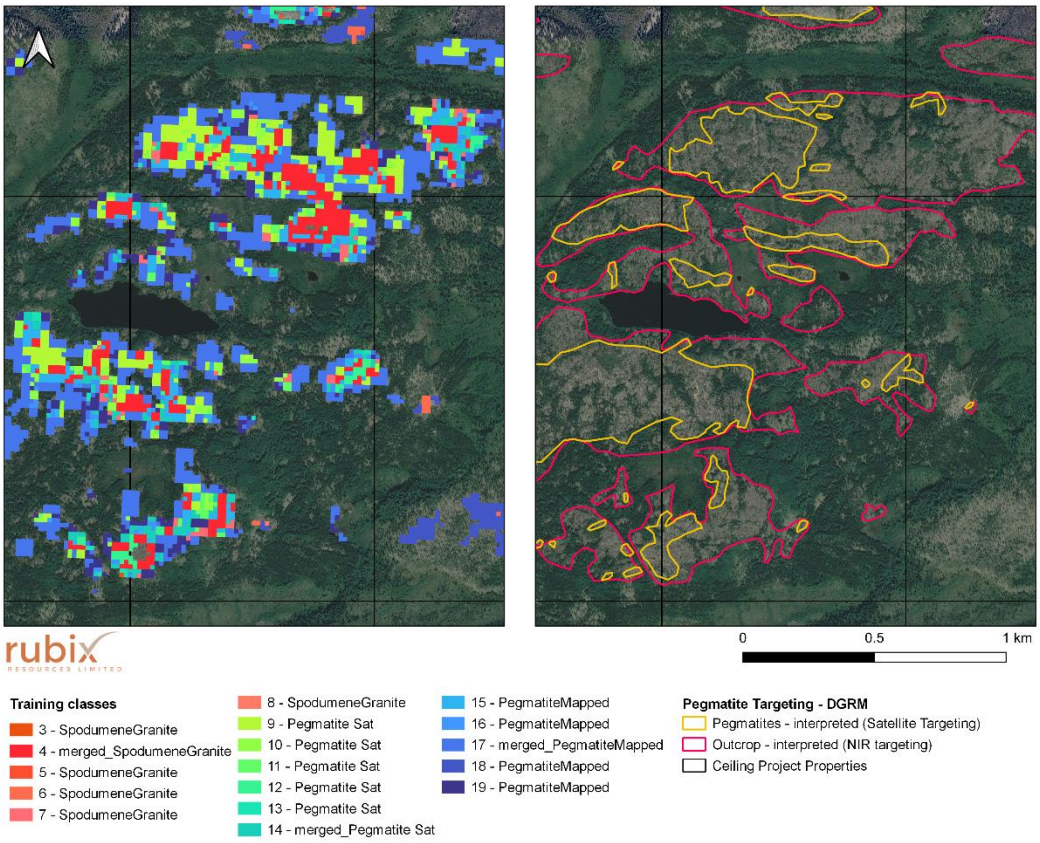

Figure 1 – Results of the hyperspectral mapping study and supervised classification (left) compared to the previously reported DGRM interpretation of satellite imagery

[1] Cardoso-Fernandes et al. 2018. See References for full citation.

Rubix Resources Limited (ASX: RB6, "**Rubix**" or the "**Company**") is pleased to provide an update for its Ceiling Lithium Project ("**Ceiling**" or the "**Project**") in James Bay, Quebec.

Rubix commissioned expert geological consultancy group PGN Geoscience, Rubix to conduct a hyperspectral mapping study targeting lithium prospectivity at the Ceiling Lithium Project. Processing and classification of Sentinel-2 spectral reflectance data was undertaken to identify areas of high prospectivity for lithium minerals (spodumene) and prospective lithologies (pegmatites).

The results have shown good coincidence with outcrop interpretations previously reported[2], and are supported by an independent lithium indicator method reported by Cardoso-Fernandes et al. (2018) which was used successfully to directly identify lithium-bearing minerals in the Iberian Belt, Spain.

An overview of the results from the study are presented in **Figure 2**.

Method for the classification of spectral data

Two recent Sentinel-2 scenes were obtained by PGN, with the scenes containing minimal cloud cover and/or smoke from ongoing wildfires therefore eliminating noise or interference in the spectral response. The scenes were first corrected to eliminate atmospheric interferences and then classified to identify signals corresponding to water (lakes, rivers), vegetation and outcrop. The final classification was undertaken after masking the spectral signature of water and vegetation, to minimise the introduction of any false positives in these areas.

Using a training dataset provided by Rubix, which included mapped and interpreted pegmatite occurrences, mapped spodumene-bearing granites and spodumene pegmatite occurrences observed from nearby areas including Q2 Metals' Mia Project, the spectral response of these training points was used to create a suite of 19 classification categories that were then applied to the area of interest ('supervised classification').

The supervised classification was highly successful in predicting bodies of water, giving confidence in the lithological prediction.

The result of the supervised classification was a map of spectral responses that may be associated with pegmatites and spodumene-bearing granites. These show generally good coincidence with outcrops that are visible in satellite imagery and suggest that there are zones of potentially elevated lithium prospectivity within outcrops.

The generally close spatial association between all resulting classified pixels gives confidence to the prediction.

[2] Rubix Resources ASX announcement 3rd August 2023, 'Potential Pegmatite Outcrops Identified in Satellite Imagery'

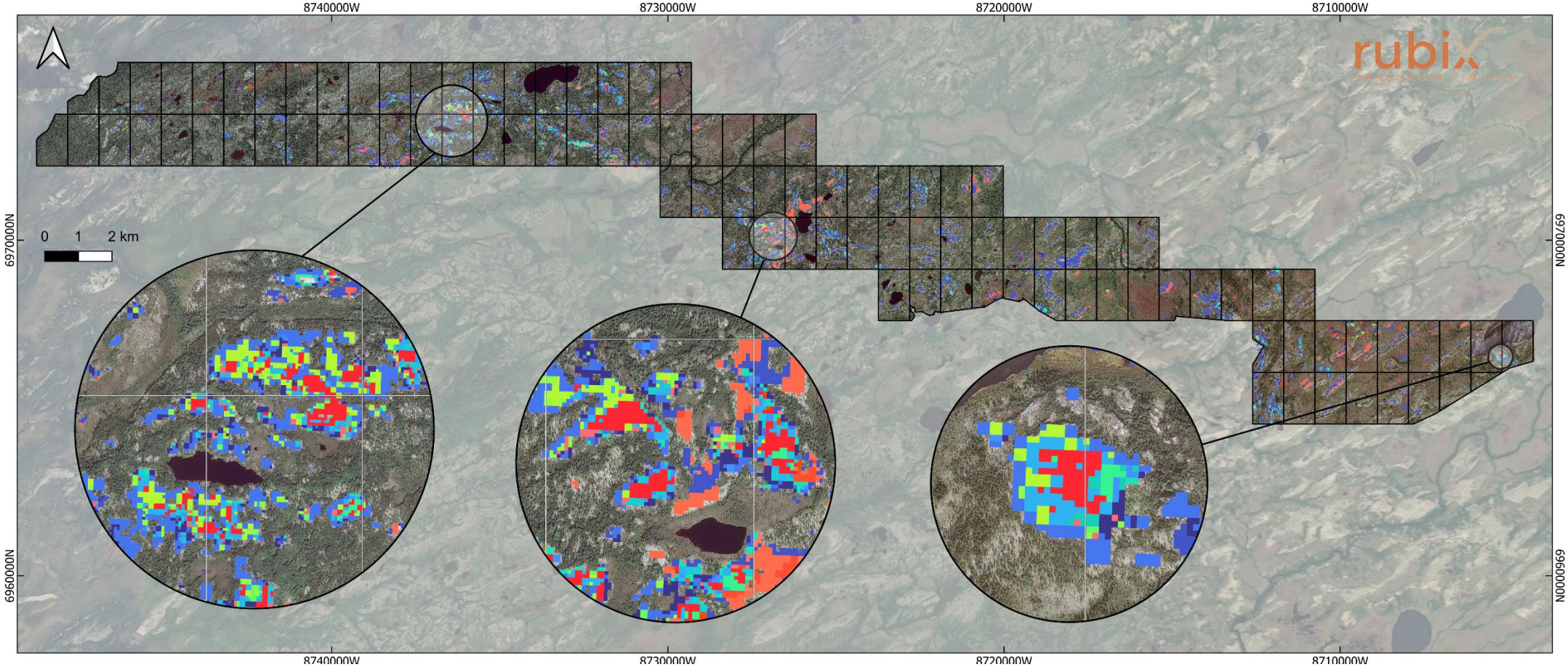

Figure 2 – Overview of hyperspectral mapping (supervised classification) using Sentinel-2 data for the Ceiling Project. Mapping key as in Figure 1. Reds – predicted spodumene granite. Green & Blue – predicted pegmatitic rocks.

The final processing stage for the data is based on the methodology reported by Cardoso-Fernandes et al. (2018) and utilises the ratio of Band 3 (green) over Band 8 (NIR) as a direct Li-bearing mineral indicator. Applied to this data and compared to the results of the supervised classification, there are encouraging coincidences between the two results which warrant field verification (**Figure 3**).

Assessed together with outcrops interpreted from satellite imagery, Rubix is excited to investigate these results as soon as possible.

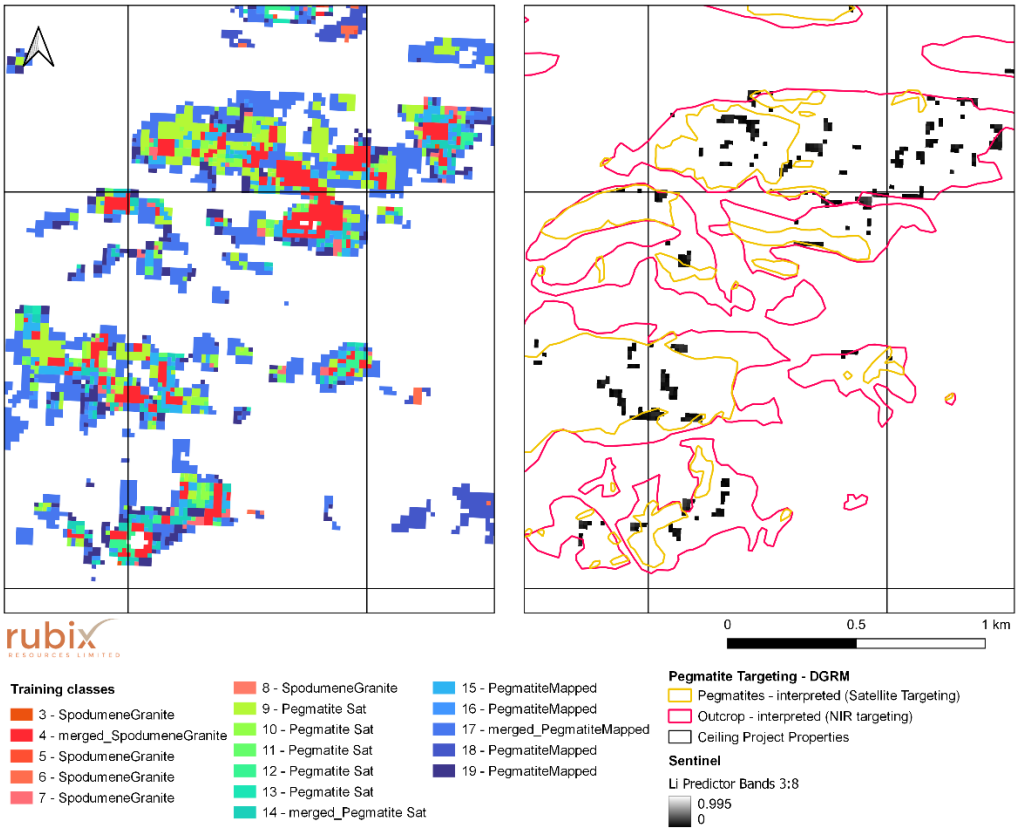

Figure 3 – The supervised classification (left) with the Li-indicator prediction method using Sentinel-2 Bands 3:8, where black pixels suggest the occurrence of lithium minerals.

Good correspondence between the data sets supports the interpretation that this area is prospective for lithium mineralisation.

Note: While the new data presented here show good correspondence with existing outcrop interpretation, it is likely that it contains artefacts and/or false positives. While the use of hyperspectral mapping is a powerful prospectivity analysis tool, Rubix cautions that both spectral interferences and the spatial resolution of satellite-based remote sensing techniques means that the presence of lithium mineralisation cannot be proven based on this data alone.

Hyperspectral data in mineral exploration

Remote sensing and the use of hyperspectral data is a powerful tool in the delineation of exploration targets for a range of deposit types. Research and use of these data for minerals exploration has increased in response to a growing need to rapidly and inexpensively identify areas of interest in the early stages of exploration.

The basis of the methodology relies upon the determination of unique spectral responses associated with a variety of minerals including those associated with hydrothermal alteration, which may provide a vector to ore deposits. Spectral data is collected as 'bands' which correspond to intervals of the electromagnetic spectrum transmitted from Earth. These include bands encompassing wavelengths corresponding to visible light, near infra-red (NIR), shortwave infra-red (SWIR) and thermal infra-red (TIR). Geological applications use ratios of these bands to identify subtle spectral changes and classify different rock types.

Sentinel-2 offers relatively high spatial resolution (10m, 20m and 60m) across 13 bands (**Figure 4**), with a temporal resolution of between 5 and 6 days between its satellite pair.

There are numerous satellites in Earth's orbit which collect surface reflectance information which can be used to obtain useful geological information. Of these, ASTER, Landsat-5, Landsat-8, WorldView and Sentinel-2 are among the most frequently used as they offer data across a useful range of bands at a spectral resolution appropriate for geological applications. Regular visitation of each satellite to image approximately the same location on the Earth means that the data also provides useful seasonal information.

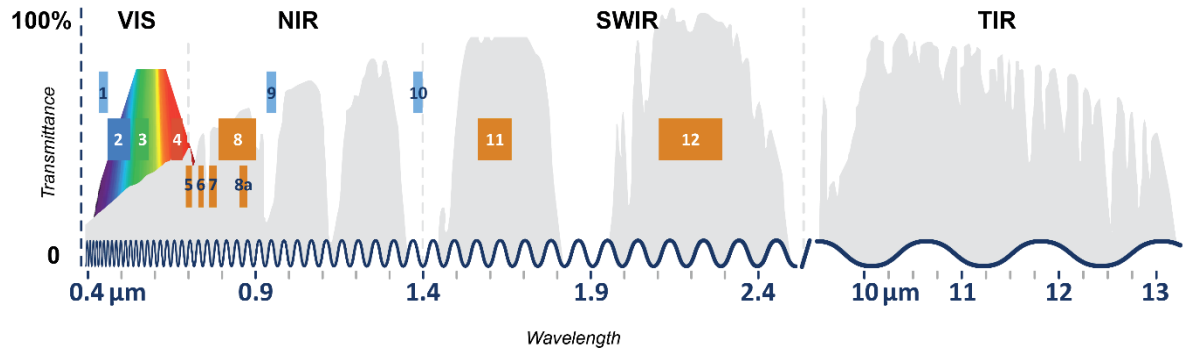

Figure 4 – Position of the Sentinel-2 bands overlaid on the transmittance spectrum

Cautionary note:
The presence of pegmatite, pegmatitic granite or visual spodumene does not equate to lithium mineralisation. Results from hyperspectral mapping are indicative only and fieldwork and geochemical assessment is required to confirm the presence of lithium mineralisation. The Company is encouraged by the geology and data currently available, but no quantitative or qualitative assessment of mineralisation is possible at this stage. The Company will undertake fieldwork to test for potential lithium mineralisation, and laboratory analysis of rock chip samples is required to determine if the mapped pegmatites and pegmatitic granites have the potential to host lithium mineralisation.

Future Work

Hyperspectral mapping and Li-prediction forms the first stage of Rubix's initial exploration activities at the Ceiling Project. Scheduled upcoming data collection also includes high-resolution airborne imagery and LiDAR data, followed by a field campaign which will comprise detailed geological mapping and sampling of priority areas to confirm the presence of lithium mineralisation. Updates will be provided as the work program progresses and new data are received. Diamond drilling is subsequently planned for key targets that are developed.

References

Cardoso-Fernandes, J., Lima, A., & Teodoro, A. C. (2018, October). Potential of Sentinel-2 data in the detection of lithium (Li)-bearing pegmatites: a study case. In *Earth resources and environmental remote sensing/GIS applications IX* (Vol. 10790, pp. 201-215). SPIE.

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Authorised for released by the board of Rubix Resources Limited.

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About the Ceiling Lithium Project

The Ceiling Lithium Project comprises 101 active mineral claims covering an area of just over 50.5km^2 in the James Bay Region of Quebec, close to the community of Wemindji. The James Bay Region is rapidly emerging as a premier lithium district. The acquisition of the Ceiling Project supports Rubix's goal to become a leader in critical metals discoveries and to deliver increased opportunities for the Company's shareholders across a diversified exploration portfolio. The Project is surrounded by advanced lithium projects and deposits, and is supported by established towns, sealed all-weather roads, hydro-generated power and airports. The Ceiling Lithium Project is approximately 4.5km away from the road access leading to the community of Wemindji and connecting to Billy Diamond Highway (James Bay Road).

Dahrouge Geological Consulting (DGC) are providing on-the-ground field and exploration expertise to advance the Ceiling Lithium Project.

About Rubix Resources

Rubix Resources Limited (ASX: RB6) has a diversified base metal and gold asset portfolio providing opportunities for new discoveries in proven districts. The newly acquired Ceiling Lithium Project in James Bay, Quebec, is a natural complement to the company's assets across five projects located in world-class jurisdictions in Northern Queensland and Western Australia.

Figure 5 – Rubix Resources asset locations

Competent Person Statement

The technical content of this news release has been reviewed and approved by François Gagnon, P. Geo., Senior Exploration Geologist for Dahrouge Geological Consulting Ltd., and Qualified Person under NI 43-101 on standards of disclosure for mineral projects.

The information in this announcement is based on, and fairly represents information compiled by Dr. Casey Blundell, a Competent Person who is a Member of the Australian Institute of Geoscientists and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which she has undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Blundell consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

Forward Looking Statements
Forward-looking statements are statements that are not historical facts. Words such as "expect(s)", "feel(s)", "believe(s)", "will", "may", "anticipate(s)" and similar expressions are intended to identify forward-looking statements. These statements include, but are not limited to statements regarding future production, resources or reserves and exploration results. All of such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the Company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. Our audience is cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events.

Appendix 1 JORC Code, 2012 Edition – Table 1 Report

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. 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.*	Two scenes from the Sentinel-2 Satellite were obtained from the European Space Agency (ESA) Copernicus Open Access Hub directly, and via the SCP Plugin for QGIS by PGN Geosciences. The dates of the scenes are 28/06/2023 and 8/06/2023. The images were corrected to represent the bottom of atmosphere reflectance over all bands and then classified using a training dataset supplied by Rubix Resources. Using the SeNtinel Applications Platform (SNAP) software, initial assessment of the data investigated the presence of outcrop and interpretable lithological pixels. Final classifications were undertaken using the spectral responses from water and vegetation as a mask to minimise the prediction of any false positives in the resulting final classification. The training dataset provided by Rubix for supervised classification included mapped spodumene-bearing granites and lithium occurrences from the nearby Mia Lithium Prospect (Q2 Metals), mapped pegmatite outcrops from the Peuplier Greenstone Belt, and other known lithium mineralisation occurrences from publicly available datasets, and outcrops interpreted from satellite imagery previously reported by Rubix on 3rd August 2023. The training dataset formed the basis of the supervised classification and the resulting hyperspectral mapping data. It was highly effective in predicting the location of water bodies, vegetation, and outcrop occurrences. A known Li-indicator band ratio reported by Cardoso-Fernandes et al. (2018) was used independently of the supervised classification method to predict the occurrence of lithium minerals in the Sentinel-2 scene. The resulting Li-indicator prediction shows good correspondence with the supervised classification and predicted outcrop occurrences, giving confidence to the prediction that lithium mineralisation may be present on the property.

Criteria	JORC Code explanation	Commentary
		No assay data is available for the rocks referred to in the Release. Rubix will complete work to verify the interpretation presented in this release.
Drilling techniques	• *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).*	No drilling has been completed on the project
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	Not applicable, no drilling completed
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	Not applicable, no drilling completed
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all subsampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Not applicable, no drilling completed
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis*	No assay data is being reported. The method used by PGN Geoscience to assess the lithium prospectivity of the Ceiling Project using supervised classification employs a standard workflow for the processing of Sentinel-2 data.

Criteria	JORC Code explanation	Commentary
	including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • *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.*	An initial un-supervised K-means classification was used to demonstrate that the data were appropriate and that lithologies could be distinguished using a simple classification method from bodies of water and areas likely to be vegetated. Supervised classification using the training data was produced using a minimum-distance algorithm and a distance threshold of 0.05 spectral units. The final classification was masked according to the vegetation index provided by the SNAP software. The Li-indicator band ratio used is reported by Cardoso-Fernandes et al. 2018 and is a ratio of bands 3 (green) over 8 (NIR) to provide a direct detection method for Li-minerals.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	Not applicable, no drilling.
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	Not applicable, there are no new data points included in the Release. The grid system used at the Ceiling Lithium Project is UTM NAD83 (Zone 17).
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	Not applicable, no drilling completed.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	Not applicable, no drilling completed.
Sample security	• *The measures taken to ensure sample security.*	Not applicable, no drilling completed.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	No audits or reviews of sampling techniques and data were completed

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	• *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.* • *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.*	The claims are believed to be in good standing with the relevant government authorities and there are no known impediments to operating in the project area.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Limited historical work has been completed within the claims, with no exploration targeting lithium mineralisation. Publicly available geological and geophysical datasets were sourced from MERN via SIGEOM.
Geology	• *Deposit type, geological setting and style of mineralisation.*	The Ceiling Lithium Project is located in the Archean-aged Superior Province of the Canadian Shield, which is host to some of the most significant lithium resources in the world. The Ceiling Lithium Project encompasses the eastern continuation of the Wemindji Greenstone Belt, which occurs as a relative magnetic low in regional magnetic datasets. Outcrop is reportedly quite abundant, though there are swampy depressions lacking in outcrop. Much of the project is underlain by rocks of the Wemindji Greenstone (Volcanic) belt, including amphibolite, biotite-paragneiss and gneiss, tonalite and granodiorites, and in places metagabbros, anorthosite and pink (or white) leucocratic granite and pegmatites. There has been comparatively little exploration in this part of the James Bay Region. A tourmaline- and molybdenite-bearing pegmatite outcrop has been noted in the project area, and along strike to the west on an offshore island in James Bay (Walrus Island), a spodumene-bearing pegmatite has been noted. This latter pegmatite is described as being a 'fairly large mass of muscovite-pegmatite' containing amazonite, spodumene and plates of molybdenum ~3cm in diameter.
Drill hole information	• *A summary of all information material to the understanding of the exploration results*	Not applicable, no drilling completed

Criteria	JORC Code explanation	Commentary
	including a tabulation of the following information for all Material drill holes: ○ *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.* • *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	• *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.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	Not applicable, no drilling completed
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *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').*	Not applicable, no drilling completed
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.*	Appropriate plans are included in this release
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.*	The release is considered to be balanced, with all relevant information included in the release.
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*	To the best of the Company's knowledge, no material exploration data or information has been omitted from this Release.

Criteria	JORC Code explanation	Commentary
	method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	• *The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Rubix Resources re-affirms its commitment to exploration across its diversified portfolio in both Australia and Canada. Upcoming activities for the Ceiling Lithium Project will include the collection of LiDAR data, field mapping and rock-chip sampling in priority areas.. Drilling will subsequently be completed on key targets identified from the mapping and sampling.