



23 April 2024

High-Priority Targets Identified at La Grande East Project, James Bay – Quebec, Canada

Highlights:

- 340 high-priority targets identified from desktop studies across the recently acquired La Grande East Project.
- Satellite imagery and government geophysical data utilised in generating key targets.
- Targets generated will form the basis of the Company's upcoming La Grande East summer field exploration program expected to commence in May 2024.
- The JBY team continues to plan for future works on its La Grande Project, which is a highly prospective lithium project located along trend from Winsome Resources' (ASX: WR1) Cancet Lithium Project and Patriot Battery Metals' (ASX: PMT) world-class Corvette Property.

James Bay Minerals (ASX: JBY) ("**James Bay Minerals**" or "**the Company**") is pleased to advise that it has identified 340 high-priority targets across its newly acquired La Grande East Project, located in the James Bay Province of Quebec, Canada.

James Bay Executive Director, Andrew Dornan, commented:

"We approach our summer field program with an exceptional pipeline of targets. The Company's foundations are set by holding one of the largest land positions on the premium La Grande Lithium trend. Our focus now is on ensuring that we target low-hanging fruit across all areas of the La Grande Project. This will ensure that we deploy capital efficiently on well-established targets."

La Grande East Project

The La Grande East Project is situated approximately 15km from James Bay Minerals' Aqua Property and includes 136 claims (62 claims acquired and 74 claims staked), covering an area of 7,000 hectares along the Robert-Bourassa reservoir.

The property sits less than 1km from the Transtaiga Highway, which allows for all year walk-up access.

Desktop studies on the La Grande East Project have focused on magnetic lows (prospective zones) within the property which trend from east to west. Satellite imagery was then overlaid across the prospective zones focused on identifying white outcrops, which can correlate with pegmatite outcrops.

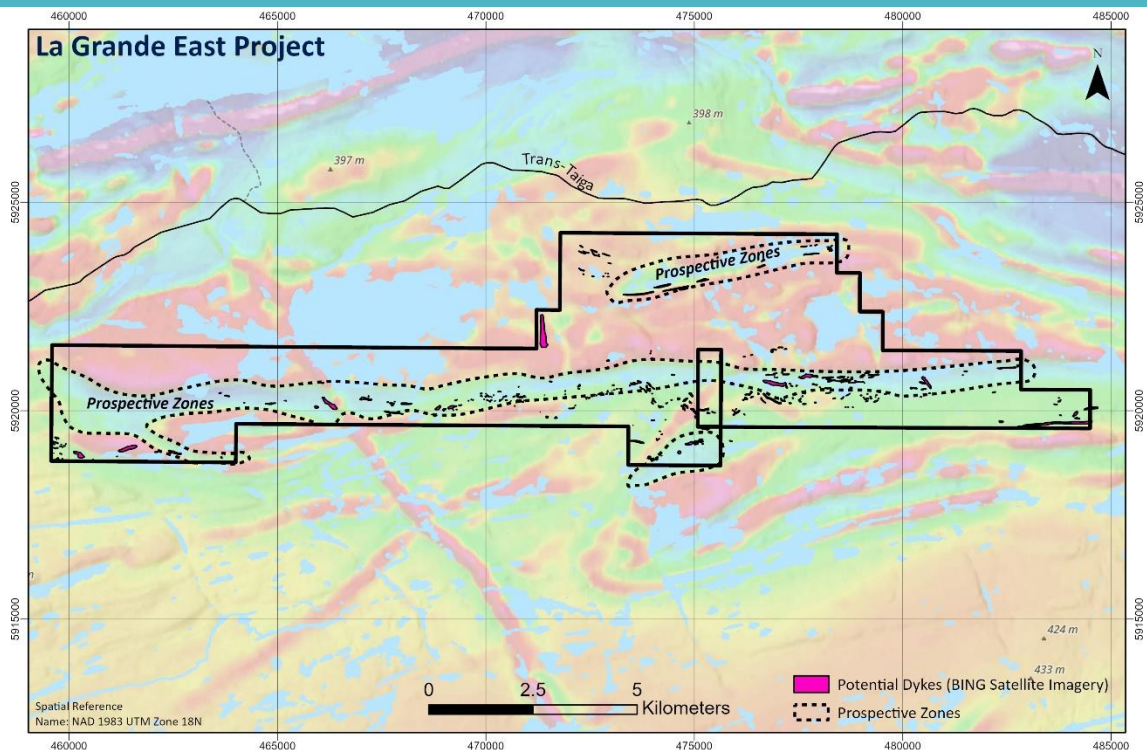


Figure 1 – Geophysical surveys by the Quebec Government overlaid with prospective zones and potential pegmatite dykes.

Satellite imagery, which has been utilised to generate the potential pegmatite dyke targets, are shown in Figures 2 to 9 below.

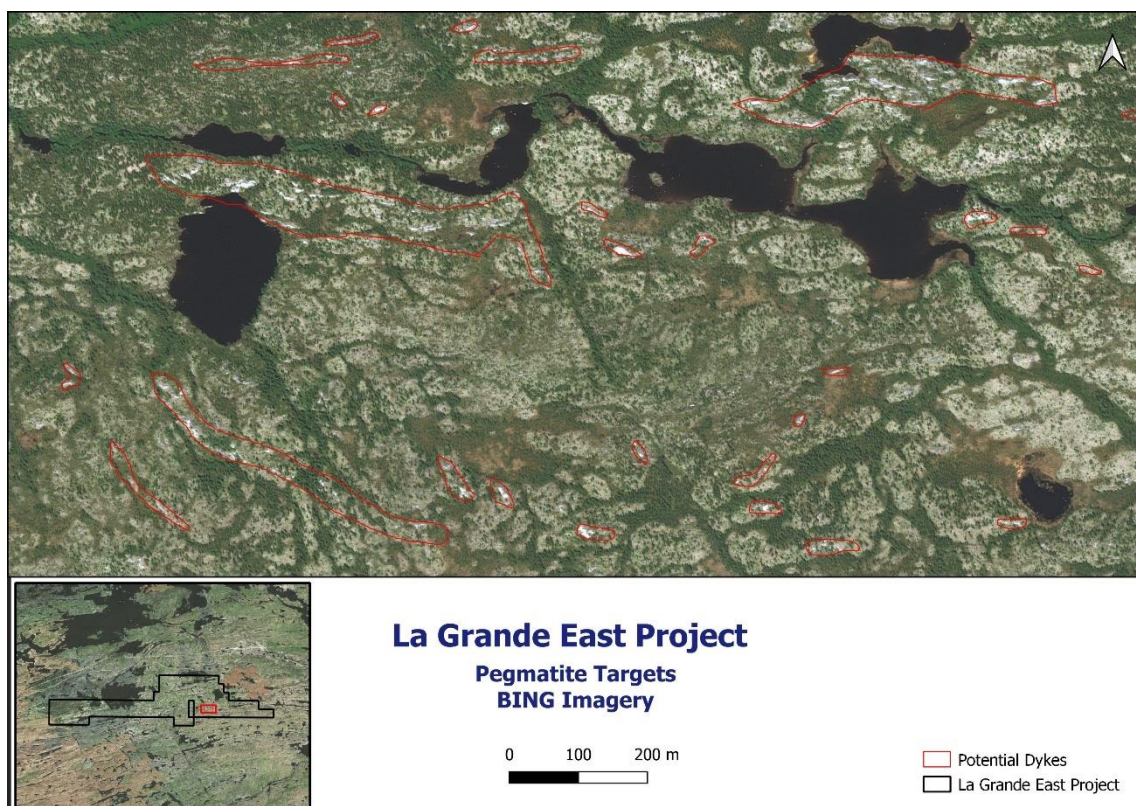


Figure 2 – La Grande East pegmatite targets identified via satellite imagery.

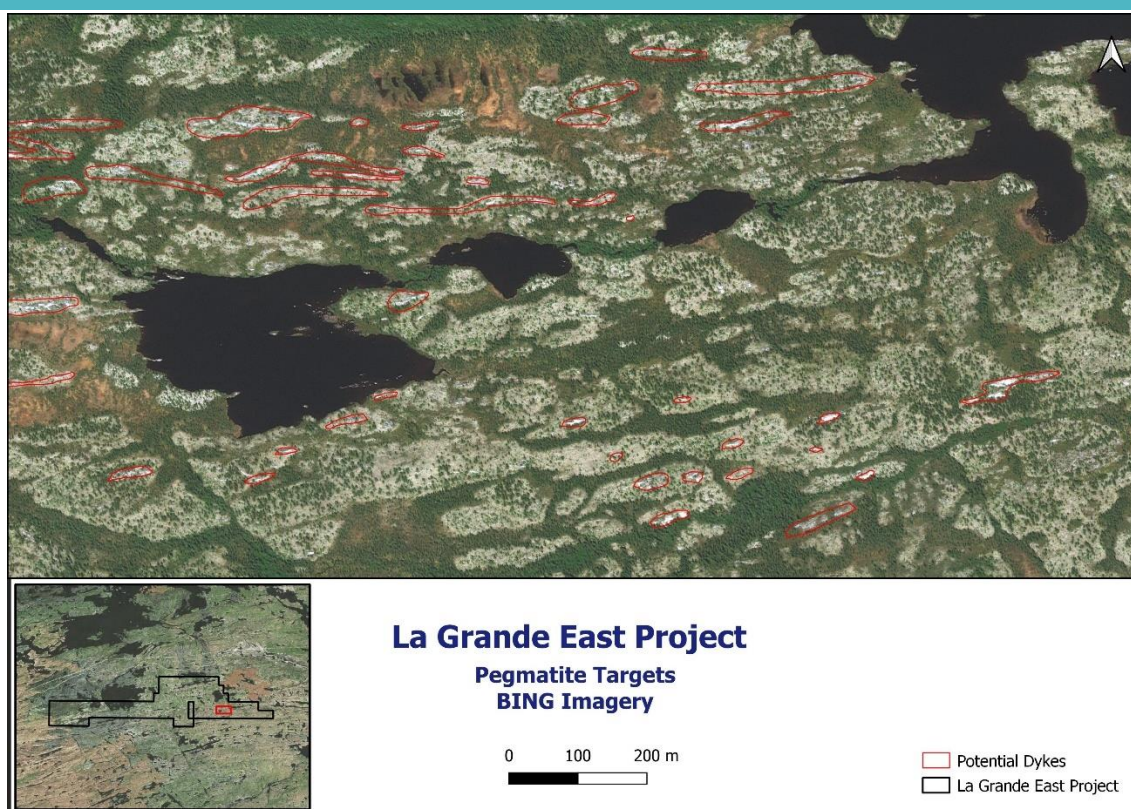


Figure 3 – La Grande East pegmatite targets identified via satellite imagery.

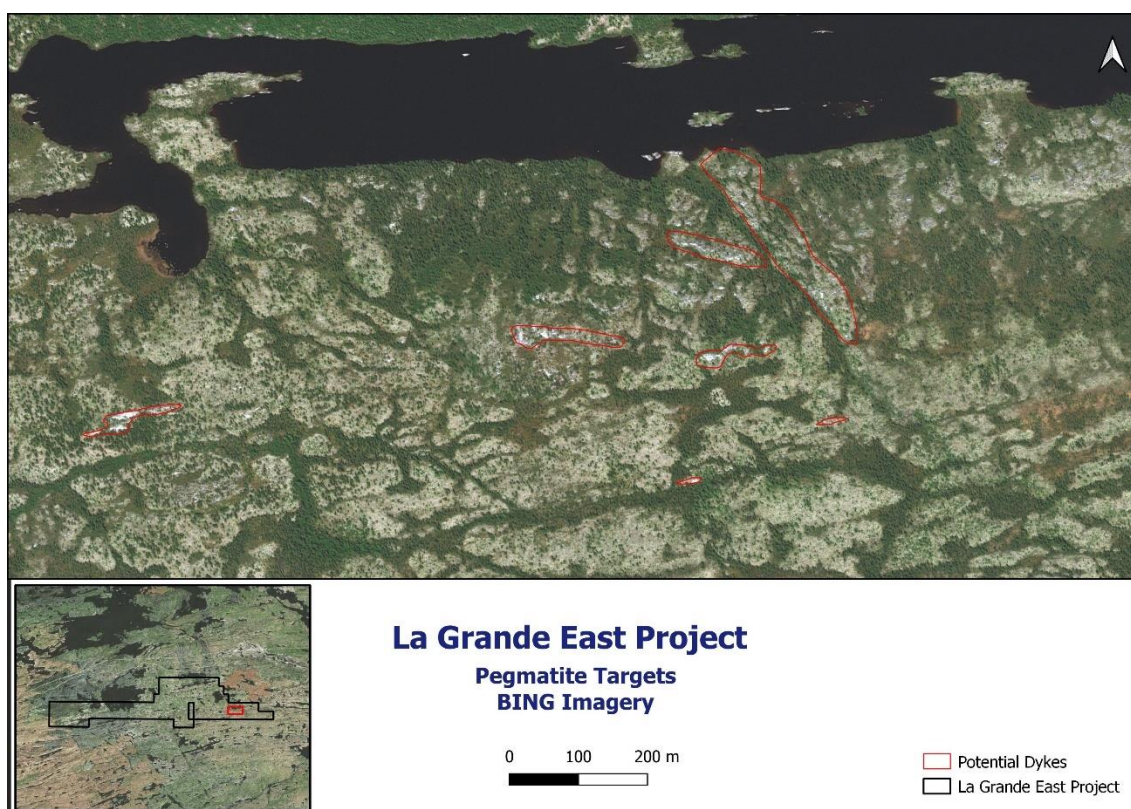


Figure 4 – La Grande East pegmatite targets identified via satellite imagery.



Figure 5 – La Grande East pegmatite targets identified via satellite imagery.



Figure 6 – La Grande East pegmatite targets identified via satellite imagery.

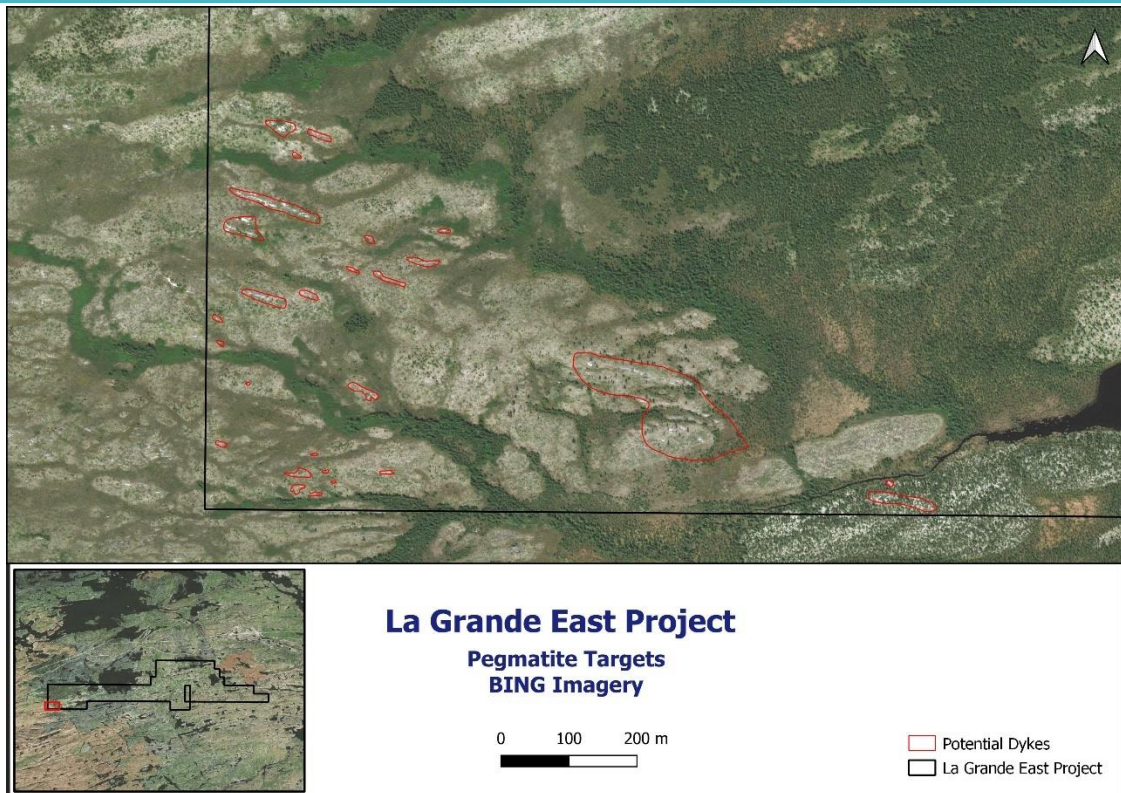


Figure 7 – La Grande East pegmatite targets identified via satellite imagery.

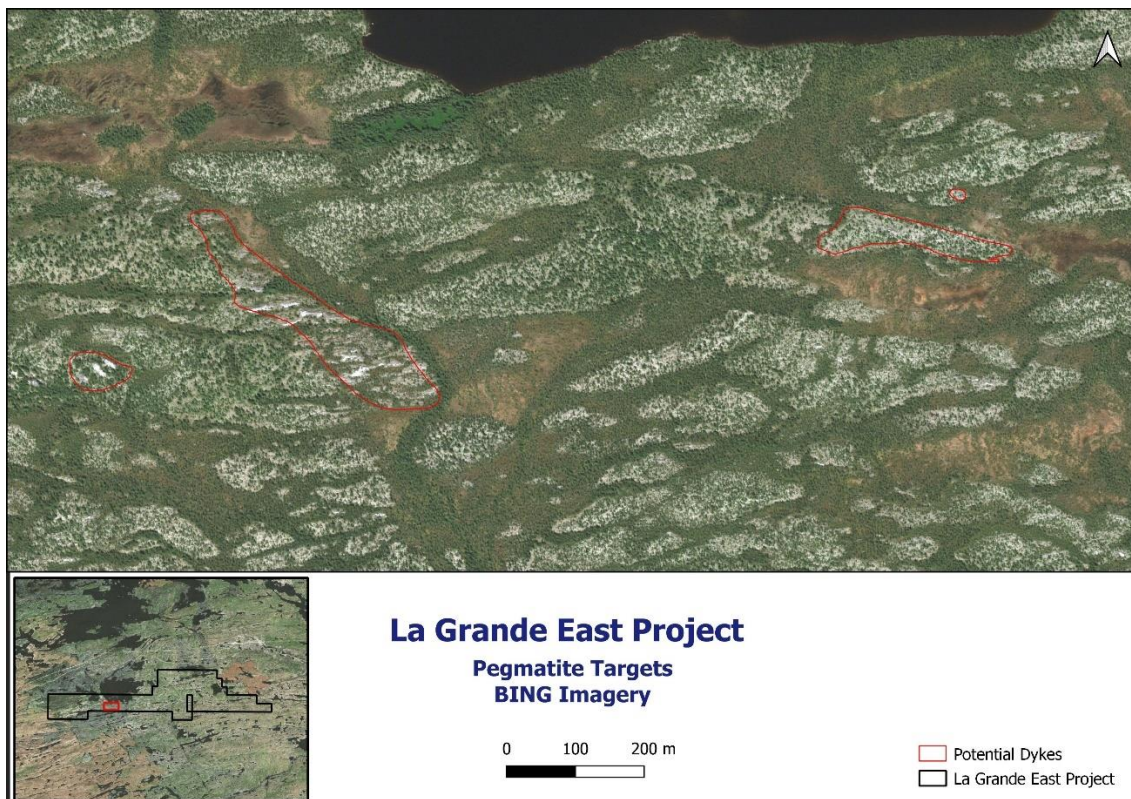


Figure 8 – La Grande East pegmatite targets identified via satellite imagery.



Figure 9 – La Grande East pegmatite targets identified via satellite imagery.

Planning for the Company's 2024 summer field exploration program is well advanced with mobilisation expected within the next four weeks.

The field program has been designed to understand all key areas identified via airborne surveys, data generated from neighbouring properties and desktop studies completed since listing.

The James Bay region, located in Quebec, Canada, is one of only very few Tier-1 jurisdictions which display the three key ingredients required for the formation of large-scale Lithium, Caesium, Tantalum (LCT) pegmatites.

James Bay Minerals is in the fortunate position of holding one of the largest land positions of 37,168 hectares along the La Grande Greenstone belt and the largest holding along the premium La Grande lithium trend, which extends from ~55km east to west.

Background on James Bay Minerals

James Bay has acquired a 100% interest in one of the largest lithium exploration portfolios in the James Bay region, covering an area of 41,572Ha or 416km². The Joule, Aero, Aqua and La Grande East properties are located in the La Grande sub province along trend from the Corvette deposit, where Patriot Battery Metals (ASX: PMT) recently reported a maiden Inferred Mineral Resource Estimate of 109.2Mt at 1.42% Li₂O and 160ppm Ta₂O₅ (0.40% Li₂O cut-off grade)¹.

The Troilus Project is located further to the south sitting only 5km to the north of Sayona's Moblan Lithium Project and proximity to Winsome Resources' Sirmac-Clappier Project.

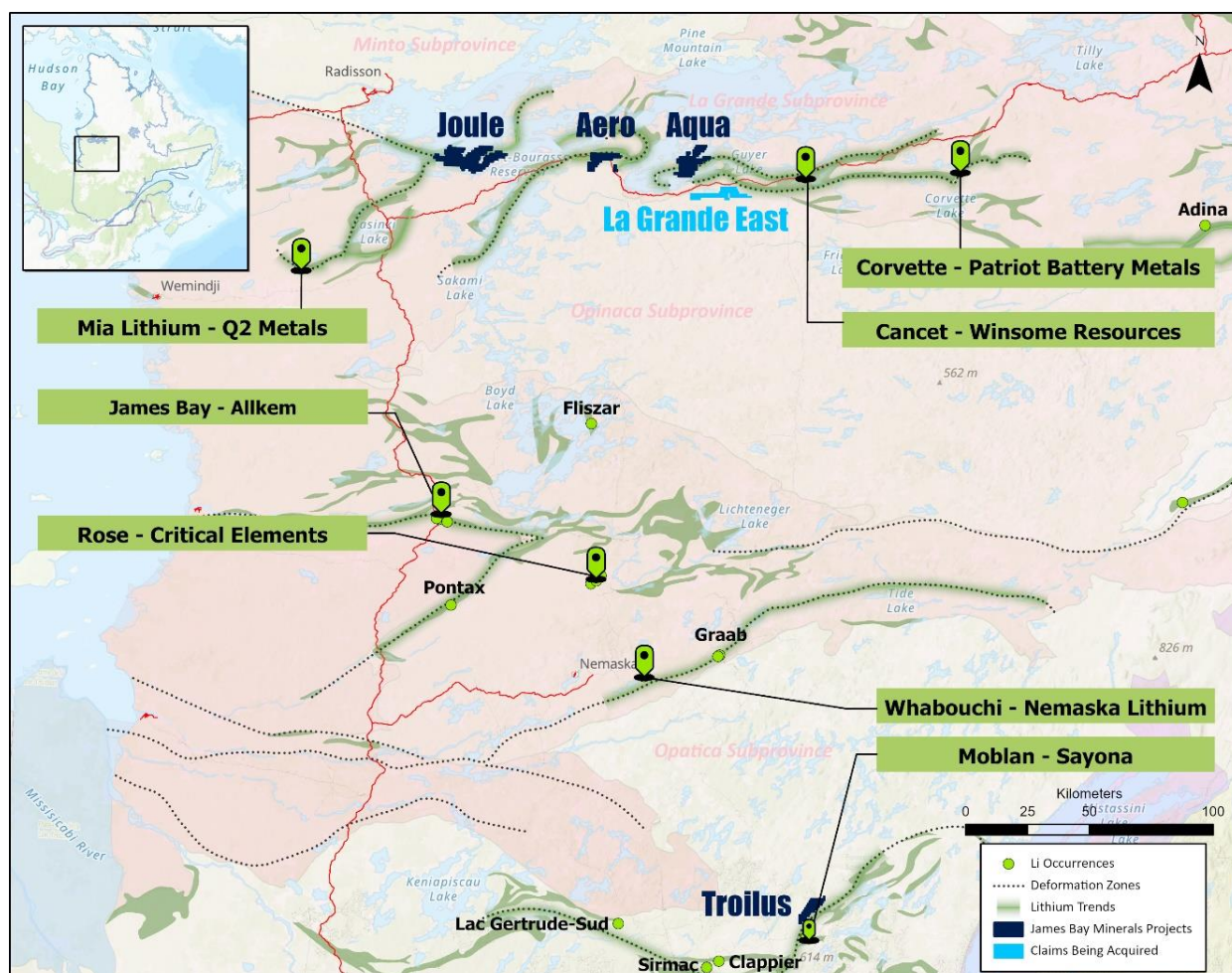


Figure 6 - James Bay Minerals' key lithium project locations in Quebec, Canada.

The flagship Joule Property encompasses a ~24km long prospective deformation zone along a regional fault which has been subject to minimal historical exploration². The eastern segment of the deformation zone extends for 14km and fan tails to reach a width up to 1.5km.

The Aero Property contains approximately 12km of deformation zones which are considered highly prospective for LCT pegmatites². Of note, the nearby Cancet (Winsome Resources Ltd) and Corvette (Patriot Battery Metals) properties both exhibit deformation zones upon which significant exploration success has occurred.

¹ See Patriot Battery Metals Announcement dated 31 July 2023: "Patriot Announces the Largest Lithium Pegmatite Resource in the Americas at CV5, Corvette Property, Quebec, Canada"

² See JBY Prospectus dated 19 July 2023

The Aqua Property contains a deformation zone running east to west through the property of approximately 6km, this zone is considered prospective for LCT Pegmatites². Of note, FIN Resources have uncovered a significant lithium showing approximately 200m from the northwest boarder of the property³.

All the properties have the three key ingredients required to host massive lithium-caesium-tantalum (LCT) pegmatites:

- Neo Archaean rocks;
- placement along major regional faults; and
- lying on greenstone belts in proximity to granites.

This announcement is authorised for ASX lodgement by the Board of Directors of James Bay Minerals Ltd.

ENDS

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Forward-looking statements

This announcement may contain certain forward-looking statements, guidance, forecasts, estimates or projections in relation to future matters (Forward Statements) that involve risks and uncertainties, and which are provided as a general guide only. Forward Statements can generally be identified by the use of forward-looking words such as “anticipate”, “estimate”, “will”, “should”, “could”, “may”, “expects”, “plans”, “forecast”, “target” or similar expressions and include, but are not limited to, indications of, or guidance or outlook on, future earnings or financial position or performance of the Company. The Company can give no assurance that these expectations will prove to be correct. You are cautioned not to place undue reliance on any forward-looking statements. None of the Company, its directors, employees, agents or advisers represent or warrant that such Forward Statements will be achieved or prove to be correct or gives any warranty, express or implied, as to the accuracy, completeness, likelihood of achievement or reasonableness of any Forward Statement contained in this announcement. Actual results may differ materially from those anticipated in these forward-looking statements due to many important factors, risks and uncertainties. The Company does not undertake any obligation to release publicly any revisions to any “forward- looking statement” to reflect events or circumstances after the date of this announcement, except as may be required under applicable laws.

Competent Person Statement

The Exploration Results reported in this announcement are based on, and fairly represent, information and supporting documentation reviewed, and approved by Mr Brodie Box, MAIG. Mr Box is a geologist and has adequate professional experience with the exploration and geology of the style of mineralisation and types of deposits under consideration 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. Mr Box consents to the form and context in which the Exploration Results are presented in this announcement.

*The information in this announcement that relates to prior Exploration Results is extracted from the Company’s Prospectus, dated 19 July 2023, (**Prospectus**) and the ASX announcements, as referenced (**Original Announcements**). The Company confirms that it is not aware of any new information or data that materially affects the information contained in the Prospectus and Original Announcements.*

³ See FIN Resources Announcement dated 9 October 2023: “Large Spodumene Crystals Discovered in Pegmatite Outcrop

JORC Code, 2012 – Table 1

Section 1 Sampling Techniques and Data – La Grande Project, Aero Property

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

| Criteria | JORC Code explanation | Commentary |
|-----------------------|--|--|
| Sampling techniques | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> In connection with this announcement no sampling has been conducted. |
| Drilling techniques | <ul style="list-style-type: none"> 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). | <ul style="list-style-type: none"> In connection to this announcement no drilling has been conducted and no drill assays are being reported. |
| Drill sample recovery | <ul style="list-style-type: none"> 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. <p>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.</p> | <ul style="list-style-type: none"> In connection to this announcement no drilling has been conducted and no drill assays are being reported. |
| Logging | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> In connection to this announcement no drilling or sampling has been conducted and no results are being reported. |

| Criteria | JORC Code explanation | Commentary |
|---|---|--|
| Subsampling techniques and sample preparation | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • In connection with this announcement no drilling has been conducted and no drill assays are being reported. |
| Quality of assay data and laboratory tests | <ul style="list-style-type: none"> • 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 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. | <ul style="list-style-type: none"> • In connection to this announcement no drilling or sampling has been conducted and no results are being reported. |

| Criteria | JORC Code explanation | Commentary |
|---|--|---|
| Verification of sampling and assaying | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> Geophysical images have been downloaded from online public government data resources (Quebec Government Stratigraphic Surveys) and aerial satellite imagery from Bing. Bing Maps. (n.d.). Retrieved from https://www.bing.com/maps ESRI. (2024). World Topographic Map. Retrieved from https://cdn.arcgis.com/sharing Ministère des Ressources naturelles et des Forêts (MRNF), 2024 - Interactive map. MRNF, Québec; Online products and services - Mines, Interactive Map. In connection with this announcement no drilling has been conducted and no drill assays are being reported. assay data. |
| Location of data points | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> The grid datum is NAD 1983 UTM Zone 18N In connection to this announcement no drilling has been conducted and no location or data points of drill holes reported. |
| Data spacing and distribution | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> In connection to this announcement no drilling has been conducted and no location or data points of drill holes reported. Government geophysical imagery varies in data spacing but is considered at an appropriate density to make observations reported in the announcement. |
| Orientation of data in relation to geological structure | <ul style="list-style-type: none"> 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 mineralized structures is considered to have introduced a sampling bias, this should be assessed and reported if material. | <ul style="list-style-type: none"> In connection with this announcement no sampling or drilling has been conducted, therefore no orientation data is generated in relation to geological structures. |
| Sample security | <ul style="list-style-type: none"> The measures taken to ensure sample security. | <ul style="list-style-type: none"> Not applicable to this announcement. |
| Audits or reviews | <ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. | <ul style="list-style-type: none"> No audits or review have been undertaken. |

Section 2 Reporting of Exploration Results – La Grande Project, Aqua Property

(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"> 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. | <ul style="list-style-type: none"> The La Grande Project consists of 729 continuous claims covering an area of 37,168 hectares. The Joule, Aero, Aqua and La Grande East Properties which forms part of La Grande Project is 100% owned by James Bay Minerals Ltd. |
| Exploration done by other parties | <ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. | <ul style="list-style-type: none"> The La Grande Project is a greenfield project with limited historical exploration. All data obtained on the properties has been generated by Quebec Government Stratigraphic surveys. |
| Geology | <ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. | <ul style="list-style-type: none"> The geology of the Project is relatively unexplored. The primary type of mineralization suggested by the data and mineralization on the adjacent properties is lithium-bearing spodumene which occurs in granite pegmatite and aplite dykes. The property sits within three key geological ingredients which make it prospective to large LCT pegmatites. These are: <ul style="list-style-type: none"> - Right Archean Rock Age - Large deformation zones - Proximity to Greenstone Belts |
| Drill hole Information | <ul style="list-style-type: none"> 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"> o easting and northing of the drill hole collar o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar o dip and azimuth of the hole o down hole length and interception depth o 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 | <ul style="list-style-type: none"> No drilling activities have been undertaken or reported to date. |

| Criteria | JORC Code explanation | Commentary |
|--|---|---|
| Data aggregation methods | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> No drilling activities have been undertaken or reported to date. |
| Relationship between mineralisation widths and intercept lengths | <ul style="list-style-type: none"> 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'). | <ul style="list-style-type: none"> No drilling activities have been undertaken or reported to date. Pegmatites targets stated in the announcement are interpretations based off satellite imagery and geological interpretation and remain to be confirmed in the field. |
| Diagrams | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> Appropriate maps and figures have been included in this announcement. |
| Balanced reporting | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> Exploration targets are interpretations based on desktop work only. Public government geophysical surveys (sourced from Quebec Government Stratigraphic Surveys) and publicly available satellite imagery (Bing satellite imagery) have been obtained from free online resources. |
| Other substantive exploration data | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> All relevant and material exploration data for the target areas discussed, have been reported or referenced. |

| Criteria | JORC Code explanation | Commentary |
|--------------|--|--|
| Further work | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • Further work will include but not limited to systematic geological mapping, rock chip sampling, soil sampling, pXRF measurements, geophysics, structural interpretation and drilling to identify suitable host rock geology and structural architecture. |