31 October 2023

Spodumene discovered at Aero Property – James Bay, Canada

Highlights:

- **Spodumene crystals observed within Warhawk outcrop during maiden field prospecting campaign.**
- **Lithium mineralisation initially confirmed using LIBS[1] SciAps Z-903 device.**
- **This significant discovery is located along trend from Winsome Resources' (WR1:ASX) Cancet lithium deposit (Cancet) and Patriot Battery Metal's (PMT.ASX) world-class CV5 Deposit (Corvette).**

James Bay Minerals (ASX: **JBY**) ("**James Bay Minerals**" or "**the Company**") is pleased to advise that it has discovered spodumene during its maiden field exploration program at the highly prospective Aero Property, which forms part of the Company's La Grande Project, located in the prolific Eeyou Istchee-James Bay district in Quebec, Canada.

Mark Fekete, Senior Field Geologist with James Bay's exploration partner, Breakaway Exploration, commented:

"The discovery of a lithium-bearing mineral at surface on the Warhawk pegmatite within the Aero Property confirms that this pegmatite contains lithium. Now that we have proven through a recognised exploration technique that lithium is present, our focus is to now determine where the highest concentration of lithium is within the Warhawk and other pegmatites dykes on the Property."

As part of the maiden fieldwork campaign and in order to carry out indicative in-field testing, a SciAps LIBS Z-903[1] device has been utilised to test minerals of interest identified in outcrop and rock/channel samples. The anomalous lithium values returned coincide with the identification of the spodumene mineral in outcrop and highlights the presence of lithium in the pegmatite. Significant organic coverage across the Aero pegmatites, including moss and lichen, makes it difficult to visually identify spodumene at surface or to estimate the percentage of lithium mineralisation accurately.

[1] LIBs readings should not be considered a substitute for laboratory analysis and are not representative of the whole rock concentration but represent a relative concentration measured at a single point. It has been used to aid geological interpretation and confirm the minerals identified in the field are in fact lithium-bearing, while providing an approximate lithium concentration

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The identified mineral within the Warhawk pegmatite appears light green in colour on weathered surface with crystal habit, cleavage, hardness and positive LIBS readings supporting its identification as spodumene. All samples have been methodically taken from breaking pegmatite rock at surface and sampling freshly exposed rock between 10mm - 200mm deep. Preliminary observations show generally small crystals of the green mineral identified in outcrop which makes up approximately 2% of the whole rock composition seen in Figures 1 and 2 below. Breakaway Exploration (BXM) personnel have systematically selected grab samples and executed rock saw channel sampling.

Samples were collected for petrography and/or XRD work to confirm the primary lithium-bearing mineral as spodumene and if other lithium minerals are present. Assay work will be used to determine lithium content, which has initially been identified by the hand-held LIBS analyser.

Figure 1 – Raw outcrop with green mineral interpreted to be spodumene.

Figure 2 – Interpreted wheathered green hiddenite from Figure 1 under hand lens. See Appendix 1 for further details.

The LIBS device is calibrated to a lithium pegmatite analysis profile on initiation, with standards analysed at initiation and every 10 readings or between high-grade readings for consistency checks. Reading times are approximately 3-5 seconds.

While the LIBS device has been used to identify the green mineral as being lithium-bearing, laboratory assays are required to provide accurate, quantitative analysis and may also be used to calibrate the machine to local mineralogy in the future for more accurate LIBS readings.

For this reason, no reported lithium values have been included in this announcement while the Company awaits assay analysis. While the current field observations indicate that the mineral identified is a lithium-bearing spodumene mineral, some of the percentages of lithium produced from the LIBS analyser does not

correlate to an accurate quantitative measurement of the lithium concentration of the green mineral itself, or to the overall grade of the pegmatite.

The LIBS is being used as a field tool for determining if minerals are lithium-bearing as preliminary observations and interpretations evolve. Site specific calibration and petrographic analysis will be used to confirm grades and identify all lithium minerals present in the pegmatite.

Figure 3 – Fresh rock Channel Sample from Warhawk with lithium mineralisation indicated by LIBS.

Figure 4 – LIBS reading taken of weathered green spodumene from Warhawk outcrop.

As the exploration field team continues to explore a significant pegmatite system, the full extent and understanding of the mineralisation remains in its early stages and interpretations are subject to change as more information becomes available.

The exploration program continues to focus on the south-eastern portion of the Aero Property and on identifying further spodumene mineralisation, near where a 4-season gravel road runs through the property. The Warhawk pegmatite, located within the Aero Property, is situated 1km from this road, and 500m from High Voltage power lines carrying green power generated from the Hydro Quebec electric dam.

Figure 5 – Executive Director Andrew Dornan standing on Warhawk pegmatite.

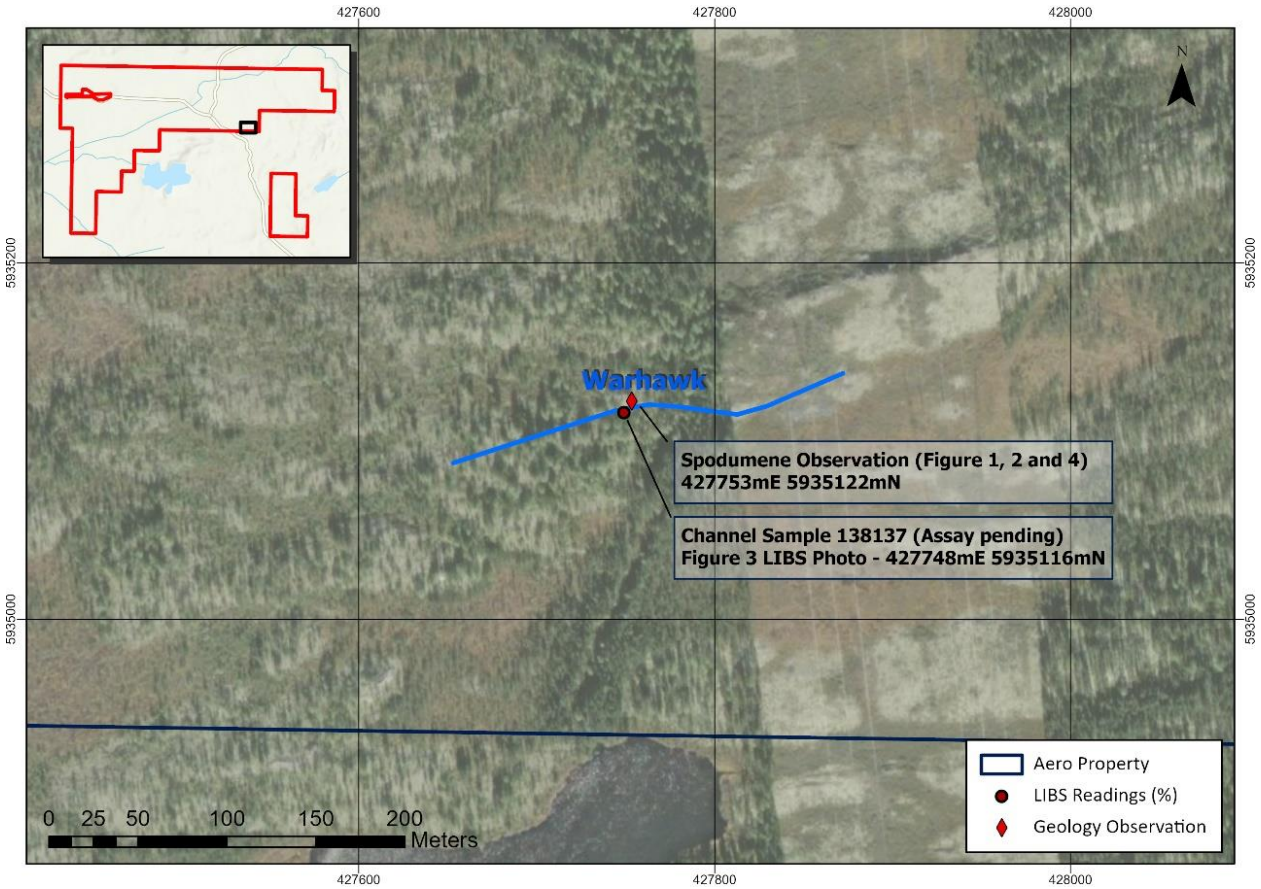

Figure 6 – Warhawk pegmatite detailing spodumene observations and channel sample LIBS test location.

James Bay Executive Director, Andrew Dornan, commented:

"The rapid pace of discovery achieved by our exploration team at Aero – where they have uncovered a large pegmatite field within two weeks of commencing exploration and now identified spodumene mineralisation – gives us great confidence in our theory that the James Bay Minerals properties have the key foundations and potential for a major lithium discovery. We are looking forward to receiving assay results from this first phase of exploration and advancing this highly prospective Property towards drilling."

About the Aero Property

The Aero Prospect consists of 89 continuous claims covering an area of 4,365 hectares. The Aero Property has approximately 12km of deformation zones which are considered highly prospective for Lithium-Caesium-Tantalum (LCT) Pegmatites. The nearby Cancet (Winsome) and Corvette (Patriot) properties both have deformation zones running through their properties and both Winsome and Patriot have had significant exploration success along these zones.

The maiden field program has been undertaken by five personnel and was designed to map targeted areas of the Aero Property along with the collection of rock chips and completion of channel samples for analysis.

Established infrastructure, in particular the sealed roads which run through the Property, allows for easy access.

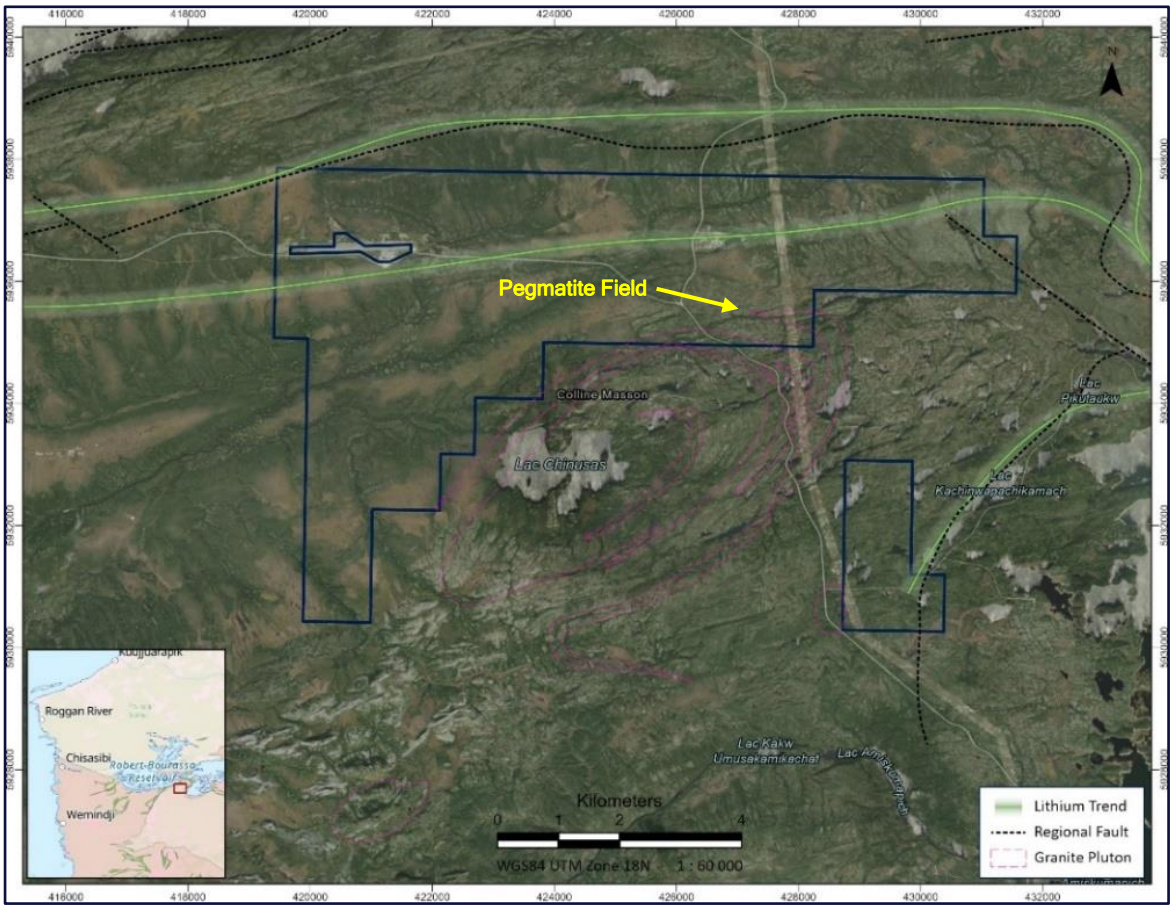

Figure 7 - Aero Property Satellite Imagery.

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 22,438Ha or 224km^2. The Joule, Aero and Aqua 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% Li_2O and 160ppm Ta_2O_5 (0.40% Li_2O cut-off grade).[2]

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.

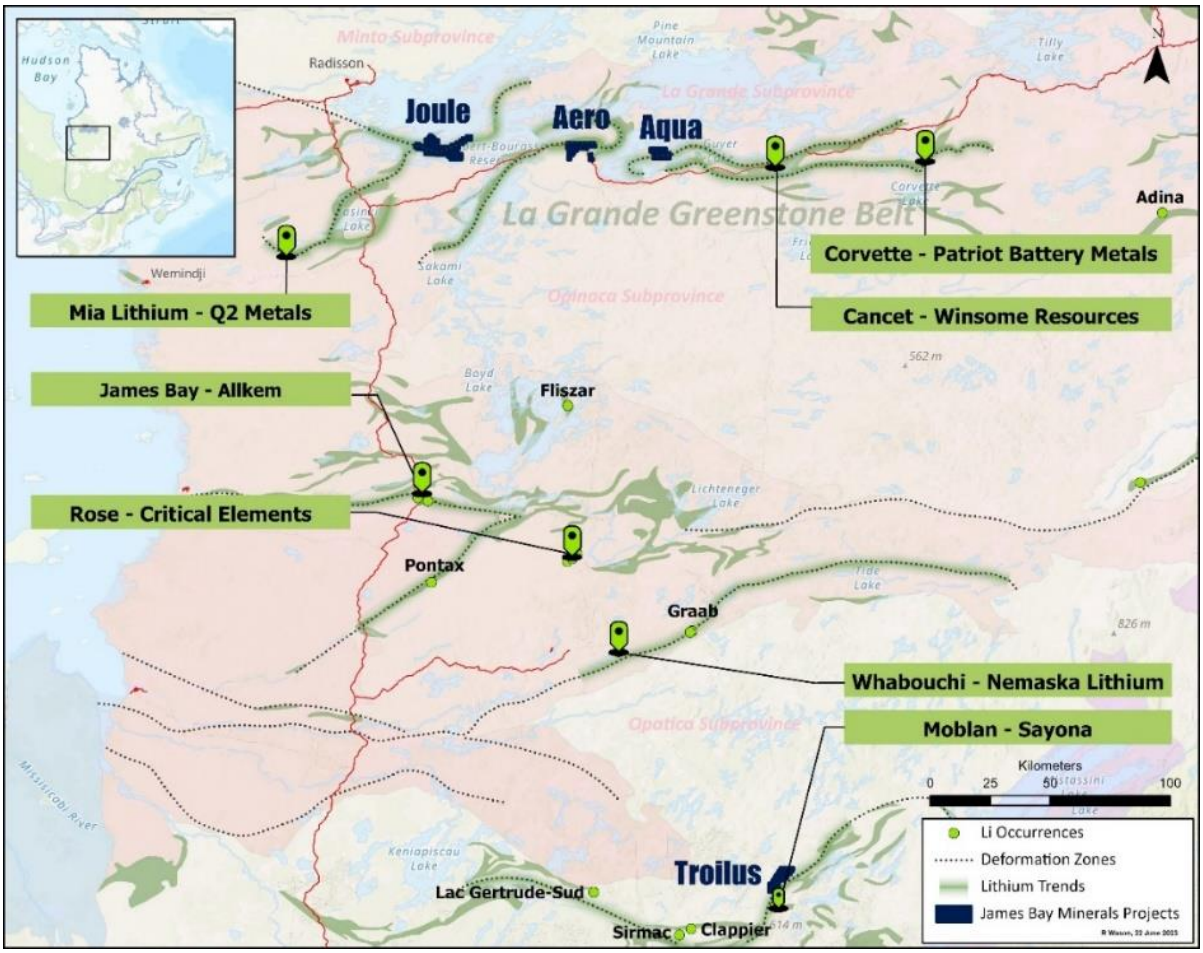

Figure 8 - James Bay Minerals' key lithium project locations in Quebec, Canada.

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

The Aero Prospect contains approximately 12km of deformation zones which are considered highly prospective for LCT pegmatites. Of note, the nearby Cancet (Winsome Resources Ltd) and Corvette (Patriot

[2] *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*"

Battery Metals) properties both exhibit deformation zones upon which significant exploration success has occured[1].

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.

Appendix 1 - Visual Interpretations

Figure	Sample ID	Sample Type	Northing	Easting	Lithology	Mineralisation	Li Mineral %[3]	Other Minerals Present	Assays
Figure 1	-	N/A	5935122mN	427753mE	Pegmatite	Disseminated green spodumene	~2% green mineral	Qtz 35%, Feldspar 50%, tourmaline <5%	Not sampled
Figure 2	-	N/A	5935122mN	427753mE	Pegmatite	Disseminated green spodumene	~2% green mineral	Qtz 35%, Feldspar 50%, tourmaline <5%	Not sampled
Figure 3	LIBS 784 Channel #138137	Channel Sample	5935116mN	427748mE	Pegmatite	Disseminated	100% Unknown	Qtz 35%, Feldspar 50%, tourmaline <5%	Approx 12 weeks
Figure 4	LIBS 1524	Outcrop	5935122mN	427753mE	Pegmatite	Disseminated green spodumene	~2% green mineral	Qtz 35%, Feldspar 50%, tourmaline <5%	Not sampled

WGS 84 UTM Zone 18N

[3] "Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations"

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	• 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.	• Investigative style rock chip sampling has been taken opportunistically from pegmatite outcrop along with channel sampling. Sample batches have been prepared and dispatched to the Laboratory, with no results at this point. • A handheld LIBS detector has been used for selective spot analysis of minerals interpreted to be lithium bearing in the pegmatite. The lithium values indicate lithium grade but do not accurately represent quantitative analysis and have therefore been omitted from the report. The results highlight the presence of lithium bearing minerals. • The LIBS (Z-903) analyser is new and was calibrated daily.
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, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	• In connection to this announcement no drilling has been conducted yet and no drill assays are being reported.
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.	• In connection to this announcement no drilling has been conducted yet and no drill assays are being reported.
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.	• In connection to this announcement no drilling has been conducted yet and logging completed.

Criteria	JORC Code explanation	Commentary
Subsampling 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.	• Sample types and locations have been reported to demonstrate the latest observations in the field. • Sample collection has been completed and dispatched . Sample techniques and preparation details will be reported in future announcements with assay results.
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 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.	• Rock chip and channel samples have been dispatched to the selected laboratory in Quebec for analysis. No results have been reported yet. • A SciAps Z-903 LIBS device has been used for spot sample readings of minerals of interest. The device is calibrated each day, and standards analysed every 10 readings and between high-grade readings for consistency checks. Readings times are approximately 3 to 5 seconds and are standard for the device. The device is calibrated to a lithium profile supplied by SciAps prior to use. • Handheld LIBS is expected to differ from laboratory assay results and should not be used to indicate whole rock grade.
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.	• All data generated from the mapping of the pegmatite has been uploaded into the company's data storage and been checked by two personnel. • LIBS readings have been downloaded directly from the device. • LIBs results do not represent assay data.
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.	• All field data being taken at this stage will utilise a handheld GPS, which is a standard tool for reconnaissance style sampling.

Criteria	JORC Code explanation	Commentary
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 for investigative nature of sampling. • At this stage no effort was made to illustrate geological or grade continuity between sample points.
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 mineralized structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Initial surface samples have been taken to demonstrate the length of the pegmatites exposed along strike. • Channel samples attempt to sample a representative cross-section of the pegmatite at surface. No results have been reported and no bias has been determined.
Sample security	• The measures taken to ensure sample security.	• All samples collected are being held on site at the company's and Breakaway Explorations sample storage facility. All samples are stored within number coded sealed bags and labelled by the company's field personnel. • Field personnel have organised transport of the samples to a laboratory in Quebec.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• No audits or review have been undertaken.

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

(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 Aero Property which forms part of La Grande Project is 100% owned by James Bay Minerals Ltd. • The Aero Property consists of 89 continuous claims covering an area of 4,366 hectares. The Project is located in the La Grande, Greenstone belt. • All claims are in good standing and have been legally validated by a Quebec lawyer specialising in the field
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• The Aero Property which forms part of James Bay Minerals 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	• Deposit type, geological setting and style of mineralisation.	• The geology of the Property 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. Early-stage field investigations are confirming the extent of this with a pegmatite field identified and lithium bearing minerals present at the Warhawk pegmatite. • The property sits within three key geological ingredients which make it prospective to large LCT pegmatites. These are: - Right Archean Rock Age - Large deformation zones - Proximity to Greenstone Belts
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: 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.	• No drilling activities have been undertaken or reported to date.

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	• 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	• No drilling activities have been undertaken or reported to date.
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').	• No drilling activities have been undertaken or reported to date.
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 maps and figures have been included in this 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 relevant and material exploration data for the target areas discussed, have been reported or referenced. • No grades are 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 relevant and material exploration data for the target areas discussed, have been reported or referenced.
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.	• Further work will include but not limited to systematic geological mapping, channel and rock chip sampling, soil sampling, pXRF and/or LIBS measurements, geophysics, structural interpretation and drilling to identify suitable host rock geology and structural architecture for late state evolved and fertile LCT Pegmatites