



18 October 2023

High-resolution heliborne magnetic & spectrometric survey flown across La Grande Project – James Bay, Canada

JBY's exploration acquires further critical data across the La Grande Project

Highlights:

- **High-Resolution heliborne magnetic & spectrometric survey flown across La Grande Project.**
- **Magnetic and spectrometric surveys will provide key data to help determine the geometry and locations of pegmatite formations which are undercover or plunge undercover.**
- **Magnetic and spectrometric surveys have been successfully used in the James Bay region by lithium explorers as an exploration tool for the discovery of lithium-bearing pegmatites.**
- **The La Grande Project is a prospective lithium property located along trend from Winsome Resources' (ASX: WR1) Cancet Lithium Project and Patriot Battery Metals' (ASX: PMT) world-class CV5 deposit.**

James Bay Minerals (ASX: **JBY**) ("**James Bay Minerals**" or "**the Company**") is pleased to advise that its maiden exploration campaign in the Istchee-James Bay region in Quebec, Canada continues to make strong progress with a high-resolution heliborne magnetic & spectrometric survey flown across its La Grande Project. JBY engaged Prospectair to acquire magnetic and spectrometric data across three key areas of interest – being the Aqua, Aero and Joule Properties (Figure 1). Prospectair deliverables are due to be received by the end of November 2023.

Magnetic and spectrometric survey data will be utilised to analyse and identify various structural features across the Company's properties. Any radiometric lineament lining-up with a narrow topographic high and/or lining up with a magnetic low (or a break in magnetic signal) will generate a high potential target.

Given the Company has already identified multiple outcropping pegmatites across its La Grande Project (see ASX announcements dated 28 September, 5 October and 12 October 2023), data generated will be critical in determining the direction in which these pegmatites plunge undercover and assist in defining the H1 2024 drill program across the Aero Property. Data will also be key in identifying potential targets in areas which may lie undercover.

During Q4 2023, JBY's exploration team plans to undertake desktop studies utilising all data generated from its maiden field program which includes LIDAR, high-resolution photography, field mapping, sampling,

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magnetic and spectrometric surveys. These studies will generate follow-up targets for 2024 field programs across all three La Grande properties.

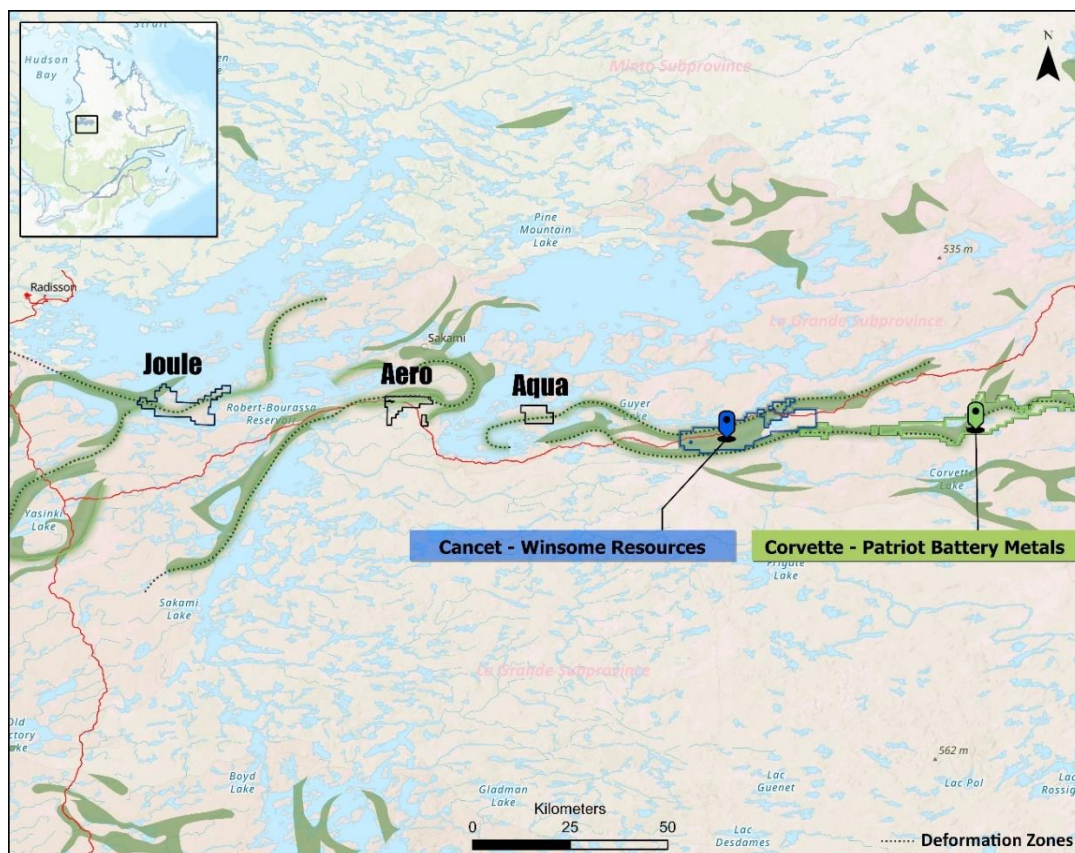


Figure 1 – La Grande Project Joule, Aero, and Aqua properties.



Figure 2 – Prospectorair magnetic and spectrometric survey helicopter and associated equipment.

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 224km². 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% 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.

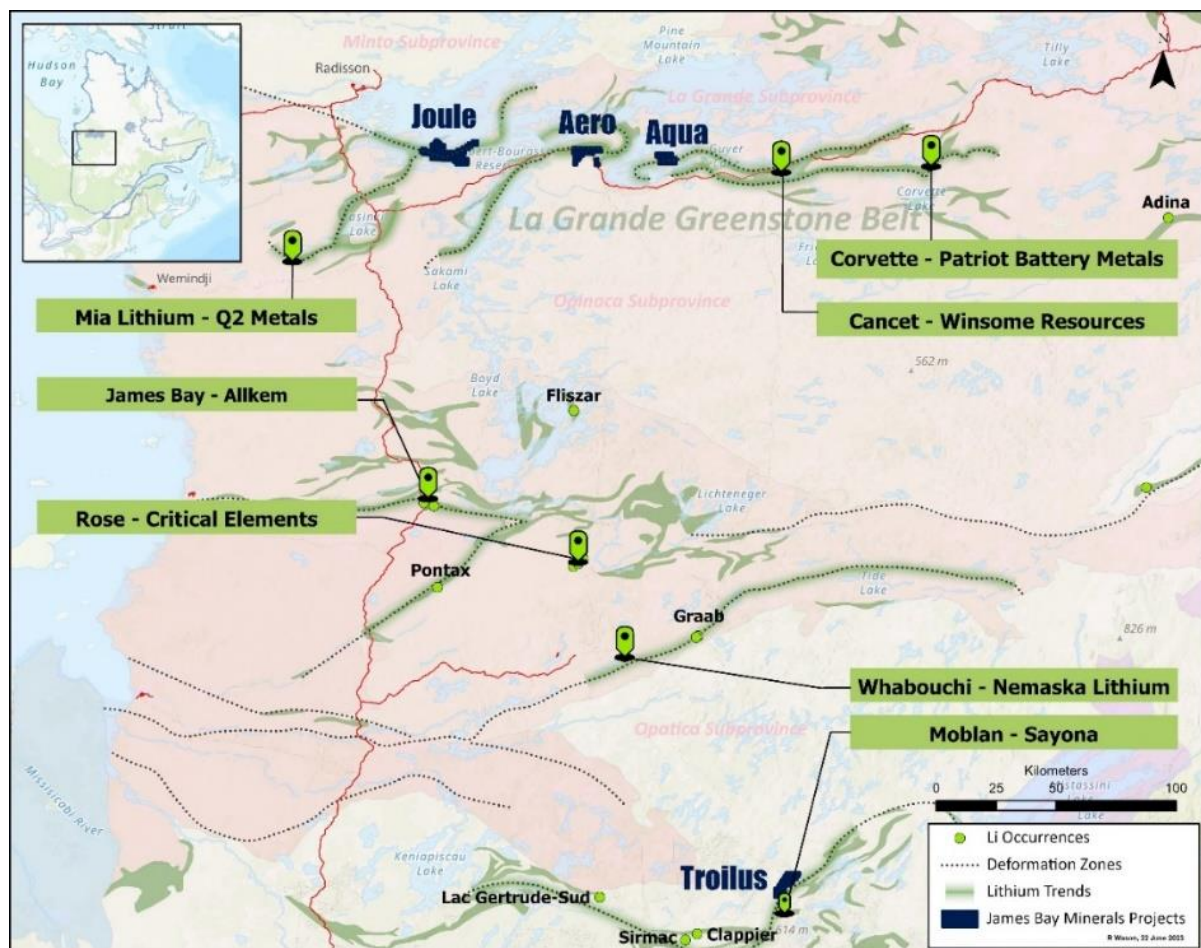


Figure 2 - James Bay Minerals' key lithium project locations in Quebec, Canada.

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

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"

(Patriot Battery Metals) properties both exhibit deformation zones upon which significant exploration success has occurred¹.

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

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Competent Person Statement

The information in this announcement that relates to Exploration Results at the La Grande and Troilus Projects is extracted from the Company’s Prospectus dated 19 July 2023 (Prospectus) and ASX Announcements dated 28 September, 5 October and 12 October 2023 (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 the Original Announcements.