

19th March 2025

Metallurgical Testing to commence on High-Grade Skarn at Independence Gold Project

Testwork to determine optimal processing route for high-grade skarn
Resource of 984,412oz at 6.67g/t Au

Highlights:

- Initial metallurgical testing to commence on the high-grade skarn mineralisation at the Independence Gold Project in Nevada, USA:
 - No previous metallurgical tests have been conducted on the skarn mineralisation
 - Metallurgical program aims to determine the optimal processing method to maximise gold recovery from the high-grade skarn Resource
 - Historical core located at site will be assessed and sent for metallurgical optimisation testing
- Previous metallurgical testing at the Independence Project focused on heap leach amenability of near-surface epithermal mineralisation. Heap leach is commonly used for oxide material, but typically yields poor recoveries for transitional and sulphide materials such as the skarn mineralisation:
 - JBY to conduct specific metallurgical testwork of near-surface sulphide ore to determine the optimal processing method to maximise gold recovery
- The high-grade skarn Resource at the Independence Project (984,412oz at 6.67g/t¹) is hosted in the same Battle Formation geological unit as the adjacent Fortitude Mine (operated 1984–1993, now part of NGM's Phoenix Mine Complex), which produced 2.3Moz gold at 6.68g/t with 90% recoveries

James Bay Minerals (ASX Code: "JBY") ("JBY" or "the Company") is pleased to advise metallurgical testing on the high-grade skarn mineralisation is to commence at the Independence Gold Project in Nevada, USA. This metallurgical program represents a critical step towards unlocking the full value of the high-grade skarn-hosted gold mineralisation, which contains an Inferred Mineral Resource of 984,412oz Au at 6.67g/t (refer to ASX announcement dated 5 March 2025).

¹ Refer to ASX announcement dated 5 March 2025.

To date, **no metallurgical test work has been completed on the skarn gold mineralisation** at the Independence Project.

Importantly, the previously reported 22% recovery for sulphide materials (see announcement 5 March 2025) was derived from historical heap leach tests conducted on near-surface epithermal mineralisation, which were optimised for oxide material only. As such, the reported recovery is not considered to be relevant to the skarn-hosted mineralisation (which is sulphide material) and is not the optimal process for recovering gold from epithermal sulphide mineralisation.

No specific testwork has been conducted on epithermal sulphide or skarn mineralisation to optimise recoveries.

Given the high-grade nature of the skarn-hosted gold resource, the Company believes there is significant potential to optimise recoveries using conventional processing methods such as flotation, pressure oxidation (POX), or other sulphide-specific recovery techniques. The upcoming testwork will provide valuable insights to determine the most efficient processing pathway and inform future development plans.

The neighbouring Fortitude Mine historically produced 2.1Moz of gold between 1984 – 1993 (operated by Battle Mountain Gold company prior to acquisition by Newmont and merger into current owner NGM, a Barrick/Newmont JV) at an average grade of 6.68g/t with recoveries of over 90%², and current operations in the Phoenix mine recovering sulphide ore at an average rate of 79% for Au³. Both the neighbouring Midas Pit and Fortitude Pit's are hosted in the same Battle Formation that JBY's Independence Gold asset's 984,412 oz Au at 6.67g/t skarn resource is hosted in (Figures 1 and 2).

² Sources: (a) <https://westernmininghistory.com/mine-detail/10310329/>
(b) https://www.sec.gov/Archives/edgar/data/1164727/000116472722000007/exhibit964-nevadagoldmines.htm#ie6074fed07384e34b3011db8bfaf8278_619

³ Reference page 1042 Geology and Ore deposits 2000, The Great Basin and Beyond Proceedings Volume 2; Cary Johnson, Nicholes, Campo

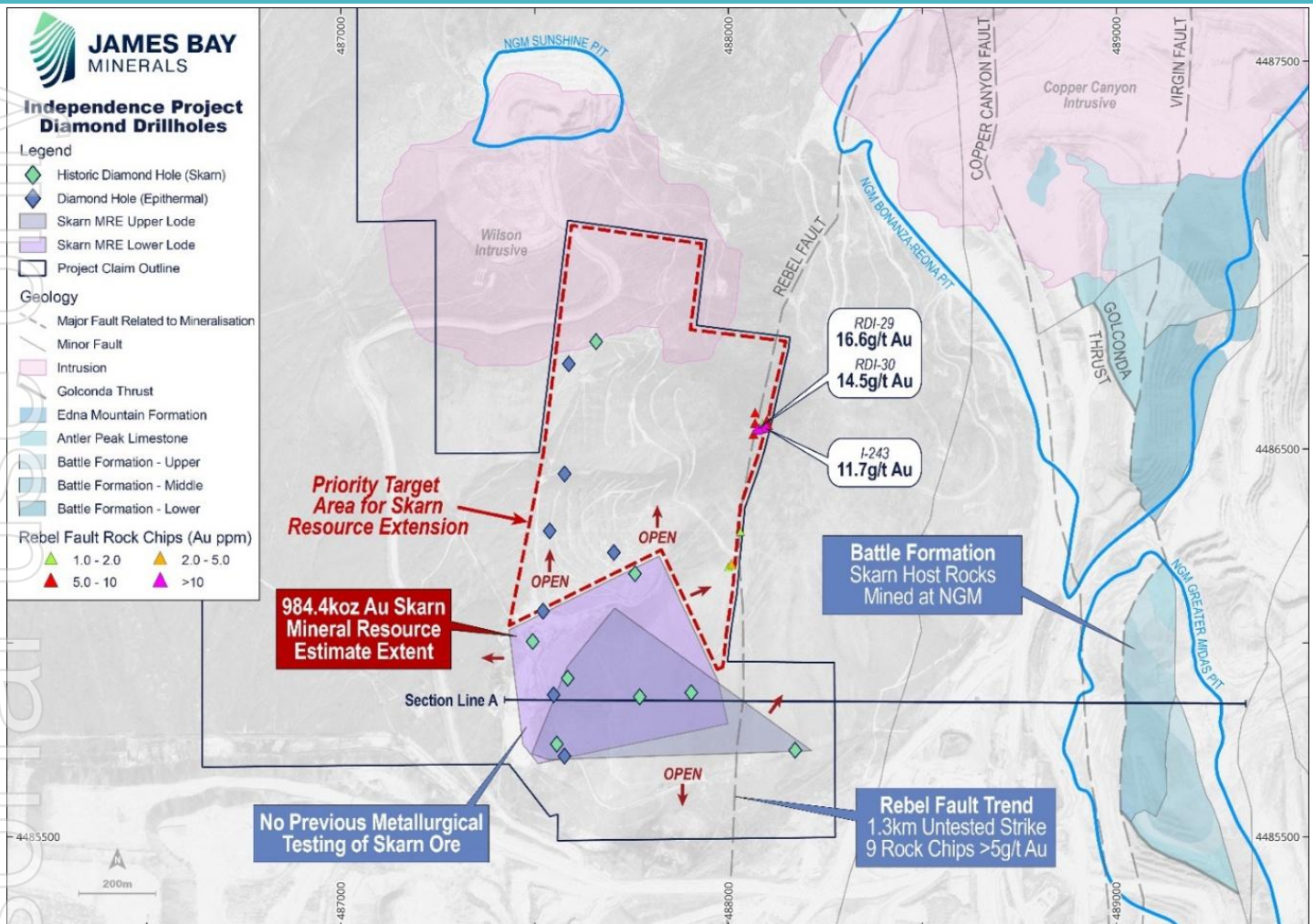


Figure 1: Topographic map of the Independence Project in relation to NGM's Phoenix Mine Complex (Refer to ASX Announcement Dated 7 January 2025 for full details)⁴.

Next Steps

Through the engagement of external metallurgical consultants, the selection and preparation of drill core will commence from existing drillholes at the Project. Through this work, the Company seeks to evaluate gold recoveries from the untested skarn resource and enhance the epithermal transitional and sulphide recoveries through optimised metallurgical testing. The results of the metallurgical testwork will be incorporated into the future stages of Project development.

James Bay Minerals will provide further updates as the metallurgical program progresses. The Company remains committed to maximising the economic potential of the Independence Gold Project and ensuring investors have clear and accurate information on the ongoing optimisation efforts.

⁴ Refer to ASX announcement dated 27 November 2024 for Rock Chips results.

James Bay Executive Director, Matthew Hayes, commented:

“This metallurgical program is a key step in clarifying the recovery potential of the high-grade skarn resource of 984,412 ounces at 6.67g/t Au. While previous testwork focused solely on near-surface oxide material suitable for heap leaching, no metallurgical studies have been conducted to optimise gold recovery for the sulphide or transition material. This program will address that gap, ensuring a clear understanding of the Project’s full potential and identifying the most effective processing methods.”

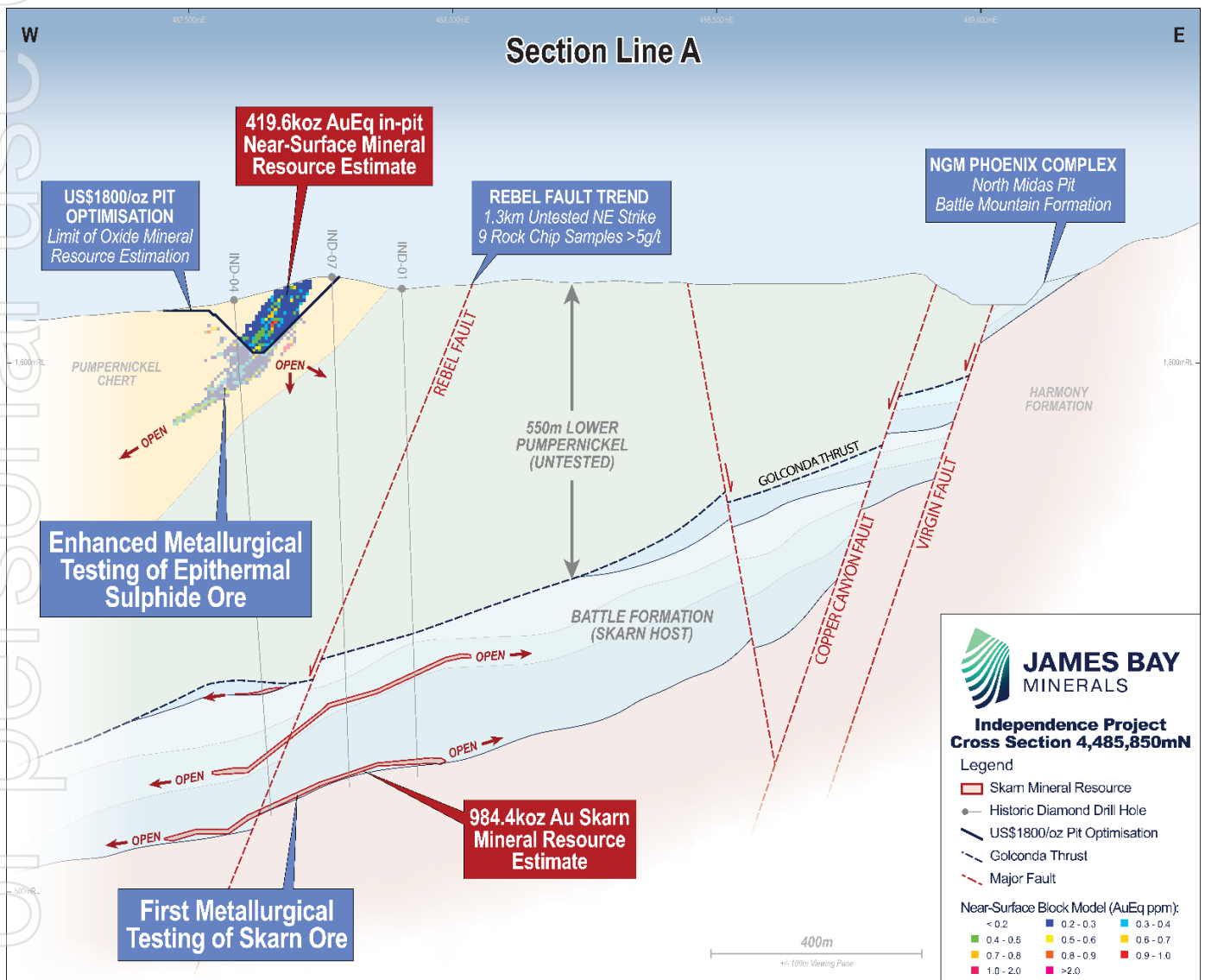


Figure 2: Section Line A through the Project showing the position of Mineral Resources⁵ with respect to NGM’s North Midas Pit.

⁵ Refer to ASX announcement dated 5 March 2025.

Historical Metallurgical Test work

As reported in the Company's announcement 'Maiden JORC Resource 984,412oz @ 6.67g/t at Independence Gold Project, USA' on 5 March 2025, metallurgical test work has been completed on the near surface mineralisation at the Project by historical operators GMC, and more recently by GIMC. The metallurgical test work has focused on heap leach amenability for the oxide material and the Company intends to undertake testing for further optimisation of transitional and sulphide material.

Various metallurgical test work procedures were completed on surface and underground bulk sample material between 2009-2012, commissioned by GMC and performed by McClelland Laboratories of Sparks, Nevada. The work involved bottle roll and column tests at various crush sizes, and total sulphur content vs cyanide soluble gold tests.

Bottle roll tests showed gold recovery in oxides of 81-84%, and silver of 22-48% depending on crush size and leach time⁶.

From the column tests, the surface sample gold recovery was 82.1% for the 100mm crush material and 81.5% for the 50mm crush material. Silver recovery was 24% for 100mm crush and 30% for finer 50mm crush. For the underground sample column tests, the 25 mm crush size had higher metal recovery both in gold and silver than the 50 mm crush size, with gold recovery almost 6% higher and silver recovery 7% higher⁶.

GIMC followed up with further test work in 2021 undertaken by KCA. Sample composites underwent bottle roll and cyanide shake tests for gold and silver recovery across different material to ascertain recovery values.

The 2021 set of samples were primarily taken from the northern end and the central parts of the property and tests revealed considerable variability in recovery. The bottle roll gold recovery varied from 34% to 94%, averaged at 74%, with a standard deviation of 11%; and the bottle roll silver recovery varied from 17% to 74%, averaged at 51%, with standard deviation of 12%⁶.

From the cyanide shake test, the cyanide soluble gold varied from 37% to 99%, averaged at 86% with a standard deviation of 13%, while the cyanide soluble silver varied from 37% to 100%, and averaged 78% with a standard deviation of 14%. The sulphide sulphur in the samples varied from 0.01% to 3.61%, with an average at 0.37%⁶.

Additional analysis using total percent sulphide in an assay sample determined material as oxide, transitional or sulphide and defined recovery characteristics of each material type for use in the resource estimate.

These values have been used for recoveries in the gold equivalent calculation of the near-surface mineralisation. No test work has been completed on the deep skarn material.

⁶ Refer to ASX announcement dated 5 March 2025.

Other characteristics of the material reported from the studies showed that the silver recovery does not appear to vary for material type, gold recovery in oxide is less dependent on crush size, whereas underground material appears to have better recovery with finer crush sizes.

The material does have elevated arsenic and copper but negligible mercury, the copper is not expected to cause high cyanide consumptions or inhibit gold and silver recovery. The most important parameter of this material is the sulphide content and total sulphur content, with a trend indicating that cyanide soluble gold decreases with the increase of total sulphur. Further tests are recommended to be completed in the near term, including column leach tests on representative material of different oxidation states.

Please refer to ASX Announcement dated 5 March 2025 for full details related to the Mineral Resource Estimation and previous metallurgical testwork.

Background on James Bay Minerals

Independence Gold Project – Nevada.

Project Overview

The Independence Project consists of 14 unpatented mining claims and 84 unpatented mill sites, situated in Lander County, Nevada, and spans approximately 627 acres of Bureau of Land Management (BLM) administered lands. It is adjacent to the Nevada Gold Mine's Phoenix Project and about 16km south of Battle Mountain. In addition, the Project encompasses Section 17, 470 acres of private fee surface land in the Battle Mountain Mining District where the company holds the exclusive water rights and where it will locate any future production water wells.

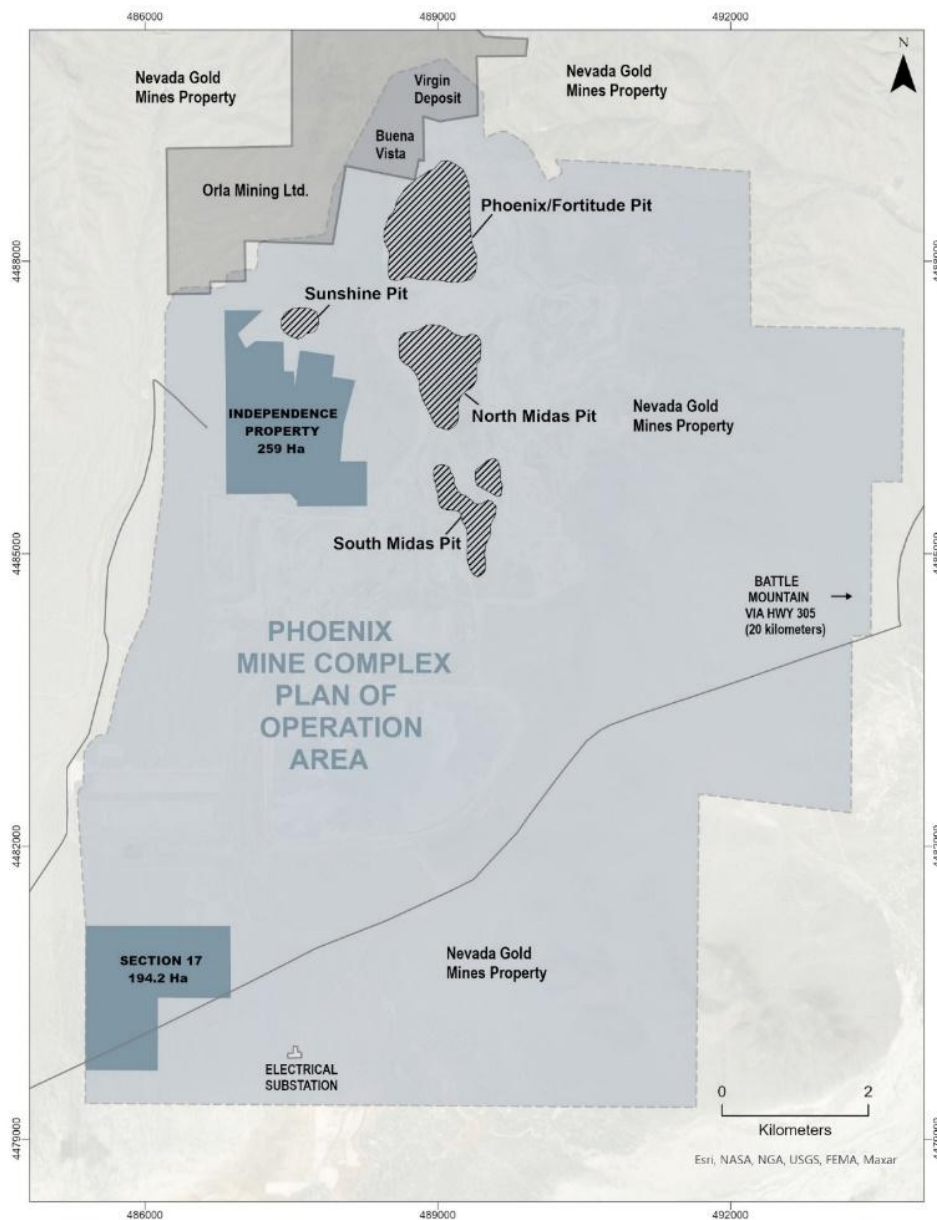


Figure 3: Independence Property overlaid with active Nevada Gold Mines (Newmont Barrick JV) Phoenix Mine Complex, Plan of Operations.

Nevada – Tier 1 Jurisdiction

Nevada is widely regarded as one of the premier mining jurisdictions in the world, known for its rich mineral resources and supportive regulatory environment. Nevada consistently ranks within the top countries of the Fraser Institutes best mining jurisdictions. Key features include:

1. **Rich Mineral Deposits:** Nevada is a leading producer of gold and silver, with numerous active mines and significant exploration potential.
2. **Stable Regulatory Framework:** The state offers a predictable and transparent regulatory process, which fosters investor confidence and encourages mining activities.
3. **Infrastructure:** Well-developed infrastructure, including roads, power, and water supply, supports mining operations and logistics.
4. **Skilled Workforce:** A robust labour market with experienced professionals in the mining sector enhances operational efficiency.
5. **Proximity to Markets:** Its location in the western United States provides easy access to major markets and transportation networks.
6. **Pro-mining Policies:** State policies generally favour mining development, with efforts to streamline permitting and reduce bureaucratic hurdles.

These factors collectively make Nevada a highly attractive destination for mining investment and exploration.

The Project contains a JORC 2012 Mineral Resource as outlined below:

Table 1: JORC Mineral Resource Estimate⁷

Description	Tonnes	Gold (Au) g/t	Gold (Au) g/t Equivalent	Gold (Au) Oz	Gold (Au) Equivalent Oz ⁸
Skarn – Mineral Resource					
Inferred	4,592,370	6.67	-	984,412	-
Near-Surface – Mineral Resource					
Indicated	23,176,458	0.40	0.43	294,395	321,584
Inferred	8,716,172	0.32	0.35	90,702	98,015

⁷ Reported by the Company on 5 March 2025.

⁸ Gold Equivalent of the near-surface estimate has been calculated per block in resource estimation and is a function of metal prices, based on a Gold Price of US\$2,412.50/oz and Silver Price of US\$28.40/oz, and metal recoveries for both gold and silver. The recovery of gold is stated as 79% in the oxide, 50% in transitional and 22% in sulphide (**AU Recovery**). Silver averages 27% across all material. Resultantly, the AuEq calculation is = $g \text{ Au/t} + (g \text{ Ag/t} * (28.4 \times 0.27) / (2,412.5 \times \text{Au Recovery}))$. The Company believes that all metals included in the metal equivalent calculation have a reasonable potential to be recovered and sold. Metallurgical testwork has been completed on the near surface epithermal deposit to assess for heap leach amenability. The optimised recovery for the oxide material is estimated from 2012 and 2021 column and bottle roll tests from which the conditions and results have been applied to transitional and sulphide material for a best-fit processing scenario. No metallurgical test work has been completed on the skarn material, nor to optimize recovery for transitional and sulphide material types, which are impacted by crush size; therefore, results are primarily based on heap leach amenability for oxide material.

Please refer to ASX Announcement dated 5 March 2025 for full details related to the Mineral Resource estimate.

Quebec Lithium Assets

James Bay has 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 Shaakichiuwaanaan deposit, where Patriot Battery Metals (ASX: PMT) reported an updated Indicated and Inferred Mineral Resource Estimate⁹ and completed a Preliminary Economic Assessment outlining the potential for a competitive and globally significant high-grade lithium project targeting production of up to ~800ktpa spodumene concentrate¹⁰.

This announcement is authorised for release 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 information in this announcement that relates to previously reported Exploration Results and Mineral Resource estimates is extracted from the Company’s ASX announcements dated 27 November 2024 and 5 March 2025 (Original Announcements). The Company confirms that it is not aware of any new information or data that materially affects the information contained in the Original Announcements and, in respect of the Mineral Resource estimates, the Company confirms that all material assumptions and technical parameters underpinning the Mineral Resource estimates continue to apply and have not materially changed.

⁹ See PMT ASX Announcement dated 6 August 2024

¹⁰ See PMT ASX Announcement dated 22 August 2024