

Maiden Campaign For Geological Hydrogen and Helium  
RNS Number : 1603A  
Bluejay Mining PLC  
13 August 2024



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**Bluejay Mining plc / Ticker: JAY / Market: AIM / Sector: Mining**

## Bluejay Commences Maiden Campaign For Geological Hydrogen and Helium at Outokumpu

Bluejay Mining plc ('Bluejay' or the 'Company'), the AIM, FSE listed and Pink-Market traded exploration and development company with projects in Greenland and Finland, is delighted to announce the start of low-cost & wide ranging work programmes to evaluate possible significant deposits of geological hydrogen and helium (including other industrial gas) in the Outokumpu Belt. This work stream will include integrating all historical data including seismic.

### Previously Identified Significant Findings:

- **High Gas Concentrations:** Historical deep drilling within the Outokumpu Belt, as reported by the Geological Survey of Finland (GTK), has revealed substantial concentrations of helium and hydrogen. Notably, the best intersection shows 100 meters at 5.6% helium within a broader 1,500-meter intercept at 1.5% helium
- **Newly identified Results** also include 80m @ 5.03% lithium (50,300mg/l) in deep brines within a larger section of 580m@ 1.16% lithium (11,623mg/l). By way of comparison brines from the "Lithium Triangle" (Argentina, Chile, and Bolivia). The Salar de Atacama in Chile have an average lithium concentration of about 0.14% lithium or 1400ppm
- **Comparative Geology:** The Outokumpu Belt's geology is similar to the Lorraine region in France, which hosts the world's largest known deposit of white hydrogen
- **Deep Drilling Success:** Gas samples from a 2480-meter-deep drill hole, analysed by the GTK, has revealed up to 46% geological hydrogen, highlighting the belt's potential for industrial gas reserves
- **Extensive Historical Data:** >2000 historical drill holes provide robust foundation for fast-tracking gas assessment across the 40-kilometer licence holding

### Upcoming Exploration Program:

**Surface Sampling:** Historical drill hole and surface sampling will be undertaken using a portable hydrogen and helium detector to measure

concentrations of these gasses. This program will also aid in assessing the location and condition of historical drillholes for further sampling.

**Water Sampling:** Water samples will be collected from a selection of deep boreholes and analysed for hydrogen, helium, and other gases, establishing a baseline for gas presence and concentration.

**Flowmeter Testing:** Groundwater flow rates will be measured to identify water-conductive fractures, aiding in locating potential gas-rich zones.

**Pumping Tests:** Pumping tests will be conducted to understand the hydrogeological structures and flow characteristics, crucial for estimating recoverable gas volumes and production rates.

**Packer Testing:** Specific borehole sections will be isolated to measure water flow and rock integrity, identifying permeable zones that could contain hydrogen and helium.

**Borehole Magnetic Resonance (BMR):** BMR logging will measure formation porosity and water volume, providing detailed geophysical data to enhance hydrogeological models and improve gas potential understanding.

#### **Eric Sondergaard, Managing Director of Bluejay Mining, commented:**

"These encouraging but preliminary indications of helium, hydrogen and industrial gasses in the Outokumpu Belt are very encouraging. They present a significant opportunity for shareholders. We have started dialogue with European groups with regards to progressing future work streams in a manner that is not dilutive to existing shareholders. We will update stakeholders accordingly, in the meantime, work program details are currently being devised in close collaboration with local experts and regulators. This first pass evaluation of surface expressions of naturally occurring helium and hydrogen will allow us to assess the conditions of existing boreholes, and focus further phases of work. This encouraging opportunity is made possible by the vast datasets of high-quality historical data the Company has absorbed recently and the availability of numerous pre-existing deep drillholes, positioning us to potentially unlock substantial value for our shareholders for minimal cost and no dilution."

#### Market Abuse Regulation (MAR) Disclosure

The information contained within this announcement is deemed by the Company to constitute inside information as stipulated under the Market Abuse Regulations (EU) No. 596/2014 ('MAR') which has been incorporated into UK law by the European Union (Withdrawal) Act 2018.

For further information please visit <http://www.bluejaymining.com> or contact:

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#### **Map of Outokumpu Tenement Belt**

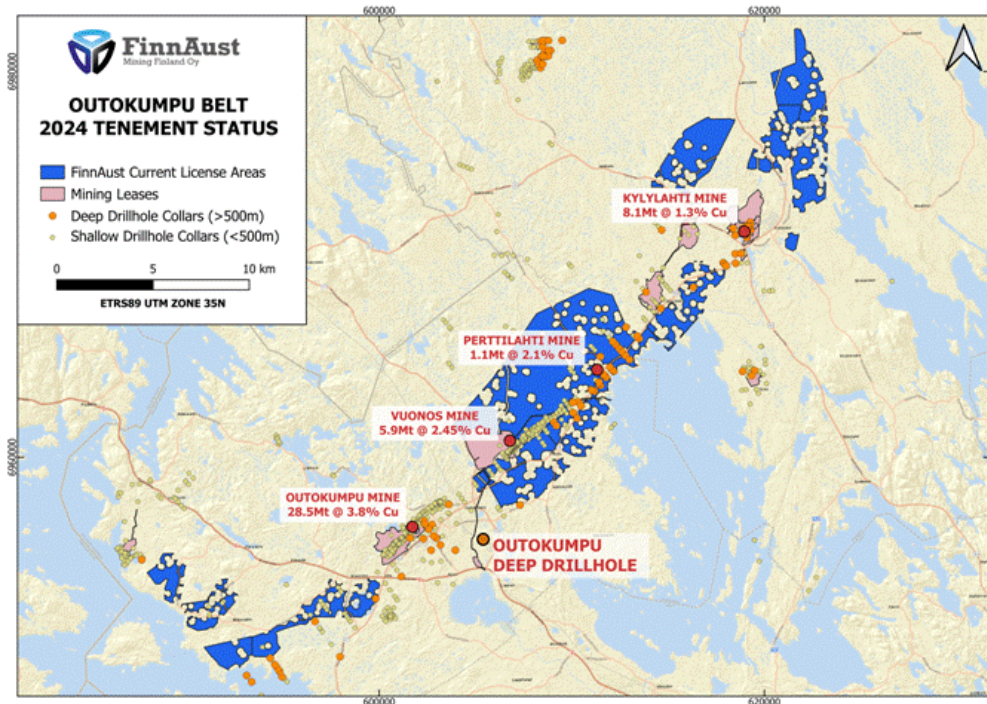


Figure 1.. Outokumpu Belt current tenement status with historic drillhole collar and mine locations

### **Hydrogen and Helium Potential in the Outokumpu Belt**

The Outokumpu belt is renowned for its rich geological deposits, historically yielding approximately 34.4 million tonnes of ore at significant grades of copper, zinc, cobalt, and nickel from the Outokumpu-Keretti and Vuonos mines. The belt is characterized by its unique Outokumpu assemblage, a complex package of hydrothermally altered mantle-derived rocks (ophiolites) often enveloped by graphitic and sulphidic black schists.

Significant findings from the Outokumpu Deep Drillhole highlight the belt's potential for Hydrogen and Helium. Notably, historical measurements indicate up to 46% hydrogen in groundwater samples and an average helium concentration of 1.54% over a 1,500-meter interval, with peak values reaching 5.60% over a 100-meter section. The geological context of the Outokumpu assemblage-comprising hydrothermally altered mantle-derived ultramafic rocks (ophiolites) and enveloped by graphitic and sulphidic black schists-supports the exploration of these gases. With over 2,000 historical drillholes, many extending beyond 1,000 meters, the belt offers substantial opportunities for further exploration.

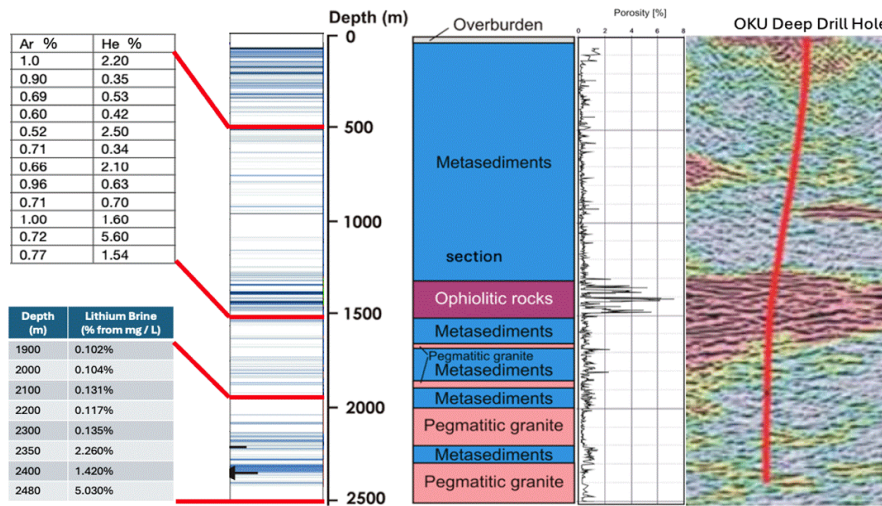


Figure 3. Helium, Argon, Lithium Results with Geophysical interpretation, modified from "Characterisation and Isotopic evolution of saline waters of the Outokumpu Deep Drill Hole, Kietäväinen 2013"

## References

- Riikka Kietäväinen, L. A. 2013. Characterisation and isotopic evolution of saline waters of the Outokumpu Deep Drill Hole, Finland - Implications for water origin and deep terrestrial biosphere. Applied Geochemistry, Volume 32, 37-51.
- Kukkonen, I. T., Rath, V., Kivekäs, L., Šafanda, J. & Čermák, V. 2011. Geothermal studies of the Outokumpu Deep Drill Hole. Geological Survey of Finland, Special Paper 51, 181-198.
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## About Bluejay Mining plc

Bluejay Mining plc, listed on the London AIM market, Frankfurt Stock Exchange, and the U.S. Pink Market, is an exploration and development company focused on high-grade critical metals in Tier 1 jurisdictions. With a diversified portfolio in Greenland and Finland, Bluejay's strategy is centred on advancing key projects while creating value through partnerships and strategic acquisitions.

The Disko-Nuussuaq nickel-copper-cobalt-PGE project in Greenland is a primary focus for Bluejay, developed in partnership with KoBold Metals. Bluejay, through its wholly owned subsidiary Disko Exploration Ltd., has a definitive Joint Venture Agreement with KoBold Metals to guide and fund exploration efforts. The JV has completed intensive analysis and interpretation of the extensive geochemical, geophysical, and geological data collected during the previous exploration campaigns. Leveraging KoBold's proprietary artificial intelligence and machine learning platforms, this comprehensive analysis has resulted in the identification of seven initial priority targets within the project area. These seven priority targets exhibit spatial characteristics indicative of potential deposits on a scale comparable to renowned mining operations such as Norilsk, Voisey's Bay, and Jinchuan. The JV is now planning a focused ground-loop electromagnetic survey to refine and prioritize each locality appropriately.

Bluejay's recent acquisition of White Flame Energy expands its portfolio into the energy sector, adding large-scale licenses for industrial gas, natural gas, and

liquid hydrocarbons in East Greenland. Approved by shareholders in July 2024, this acquisition diversifies the company's assets and aligns with its strategy to contribute to sustainable energy solutions, while also exploring conventional energy resources.

The Dundas Ilmenite Project, Bluejay's most advanced asset in northwest Greenland, is fully permitted and progressing towards near-term production. With a JORC-compliant Mineral Resource of 117 Mt at 6.1% ilmenite and an offshore Exploration Target of up to 530 Mt, Dundas is poised to become a major supplier of high-quality ilmenite. Recent discoveries of hard rock titanium mineralization, with bedrock samples showing nearly double the ilmenite content of previous estimates, further enhance the project's world-class potential. Bluejay owns 100% of the Dundas Ilmenite Project under its subsidiary Dundas Titanium A/S in Greenland.

The Thule Copper Project is a significant component of Bluejay Mining's portfolio in northwest Greenland, focused on exploring and developing high-grade copper deposits within the Thule Basin in northwest Greenland. Leveraging existing infrastructure and exploration credits, the project is strategically positioned in an underexplored region with substantial mineral potential. Bluejay's established basecamp at Moriusaq will support cost-effective exploration, aligning with the Company's broader strategy to secure high-quality copper and industrial gas projects.

In Finland, Bluejay currently holds three large scale multi-metal projects through its wholly owned subsidiary FinnAust Mining Finland Oy. Bluejay's Finland portfolio includes the Outokumpu project, where the discovery of industrial gases like helium and hydrogen adds significant economic potential to the already prospective copper-nickel-cobalt-zinc-gold-silver targets. Bluejay is planning further exploration to fully assess these resources.

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