

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

07 February 2023

**Bluejay Mining plc ('Bluejay' or the 'Company')**

**Positive results of 2022 airborne geophysical survey at Kangerluarsuk Zinc-Lead-Silver Project**

Bluejay Mining plc ('Bluejay' or the 'Company'), the AIM, FSE-listed and OTCQB traded exploration and development company, is pleased to provide an update on the 100% owned Kangerluarsuk zinc-lead-silver project ('Kangerluarsuk' or the 'Project') in Central West Greenland.

The Company received the fully processed data in Q4 2022 for the 587 line-kilometre ('km'), high-sensitivity fixed-wing FALCON® Airborne Gravity Gradiometer ('AGG'), magnetic and LIDAR survey flown by Xcalibur Multiphysics over Kangerluarsuk in September 2022 (see RNS dated [14 September 2022](#)). The resulting data has now been fully integrated with all existing electromagnetic, magnetic, geochemical, biogeochemical and geological data sets. This has allowed the Company to refine and upgrade confidence in its existing suite of drill-ready targets.

**Highlights**

- Processing and interpretation of the data received from the state-of-the-art FALCON® AGG survey flown over Kangerluarsuk has now been completed.
- Bluejay's management believe that these positive findings from the 2022 exploration season have markedly enhanced its understanding of the geological model for the mineral system at Kangerluarsuk and commercially de-risked the opportunity to strongly justify further progression of the Project. The next stages of exploration can, if successfully concluded, drive significant shareholder value through the next phases of discovery.
- The results have allowed the Company to refine existing drill targets at Kangerluarsuk, as well as identify extensions to some of these anomalies. Positive gravity anomalies identified by the survey are coincident with conductive bodies recognised in earlier airborne electromagnetic surveys and are supported by several geochemical proxies.
- Any future programme will test multiple high priority combined geophysical and geochemical anomalies, targeting zinc - lead - silver ± copper (Zn-Pb-Ag ± Cu) deposits.
- Significantly, despite being located only 12km north of the historical Black Angel zinc, lead and silver mine (widely acknowledged as Greenland's most profitable historic mine), these targets within the Project area have never been drill-tested.
- Work by previous operators of Kangerluarsuk identified several zones of outcropping mineralisation with chip sampling results of up to **up to 1 metre @ 41.1% Zn, 0.4 metres @ 45.4 % Zn** and grab samples of up to **9.3% Pb, 1.2% Cu and 596 grammes per tonne ('g/t') Ag**.

**Bo Møller Stensgaard, CEO of Bluejay Mining plc, commented:**

*"The FALCON® airborne gravity data collected last summer has significantly improved confidence in our drill targets at Kangerluarsuk. We now have multiple independent datasets that support the presence of sulphide mineralisation at depth. The Project is yet to be drilled, despite its proximity to a past producing lead-zinc-silver mine and the presence of outcropping high-grade mineralisation within our licence area. We expect to provide an update of future plans for this project, later this month."*

### **Summary Results of the Falcon® AGG survey:**

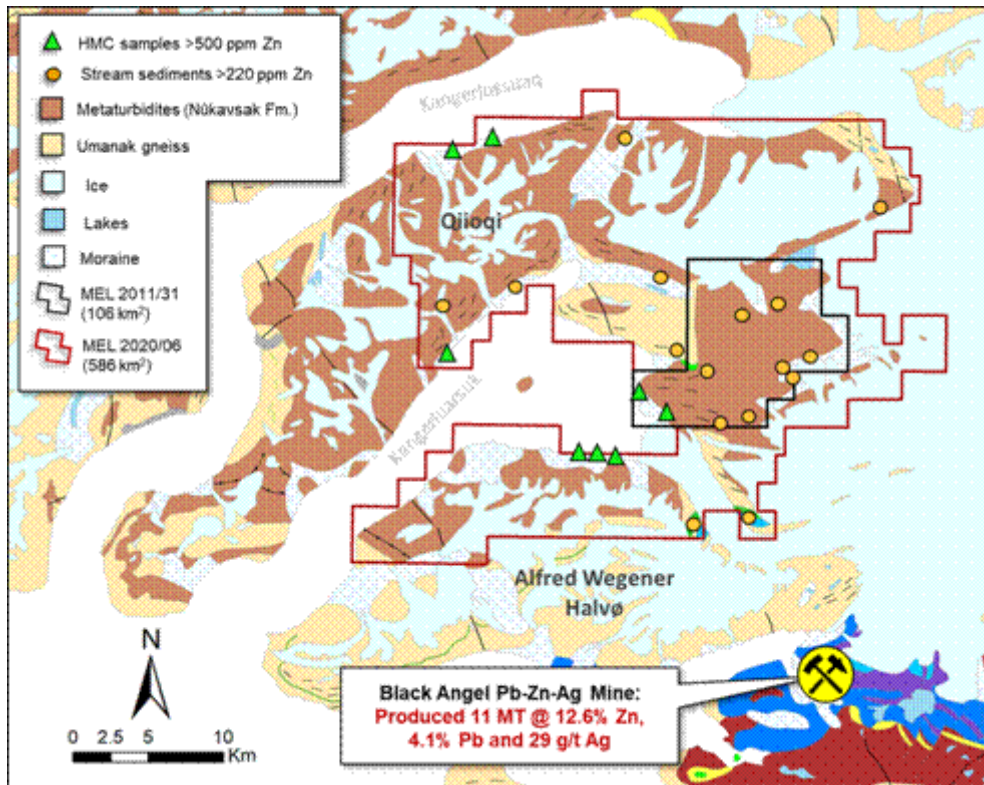
Xcalibur Multiphysics's proprietary Falcon® Airborne Gravity Gradient (AGG) system has been jointly developed by Xcalibur Multiphysics, BHP, and Lockheed Martin over the last 20 years. This has led to the only commercial AGG system that is specifically designed to deal with the rigours of high-resolution data collection in the dynamic airborne environment. The state-of-the-art system uses extremely sensitive accelerometers to produce low-noise, high-resolution gravity data from an airborne platform, providing several key advantages over other standard Full Tensor Gradiometer (FTG) systems.

The resulting gravity data provides an image of the geology based on density variations in the underlying rocks. It therefore provides a useful geophysical tool to explore for dense sulphide mineralisation. The mineralisation at Kangerluarsuk consists almost exclusively of sphalerite (zinc sulphide ore mineral), galena (lead sulphide ore mineral) and pyrrhotite (iron sulphide mineral), providing a sharp density contrast in comparison to the lower-density meta-sedimentary host rocks. This should result in identifiable gravity anomalies, indicating the presence of concealed sulphide bodies - even below thick cover. Kangerluarsuk also benefits from the absence of overburden, which can otherwise impact on modelling of gravity data.

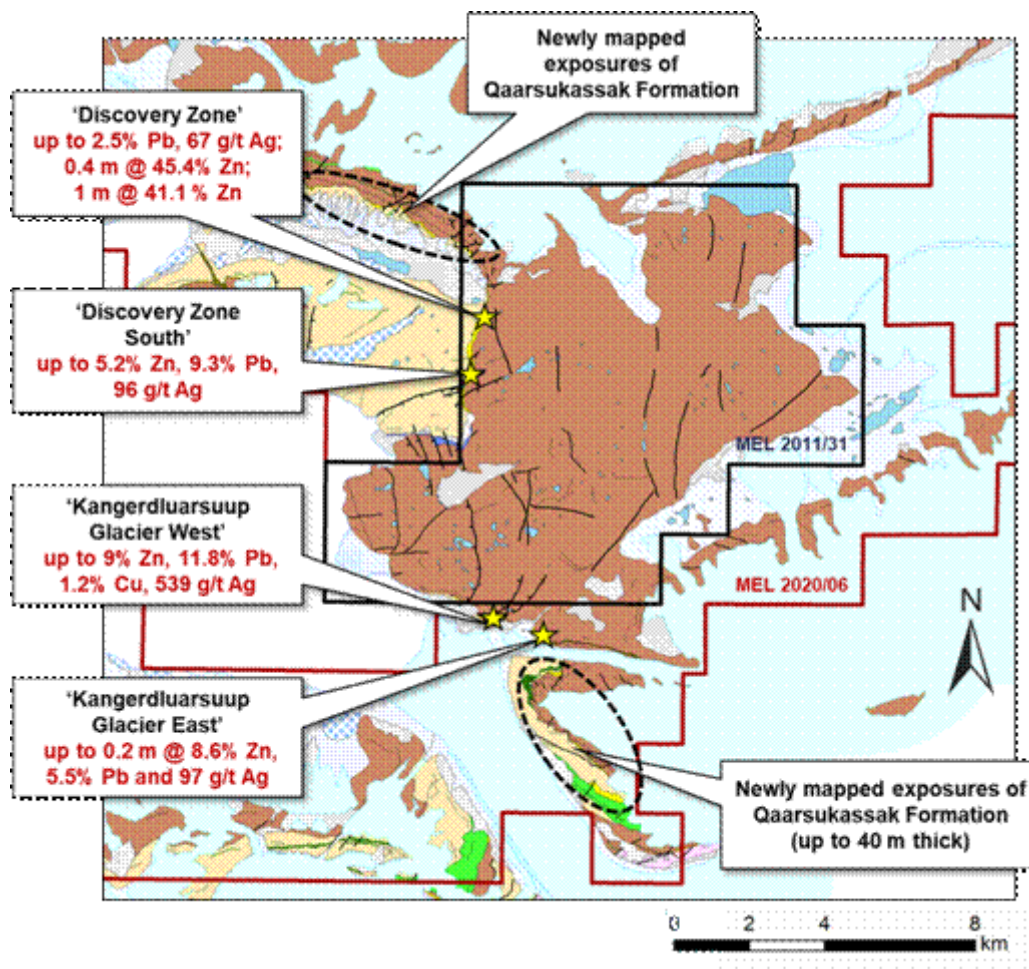
Flight lines were flown at 300 metre spacing for a total of 587 line-km (Figure 3). Detailed modelling of the AGG and magnetic data was completed both in-house and by Astrock Oy, Finland. Several positive gravity anomalies were identified. Significantly many of these are coincident with conductive bodies identified in earlier airborne electromagnetic surveys

(ZTEM and DIGHEM<sup>V</sup>, refer to section below) and supported by independent geochemical proxies (MMI, SGH and Biogeochemical sampling, refer to section below). Gravity profile modelling indicates the presence of dense bodies close to the inferred basement contact, dipping gently to the southeast. These are interpreted to represent downdip extensions of the "Discovery Zone" and "Discovery Zone South" Zn-Pb-Ag mineralisation.

The survey also collected high-precision LIDAR (laser scanner) topographical survey data, producing a detailed digital elevation model, which along with the aeromagnetic data will further assist Bluejay in defining structural controls associated with the distribution of high-grade mineralisation at Kangerluarsuk.



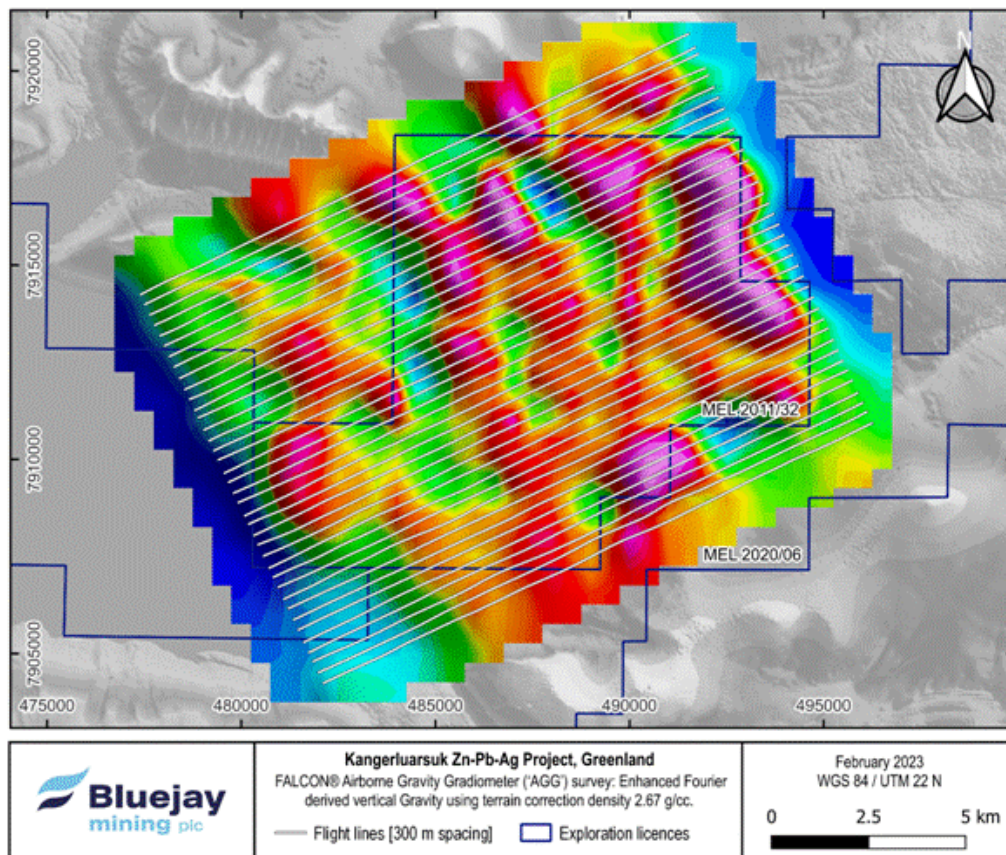
**Figure 1:** Geological map showing Bluejay's Kangerluarsuk Zinc-Lead-Silver Project, comprising of the Mineral Exploration Licences 2011/32 and 2020/06.



**Figure 2:** Geological map showing the positions of recently mapped exposures of Qaarsukassak Formation (host to the known Zn-Pb-Ag mineralisation within Bluejay's licence areas). Results of sampling by RTZ in the early 1990s also shown for



mineralised showings.



**Figure 3:** Results of the fixed-wing FALCON® Airborne Gravity Gradiometer ('AGG') survey over Kangerluarsuk showing the Enhanced Fourier derived vertical gravity using a terrain correction density of 2.67 g/cc ('grams per cubic centimetre') and a high pass filter applied. Also shown are the flight lines of the survey (300 m line spacing) and the licence boundaries of Bluejay's mineral exploration licences, MEL 2011/31 and MEL 2020/06. Greyscale background is the digital terrain model for the Kangerluarsuk area.

### About the Kangerluarsuk zinc-lead-silver Project

The Kangerluarsuk Zn-Pb-Ag Project is located within the Karrat Group, a major Palaeoproterozoic sedimentary basin with abundant Zn-Pb-Ag  $\pm$  Cu showings. The basin formed in an epicratonic rift and sag setting within the larger Rinkian mobile belt, which extends into the Foxe Belt in NE Canada. The Karrat Group hosts the former Black Angel Zn-Pb-Ag mine which was operated by Cominco and later by Boliden from 1973 to 1990 when commercial operations ceased (Figure 1). The mine produced and processed 11 million tonnes of ore at an average grade of 12.6% Zn, 4.1% Pb and 29 g/t Ag. The mine site is situated less than 12 km south of Bluejay's Project area. The Project consists of two mineral exploration licences (MEL 2011/31 and MEL 2020/06) totalling 692 square km (Figure 1). MEL 2011/31 is acknowledged by the Geological Survey of Denmark and Greenland ('GEUS') to host the strongest cluster of stream sediment zinc anomalies in Greenland, with samples of up to 2,200 ppm Zn. The Project area is highly anomalous Zn, Pb, Cu, Ag and elevated pathfinder elements (e.g., Cd, As, Cs) in historic stream sediment and heavy mineral concentrate ('HMC') sampling, indicating the potential for polymetallic mineralisation.

Zinc mineralised float within the Licence area was first reported by Cominco. Later prospecting in 1992 under a Joint Venture between Rio Tinto Zinc ('RTZ') and Platinova revealed several locations with outcropping high-grade mineralisation, with chip sampling profiles up to 1 metre @ 41.1% Zn, 0.4 metres @ 45.4% Zn and grab samples up to 9.3% Pb, 1.2% Cu and 596 g/t Ag at the edges of the Kangerluarsuk

sub-basin (Figure 2). The outcropping mineralisation at the Discovery and Discovery South zones consists of massive coarse-grained sphalerite and galena, whereas the outcropping Kangerluarsuup Glacier mineralisation to the south (Figure 2) consists of finely laminated sphalerite-galena ore, with subordinate chalcopyrite (copper sulphide ore mineral).

A regional mapping and research initiative on the Karrat Group (2015 to 2017), jointly financed by the Geological Survey of Denmark and Greenland and the Greenland Government's Ministry of Mineral Resources and Justice, has significantly enhanced the overall geological understanding of the basin and its architecture, allowing Bluejay to further refine the genetic model for the mineralisation within the Kangerluarsuk sub-basin. The known Zn-Pb-Ag ( $\pm$  Cu) mineralisation is hosted by ferruginous horizons in graphitic schist within siliciclastic and carbonate rocks of the Qaarsukassak Formation. This formation is considered to correlate with the Marmorilik Formation to the south, that hosts the former Black Angel mine. The Archaean basement gneisses in the Kangerluarsuk area were heavily incised during the Palaeoproterozoic creating palaeo-valleys that were in-filled by the Qaarsukassak Formation. Mineralisation at Kangerluarsuk generally occurs proximal to this basement contact. The overlying Nûkavsak Formation, a thick package of turbidite facies metagreywackes, is interpreted to have been thrust over the Qaarsukassak Formation. Significantly the recent mapping by GEUS highlights the presence of widespread, previously unrecognised exposures of Qaarsukassak Formation, up to 40 metres thick, within Bluejay's licence areas which have the potential to host further mineralisation. Tectonic repetition and thickening of the Qaarsukassak Formation through thrusting is also recognised.

Bluejay acquired the Kangerluarsuk Project in January 2017 when it purchased Avannaa Exploration ('Avannaa') and its exploration assets in an all-share transaction with its parent company, Cairn Energy plc. Between 2011 and 2013, Avannaa carried out an aggressive campaign to advance the Project. Detailed geological and structural mapping were completed and a series of very intense geochemical anomalies were discovered within a 15km long NE-SW trending zone based on MMI (Mobile Metal Ion) and SGH (Soil Gas Hydrocarbon) and bulk soil geochemistry surveys. The SGH study defined a signature highly consistent with a deeply buried (>500m) base metal deposit with a rating of 6.0, the highest score possible in the SGH rating system. Biogeochemical and MMI sampling by the European Union funded 'UpDeep' programme that carried out a pilot study at Kangerluarsuk in 2017, identified anomalies which are coincident with the SGH redox zones.

Avannaa also commissioned Geotech Ltd. to fly a 348 line-km helicopter-borne audio frequency magneto-variational (AFMAG) survey using the ZTEM (Z-Axis Tipper electromagnetics) system, which identified several highly conductive bodies close to the modelled basement contact. The ZTEM data supplements an earlier 435 line-km helicopter-borne DIGHEM<sup>V</sup> electromagnetic survey commissioned by Platinova in 1997. Three of the conductive bodies correspond to the strongest surface geochemical anomalies and are considered by the Company to be the highest priority drill targets. Thus, several independent geophysical and geochemical methods have been combined to pinpoint drill-targets that are now ready to be tested. Despite significant and extensive outcropping base metal mineralisation, there has never been any drilling within the Project area.

### **Qualified Person**

The scientific and technical disclosure included in this news release has been reviewed and approved by Mr. Joshua Hughes MEng (Hons), Vice President Exploration, and a full-time employee of Bluejay Mining plc, who is also a Member and Chartered Professional Geologist ("MAusIMM CP(Geo)") of the Australasian Institute of Mining and Metallurgy, a Fellow of the Society of Economic Geologists ("FSEG") and a Fellow of the Geological Society of London ("FGS"). Mr. Hughes has sufficient experience, relevant to the styles of mineralisation and type of deposits under consideration and to the activity that he is undertaking, to qualify as a Qualified Person ("QP") as defined by the AIM rules, and for the purposes of National Instrument 43-101 ("NI-43-101") Standards of Disclosure of Mineral Projects.

### **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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### **About Bluejay Mining Plc**

Bluejay is listed on the London AIM market and Frankfurt Stock Exchange and its shares also trade on the OTCQB Market in the US. With multiple projects in Greenland and Finland, Bluejay has now secured four globally respected entities as partners on three of its projects, giving the Company and its shareholders both portfolio and commodity diversification in high quality jurisdictions.

Bluejay's most advanced project is the Dundas Ilmenite Project in Greenland, which is fully permitted and undergoing further optimisation work. The Company has agreed a Master Distribution Agreement with a major Asian conglomerate for up-to 340k tonnes per annum ('tpa') of its designed 440ktpa annual output. The Company has also mandated a major European bank to head the financing syndicate for Dundas.

Bluejay, through its wholly owned subsidiary Disko Exploration Ltd., has signed a definitive Joint Venture Agreement with KoBold Metals to guide exploration for new deposits rich in the critical materials for electric vehicles (The Disko-Nuussuaq nickel-copper-cobalt-PGE Project). Disko Exploration Ltd holds two additional projects in Greenland - the 692 sq km Kangerluarsuk zinc-lead- silver project, where historical work has recovered grades of up to 45.4% zinc, 9.3% lead and 596 g/t silver and identified multiple large-scale drill ready targets; and the 2,025 sq km Thunderstone project which has the potential to host large-scale base metal and gold deposits.

In Finland, Bluejay currently holds three large scale multi-metal projects through its wholly owned subsidiary FinnAust Mining Finland Oy. The Company has a Joint Venture Agreement with a mining major at its Enonkoski nickel-copper-cobalt Project in East Finland and has signed a conditional agreement for a partial divestment in a fourth Finnish project.

**\*\*ENDS\*\***

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Anonymous (not verified)

Results of 2022 airborne survey at Kangerluarsuk

<http://www.DigitalLook.com>

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Company Announcement - General

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