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Bluejay Mining plc / Ticker: JAY / Market: AIM / Sector: Mining
Dundas Ilmenite Resource Update

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 pleased to provide an update on the Company's 100% owned Dundas Ilmenite Project ('**Dundas**' or the '**Project**') located in North-West Greenland.

Following an in depth assessment of deficiencies in the 2022 work programs at Dundas, alongside consultations with various independent consultants, the Company has determined that there is sufficient evidence to warrant the reinstatement of the 2019 Mineral Resource Estimate (MRE) at the Dundas Ilmenite Project. After joining the Company in late December 2023, significant concerns were raised by the new management team regarding the accuracy and representativeness of the 2023 MRE. This decision to reinstate the 2019 MRE reflects the Company's well-informed position that the downgrade in the 2023 MRE was the result of multiple factors, including the use of unsuitable drilling methods, and questionable decision-making.

Bluejay reaffirms its commitment to transparency and integrity with its shareholders and will continue to prioritize clear communication, accountability and ethical conduct. The Company is also considering its legal options concerning individuals involved in the 2023 resource estimation process, including former members of management.

Background:

JORC resource historic milestones:

Campaign	Drilling Method	Sampled Meters & No. of Holes	Results Available & Months Delay	Programme Result
2019 MRE Work Programs				
2016	Shallow Auger	182 m 190 holes	April 2017 (8 months)	23.6Mt 8.8% Ilmenite in-situ
2017	Sonic & Shallow Auger	678 m 261 holes	April 2018 (8 months)	96.0Mt 6.9% Ilmenite in-situ
2018	Sonic	643 m 201 holes	May 2019 (9 months)	117 Mt 6.1% ilmenite in-situ

2023 MRE Work Programs

2022	Geoprobe	395 m 153 holes	September 2023 (13 months)	*29.7Mt 4.2% Ilmenite in-situ
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**Downgrade from 59.3Mt at 6.8% ilmenite in-situ within Moriusaq West*

Key Concerns and Observations of the 2022 Work Streams

- **Choice of Drill Rig:** In 2022, a Geoprobe rig, which deploys a combination of direct push, diamond drilling, and other methods was selected by the Company's prior management as an alternative method of drilling to the sonic rig:
 - o Diamond drilling is rarely, if ever, deployed during exploration of mineral sand deposits.
 - o At Dundas, a sonic drill was successfully used on prior campaigns to collect high-quality core samples from the subsurface.
 - o Sonic drilling is an industry standard for achieving representative samples in unconsolidated sediment.
- **Variability in Sample Types:** The utilization of multiple drilling approaches (direct push, diamond, auger, etc) led to inconsistencies in sample types, recovery rates, and comparability of results.
- **Challenges with Diamond Drilling:** Diamond drilling with water lubrication in hard ground conditions resulted in poor core recovery and material washing, particularly affecting particle size distribution (PSD), and recovery of sand.
- **Short Drill Runs:** Short drill runs yielded a significant number of very short samples, highlighting drilling difficulties alongside repeated hole withdrawals and abandonments.
- **Geoprobe Limitations:** Geoprobe struggled to penetrate ice-bound sediment, leading to misinterpretation of basement refusal as bedrock, negatively impacting both grade and tonnage estimates.
- **Exclusion of Fluvial Zones:** Fluvial zones were omitted from resource estimation without sufficient justification, potentially overlooking significant resource areas.
- **Rejection of Pre-2022 Exploration Data:** During the Mineral Resource Estimate (MRE) process in May 2023, all exploration data predating 2022 was dismissed without a valid rationale.
- **Neglect of Oversight:** The 2022 Qualified Person refrained from visiting site and failed to engage with pre-2022 consultants to rectify disparities in grade and tonnage estimates.

Eric Sondergaard, Managing Director, commented: "The resource downgrade of the Dundas Ilmenite Project on September 21, 2023, came as a shock to all shareholders, including myself. The release lacked critical and necessary disclosures, compelling the new board to initiate an internal review. This unpaid work was undertaken by independent, globally recognised resource and feasibility experts, and raised serious concerns regarding the execution of the 2022 drilling campaign, decision making processes, and resultant resource amendments. The assertions made by former management that 1.5 months of inefficient and ineffective exploration in 2022 is more representative than the cumulative three-year work stream preceding it is fraught with problems. As such the Company is reviewing suitable courses of action to retrieve the effectively wasted shareholder capital from those responsible.

On a brighter note, we are very pleased that consensus exists to re-instate the 2019 Mineral Resource Estimate. The Company is taking steps to finalize this process, which has begun with a low-cost review of limited sample material available from the 2022 campaign. As Dundas is fully permitted, with a valid mining license, we will continue to review critical aspects of the project, as well as potential value adding acquisitions within the country."

Qualified Person

The scientific and technical disclosure included in this announcement has been reviewed and approved by Roderick McIlree, a director of Bluejay Mining plc, who is also a Fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM). Mr. McIlree 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 The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. McIlree has reviewed this press release and consents to the inclusion in the press release of the matters based on his information in the form and context in which this appears.

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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2022 MRE Drilling Campaign at Dundas, from 2022 Internal Post-Season Debrief

Bluejay Mining conducted a drill programme at its Dundas Ilmenite project in 2022, intending to operate on a 7-day per week and 24hr basis with one day shift and one night shift. The planned programme aimed to drill a total of 1323 meters. Due to slow progress, drilling issues, broken equipment, the programme reverted to a single dayshift for the remaining 50% of the programme. The actual programme recovered 395m of sampled material. In a highly irregular course of events, multiple drilling methods were used or attempted including Hollow Stem Auger, Direct Push, Diamond Coring, Split Spoon, Continuous Sampling, HWT, Downhole Hammering, and ODEX Hammering. The primary drilling methods were Hollow Stem Auger, Diamond Coring and Direct Push, within the same borehole.

A detailed internal presentation documenting the issues mentioned was distributed to a board member in September 2022. This presentation was never distributed to the broader Board of Directors.

Hollow Stem Auger

A hollow stem auger is a drilling tool used in geotechnical and environmental drilling. It consists of a hollow steel tube with a cutting bit on the end. The larger footprint of the augers can disturb the surrounding environment, leading to complications such as flowing sands, sand lock (the entrapment of sand in the auger), and ice rinds (frozen layers) in ice-bound sediment. Hollow stem auger drilling requires specialized equipment with specific torque and weight requirements. If the equipment lacks sufficient power or stability, it cannot effectively penetrate tough formations.



Figure 1: New auger bit (left), used auger bit (centre), damaged auger flyte (right)

In rocky or ice conditions, augers may struggle to retrieve intact samples due to the resistance of the material. This can compromise the representativeness of the samples collected and affect subsequent analyses. In the 2022 programme, the hollow stem auger was often used as "casing", to drill and recover the first meter.

Direct Push

Direct push sampling method is a technique used to collect soil directly from the subsurface. Unlike traditional drilling methods that involve rotary drilling or augering, direct push does not involve the removal of soil or rock during drilling. Instead, specialized tools are pushed into the ground to collect samples. During the 2022 field programme, borehole stability was a continual problem, particularly in unstable formations, where the boreholes could collapse or freeze around the sampling tool, significantly affecting sample quality and integrity. Additionally, the method's shallow depth penetration restricted its exploration potential, especially in areas requiring deeper sampling. Concerns about sample integrity arose due to the method's inability to remove soil or rock during drilling, potentially distorting collected samples. First meter recovery averaged only 83% during the 2022 drilling programme, which is typically the highest-grade portion of the orebody.



Figure 2: Damaged direct push bit (left), sand liquefaction and escape (right)

Diamond Coring

Diamond coring is a drilling technique that uses a diamond-tipped bit to extract cylindrical samples of consolidated rock from the subsurface, with significant amounts of water being used to cool the bit.





Figure 3: Diamond coring samples showing preferential washing of sand, reduced sample quality.

The use of water during diamond coring, intended to aid in lubrication and debris removal, had adverse impacts on the representativeness of the collected samples, particularly in sand-rich intervals. This resulted in two obvious issues: the reduction of sand core (sample) diameter due to prolonged drilling time with water, and the outright washing away of sand, leaving behind only coarser-grained material, especially at the beginning of drilling runs. Additionally, the observed ejection of particles smaller than 5 mm coming out of the hole, along with water returns, has major implications on the particle size distribution of retrieved samples.

An analysis of rejected sand, often present in significant quantities, was found to carry significant grade. Furthermore, the combined use of diamond coring and the hollow stem auger was often reported to have liquified the ground contributing to an increase in the diameter of the borehole, further complicating sampling operations. Collectively, these factors highlight the obvious lack of suitability of the equipment selected to undertake the 2022 drilling campaign. It is not obvious in any capacity why these samples were regarded as being representative of the subsurface, and the Dundas orebody.



Figure 4: Sand reject material being ejected from hole (left), collected/sampled sand reject material (right)

Depth	Sample Type	From Depth (m)	To Depth (m)	Anal. Weight (kg)	Iron +Copper%	Iron +Zinc%	Iron- Copper%	Iron-Zinc/ Copper%	Percent Mineral In- situ	WGSZ In situ	Domestic In situ		
22105	Direct Feed	0.00	1.00	4.75	38.8	18.8	2.9	57.1	30.7%	3.506	7.357		
		1.00	2.10	0.85	47.2	14.5	7.7	30.7	12.5%	1.628	3.417		
		2.10	4.00	No Sample									
		4.00	4.00	5.28	43.5	18.9	8.2	37.7	18.7%	2.944	6.178		
		4.00	6.40	No Sample									
		6.40	6.00	3.38	53.8	9.1	5.5	32.3	15.1%	1.598	3.354		
		6.00	7.50	4.58	36.8	11.1	4.2	45.0	25.6%	2.801	5.878		
		7.50	9.00	No Sample									
		9.00	10.00	5.75	58.7	8.2	7.5	33.6	19.1%	3.044	6.389		
		10.00	11.30	8.15	52.4	9.8	9.8	34.8	12.4%	1.307	2.743		
		10.00	11.30	8.15	32.9	5.8	12.1	49.5	19.5%	1.826	3.832		
		11.30	11.50	No Sample									
		11.50	12.50	5.75	38.3	6.8	6.7	48.2	25.9%	2.075	4.354		
		12.50	13.50	5.88	55.8	8.8	5.8	31.3	13.7%	1.470	3.085		
		13.50	14.50	4.88	43.8	6.5	8.8	42.5	19.7%	1.882	3.948		
14.50	15.50	No Sample (Bedrock Recorded at 14.30m)											
22105 Reject Band	Rejected Band	0.00	10.00	18.55	2.18	3.45	4.21	90.15	44.3%	6.708	14.073		
		0.00	10.00	11.18	3.81	2.58	4.85	89.20	43.9%	7.281	15.280		

Table 1: Example comparing Geoprobe drillhole analytical results to reject sand collected from the same drilling location

About Bluejay Mining plc

Bluejay is listed on the London AIM market and Frankfurt Stock Exchange and its shares also trade on the Pink Market in the US. With multiple projects in Greenland and Finland, Bluejay offers both portfolio and commodity diversification focused on base and precious metals in Tier 1 jurisdictions.

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 required for the green energy transition and electric vehicles (the Disko-Nuussuaq nickel-copper-cobalt-PGE Project). This project is Bluejay's primary focus.

Bluejay's most advanced project is the Dundas Ilmenite Project in Greenland, which is fully permitted and being developed towards production in the near term, with preparatory activities scheduled to commence in 2022. Dundas has a Mineral Resource reported in accordance with the JORC Code of 117Mt at 6.1% ilmenite and a maiden offshore Exploration Target of between 300Mt and 530Mt of ilmenite at an average expected grade range of 0.4 - 4.8% ilmenite in-situ. The Company has agreed a Master Distribution Agreement with a major Asian conglomerate for up-to 340ktpa of its anticipated 440ktpa annual output. The Company has signed on a major European bank to head the financing syndicate for Dundas. The Company's strategy is focused on securing financing ahead of commencing commercial production at Dundas in order to create a company capable of self-funding exploration on its current and future projects.

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 the 920 sq km Thunderstone project which has the potential to host large-scale base metal and gold deposits. Bluejay also owns 100% of the fully permitted Dundas Ilmenite Project under its subsidiary Dundas Titanium A/S in northwest Greenland.

In Finland, Bluejay currently holds three large scale multi-metal projects through its wholly owned subsidiary FinnAust Mining Finland Oy. The Company has identified multiple drill ready targets at the Enonkoski nickel-copper-cobalt project in East Finland. Bluejay's Hammaslahti copper-zinc-gold-silver project hosts high-grade VMS mineralisation and extensions of historical ore lodes have been proven. The drill ready Outokumpu copper-nickel-cobalt-zinc-gold-silver project is located in a prolific geological belt that hosts several high-grade former mines. In August 2023, Bluejay successfully divested its Black Schist Projects in Finland to Metals One plc in a transaction worth £4.125 million (Bluejay currently owns c. 29% of the issued ordinary share capital of AIM listed Metals One plc).

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Anonymous (not verified)

Dundas Ilmenite Resource Update

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