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

#### **Thunderstone Project**

## Bluejay Expands Greenlandic Presence with Two New Exploration Licences in South Greenland

Bluejay Mining plc, a Greenland focused exploration and development company, is delighted to announce that it has been awarded two new Mineral Exploration Licences ('the Licences') in South Greenland by the Mineral Licence and Safety Authority, Greenland ('MLSA'). The Licences cover a total of 2,025 km<sup>2</sup> near the southern tip of Greenland that is highly prospective for several commodities, including gold, base metals and uranium. The Licences, to be known as the Thunderstone Project ('Thunderstone' or the 'Project'), complement the Company's existing resource portfolio and further strengthens Bluejay's leading position in Greenland.

# Highlights

- Two new Mineral Exploration Licences applied for in 2019 (MEL 2020/03 and 2020/22) totalling 2,025 km<sup>2</sup> have now been awarded in South Greenland
- The Licences were identified as prospective following the re-evaluation of geological models, compilation of all available geological, geochemical and geophysical information and anomalies defined from a newly acquired geochemical exploration dataset
- Thunderstone is highly prospective for base-metals, especially zinc, with additional significant potential for large-scale gold and uranium occurrences
- Historical stream sediment and heavy mineral concentrate sampling has identified the Project as one of the most anomalous areas in the whole of Greenland for zinc
- The Licences will hold no financial commitments for the Company in 2020 the Government of Greenland has recently approved the adjustment of mineral exploration obligations for 2020 for all exclusive exploration licences (including special exploration licences) to zero, regardless of licence age, in response to the COVID-19 pandemic

**Bluejay CEO Roderick McIllree said:** *"We are delighted to have been granted these two highly prospective licence areas, further building on our highly strategic portfolio and consolidating our leading position in Greenland's emerging mineral sector. Historical work at Thunderstone by the Geological Survey of Denmark and Greenland underpins its potential to host several commodities, including zinc, gold and uranium; with this in mind, it is a fantastic addition to our already exciting project portfolio in our country of expertise and with minimal initial holding costs.* 

"Bluejay is already very familiar with this region and our technical team has several decades of combined expertise in the geology of South Greenland. This is supported by our recent re-analysis of all available historic stream sediment samples by modern analytical techniques. As a consequence, we are excited by the potential for significant new discoveries in this mineral region of Greenland, which will be supported by the construction of a new international airport in South Greenland currently underway. Following the submission of our application for Thunderstone there has been an explosion in licence applications in South Greenland, with a further 6,240 km<sup>2</sup> now under application by other exploration companies (see MLSA website: https://portal.govmin.gl/map), indicating that it is not only Bluejay that consider this region to be highly prospective. Of course, our primary near-term focus

remains on advancing our Dundas Ilmenite Project, finding the right partner for Disko-Nuussuaq and recommencing our field campaigns as soon as is practicable, for the benefit of our shareholders."

#### THUNDERSTONE

#### Introduction

Totalling 2,025 km<sup>2</sup>, the regional exploration project Thunderstone comprises two licence areas located on the southern tip of Greenland, at similar latitudes to Oslo and Stockholm. The adjacent area just northwest of the Project has been a focus for mineral exploration activities for several decades. However, the Thunderstone area itself has undergone only minimal mineral exploration. Until now there have been no exploration licences held historically for the vast majority of the licence areas. This is despite the fact that geochemical data acquired during the SYDURAN (South Greenland Uranium Exploration) and SYDEX (South Greenland Exploration) projects by the former Geological Survey of Greenland (now Geological Survey of Denmark and Greenland, 'GEUS') points to Thunderstone being highly anomalous in zinc and uranium.

## Lodging the Thunderstone Exploration Licences

Bluejay lodged a licence application with the MLSA for Thunderstone in June 2019. The original application totalled 3,083 km<sup>2</sup>. In September 2019 this application was later divided by Bluejay down latitude 44°W into two separate licence applications. As a result, the eastern licence (Fig. 2) now fulfils the requirements for 'Special Exploration Licence Terms for large areas in East Greenland' that includes reduced exploration obligations.

In December 2019, Bluejay received the analytical data from the re-assaying of historical stream sediments. This data along with ongoing desktop target generation studies was used to further constrain the Company's areas of interest for base metals, gold and uranium. As a result, in February 2020, Bluejay requested a reduction to the licence applications from a total area of 3,083 km<sup>2</sup> to 2,025 km<sup>2</sup>. The Licences (MEL 2020/03 and 2020/22) have now been awarded by the MLSA.

## **Re-assaying of historical stream sediments**

In collaboration with GEUS, Bluejay recently commissioned the re-analysis of all available historical stream sediment samples from the GEUS archives, for the area south of 61°N, which incorporates the Thunderstone licences and surrounding areas (Fig. 3). Most of these stream sediment samples were obtained during a regional sampling programme carried out by the Geological Survey in 1979. A total of 764 historic samples have been re-analysed by ALS Loughrea, Ireland. For several elements, the detection limits of the historic analyses were too high for the concentrations that can be expected in stream sediments, resulting in all samples falling below the detection limit. However, through modern analytical techniques, the Company has been able to define geochemical anomalies for these elements as well as a broader range of pathfinder elements that may provide vectors to mineralisation. The resulting data is now being compiled and will be used for target generation to identify high-priority areas that warrant follow-up fieldwork.

Significantly, Thunderstone is recognised as one of the most anomalous areas in the whole of Greenland for zinc in both country-wide stream sediment and heavy mineral concentrate (HMC) sampling (shown in Fig. 1A). Geochemical zinc-lead-copper anomalies may indicate the presence of undiscovered clastic-dominated sedimentary-hosted zinc-lead-silver deposits, further strengthening

the Company's exposure to the zinc sector alongside the Kangerluarsuk zinc-lead-silver project in West Greenland where the Company recently substantially expanded its licence holdings (refer to RNS dated: 27 January 2020).

# Geology

The geology of South Greenland is dominated by the Paleoproterozoic Ketilidian Orogenic Belt (1.9 – 1.75 billion years, 'Ga'), which is interpreted to have formed as a result of northward oblique convergence at a Cordilleran-type margin. It shares geological similarities to other Paleoproterozoic orogenic belts in Greenland, most notably the Rinkian-Nagssugtoqidian Belt that hosts the Company's Kangerluarsuk zinc-lead-silver project as well as the former Black Angel zinc-lead-silver mine, in Central West Greenland.

The Ketilidian Belt was accreted along the southern margin of the Archaean North Atlantic Craton. This craton-margin location marks a highly favourable geological setting for a range of mineral deposit types and at ca. 1.8 Ga the area is contemporaneous with a major metallogenic epoch globally. Recent studies utilising palaeogeographical reconstructions and geochronology have highlighted the strong correlations between the Ketilidian and comparable belts in Canada and Scandinavia, which host former and producing mines. The Ketilidian can be divided into three domains, namely the Border, Central and Southern Zones (Fig 1B) with the Central Zone considered to be the root of a large volcanic-arc system and the Southern Domain the fore-arc. The Southern Zone comprises of supracrustal rocks dominated by paragneises and schists of metasedimentary origin and subordinate amphibolites of mafic metavolcanic-volcanoclastic origin, which have been intruded by the later Ilua plutonic suite (1.75 - 1.73 Ga). This includes voluminous norites and rapakivi granites (Fig. 2). The Southern Zone can be further subdivided into the Psammite and Pelite Zones based on the dominant lithology, with Thunderstone centred on the Pelite and southernmost Psammite Zones (Fig. 1B, 2).

The Thunderstone Project is considered prospective for several commodities and deposit types. The clastic metasediments of the pelite zone are interpreted to have formed in a forearc basin setting, which provides favourable conditions for the formation of clastic-dominated sedimentary-hosted zinc (± lead-copper-silver) deposits. South Greenland is a recognised geochemical and metallogenic gold and uranium province. The NE-SW trending Nanortalik Gold Belt straddles the northern border of the Southern Zone and hosts the former Nalunaq gold mine (>350,000 oz produced at an average grade of ca. 15 g/t gold), which is located only 10km from Thunderstone's north-western licence boundary (Fig. 2). The most significant known uranium occurrence in South Greenland (excluding mineralisation associated with the Mesoproterozoic Gardar Igneous Province, e.g. Kvanefjeld) is the Illorsuit uranium prospect which is situated within Bluejay's Thunderstone Licences (Fig. 2). Illorsuit was discovered as a result of an airborne radiometric survey carried out as part of the government funded SYDURAN programme; here more than 35 uranium occurrences with grades up to 7% U<sub>3</sub>O<sub>8</sub> are associated with supracrustal rocks enclosed by granites of the Ilua plutonic suite. Since its discovery, the Ilorsuit prospect has received no commercial exploration and remains un-drill tested. Based upon existing data from drainage geochemistry and airborne radiometric surveys, South Greenland is acknowledged by GEUS as the most prospective region in the whole of Greenland for discovering new high-grade uranium deposits. Thunderstone contains several yet unexplained clusters of anomalous uranium in HMC and stream sediment samples.



**Figure 1. (A)** Total distribution of stream sediment localities in Greenland collected by the Geological Survey of Denmark and Greenland (and former Geological Survey of Greenland). Stream sediment localities with zinc values higher than 200 ppm highlight the zinc potential of Bluejay's Thunderstone and Kangerluarsuk project areas; **(B)** Geological map of South Greenland showing the zones of the Paleoproterozoic Ketilidian orogenic belt described in this announcement and the position of the new Thunderstone mineral exploration licences.



**Figure 2.** Geological map showing the principle lithologies of the Thunderstone Project. The area totalling 2,025 km<sup>2</sup>, is divided down latitude 44°W into two mineral exploration licences, namely MEL 2020/03 (1,014 km<sup>2</sup>) and MEL 2020/22 (1,011 km<sup>2</sup>). The eastern licence, MEL 2020/22 is subject to 'Special Exploration Licence Terms for large areas in East Greenland', which includes reduced exploration commitments. Proximity of the Thunderstone Project area to several towns and settlements, as well as two former mines (gold, graphite) and a known uranium occurrence are shown.



**Figure 3.** Geological map of the Thunderstone area showing the location of historic stream sediments (originally collected in 1979 as part of the SYURAN Project by the Geological Survey of Greenland) which have been recently re-assayed by Bluejay Mining Plc.

# Market Abuse Regulation (MAR) Disclosure

Certain information contained in this announcement would have been deemed inside information for the purposes of Article 7 of Regulation (EU) No 596/2014 until the release of this announcement.

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## Notes

Bluejay is dual listed on the London AIM market and Frankfurt Stock Exchange with projects in Greenland and Finland. Its most advanced project is the Dundas Ilmenite Project in Greenland, which is being developed towards production in the near term. The Dundas Ilmenite Project has been proven to be the highest-grade mineral sand ilmenite project globally, with a JORC Compliant Resource of 117 million tonnes 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's strategy is focused on securing an offtake partner and commencing commercial production at Dundas in the near term in order to create a company capable of self-funding exploration on current projects and future acquisitions.

Bluejay holds three additional projects in Greenland - the 2,897sq km Disko-Nuussuaq ('Disko') Magmatic Massive Sulphide nickel-copper-cobalt-platinum group element-gold project ('Ni-Cu-Co-PGE-Au'), which has shown its potential to host mineralisation similar to the world's largest nickel-copper mining district at Noril'sk-Talnakh, northern Russia; the 692sq km Kangerluarsuk zinc-lead-silver project ('Kangerluarsuk'), where historical work has recovered grades of 41% zinc, 9.3% lead and 596 g/t silver and identified four large-scale drill ready targets; and the 2,025 sq km Thunderstone project, which has the potential to host large-scale base metal, gold and uranium deposits.

The Company also has a 100% interest in a portfolio of copper, zinc and nickel projects in Finland. This multi-commodity portfolio has been restructured to be cost-sustainable whilst determining the best plan for future development.