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

# Thunderstone 2020 Gold, PGE, Base Metal Field Exploration Programme and

### Commissioning of a Remote Sensing Study

Bluejay Mining plc, an AIM and FSE listed, and Greenland focused exploration and development company, is delighted to announce that it has finalised a low-cost Fieldwork Programme ('Field Programme' or the 'Programme') for its 100% owned Thunderstone Project ('Thunderstone' or the 'Project') in South Greenland following the hiatus of all field activities and travel restrictions which included the postponement of the extensive fieldwork planned at Disko-Nuussuaq and Kangerluarsuk in 2020 due to the COVID-19 pandemic.

To view the announcement with the illustrative maps and diagrams, please use the following link:

http://www.rns-pdf.londonstockexchange.com/rns/5518V\_1-2020-8-7.pdf

## Highlights

- Bluejay submitted a Field Programme application for Thunderstone to the Mineral Licence and Safety Authority, Greenland ('MLSA') for approval, with mobilisation of the field crew scheduled for late-August 2020.
- The Programme is focussed on following up on several highpriority gold, platinum group elements ('PGE') and base metal geochemical anomalies identified as part of Bluejay's recent re-analysis of historical stream sediments.
- The application submitted to the Greenlandic Authorities is for a cost-effective boat-based Field Programme at Thunderstone, with ad-hoc helicopter support available as required.
- The Company has also commissioned Dr Philippa Mason, of HME Partnership, to carry out a project-wide remote sensing study for Thunderstone utilising Aster, Sentinel-2, Landsat-8 and Arctic DEM satellite data. Preliminary target selection and ranking is due to be delivered prior to the commencement of

the 2020 Field Programme.

- Bluejay has applied for an extension of both Thunderstone licences as a result of the geochemical anomalies identified from the new stream sediment data. These include a cluster of gold anomalies close to historical reports of gold-bearing quartz veins, as well as PGE anomalies, some of which are coincident with anomalous copper, nickel, cobalt and chromium, supporting the presence of mineralised maficultramafic intrusions.
- Bluejay will be resuming exploration activities with strict COVID-19 protocols in place.

**Commenting on the re-starting of exploration activities, Bluejay CEO Roderick McIllree said:** "Our new Thunderstone licences represent a true greenfield region of Greenland that has received almost no commercial exploration previously. Our 2020 Field Programme will follow up on historical indications of gold, PGE and base metal mineralisation, which are supported by our own newly acquired geochemical and remote sensing datasets. The diverse geology in these regional licences provide the scale and potential for a wide range of metals and deposit types.

"The pandemic has resulted in the postponement of our planned exploration and maiden drilling programmes at Kangerluarsuk and Disko-Nuussuaq. These advanced projects required significant infrastructure and an international effort to mobilise the necessary equipment and facilities to our remote field sites in time for the field season. Earlier restrictions to global travel meant this was not possible without significant uncertainty and associated financial risk. I am therefore delighted with the speed and enthusiasm with which our team has planned and organised this low cost Field Programme due to begin at Thunderstone later this month. This is the first step in getting going again after the global lockdown and strict adherence to COVID-19 risk mitigations policies will be enforced throughout the field programme to ensure that our activities do not pose a threat to any of our team or the remote communities that neighbour our licence areas."

### The Field Programme at Thunderstone

The Programme will target gold, PGEand base metal anomalies identified from the re-assaying of regional stream sediments, as well as historic heavy mineral concentrate ('HMC') sampling. Fieldwork will comprise of rock, stream sediment and scree sediment sampling for geochemical analysis and ground truthing of targets derived from the remote sensing study.

Bluejay's field crew will be permanently based on-board a boat, thereby reducing interaction with local communities to further minimise the risk of COVID-19 infection. The high-speed boat will provide a mobile and cost-effective platform from which the field crew can cover much of Bluejay's 2,025 sq km licence area, which is crosscut by a network of deep-water fjords. Under a contract with Air Greenland the fieldwork will be assisted by ad-hoc helicopter support, as required.

The Programme will be led by Bluejay's Greenland Exploration Manager, Joshua Hughes, alongside consultant geologist, Dr Denis Schlatter. Dr Schlatter, certified EurGeol geologist, is CEO of Helvetica Exploration Services GmbH and a Qualified Person under NI-43-101/JORC standards. Denis has 15 field seasons of mineral exploration experience in Greenland. He is a recognised expert on orogenic gold and base metal deposits and has published numerous studies in international scientific journals on orogenic gold systems in the Paleoproterozic of South Greenland and Archean of West Greenland. He was previously employed by Nunaoil A/S during the period they carried out the regional gold exploration programmes discussed within this announcement and later as a Project Research Scientist for GEUS, during which time he managed three field expeditions targeting orogenic gold in South-West Greenland. More recently Denis has provided consultancy for several exploration companies exploring for gold and base metals in Greenland.

Commenting on the mineral potential of the Thunderstone Project and the planned field programme, Consultant Geologist, Dr Denis Schlatter said: "The Ketilidian Orogenic Belt shows many geological similarities that support a correlation with both the Skellefte Mining District and the so-called 'Gold Line' in northern Sweden, where a large number of major deposits, of similar geological ages to mineralisation in South Greenland, have been discovered over the last century. Our geological understanding of the mineral systems within the Ketilidian is evolving and I am delighted to be participating in Bluejay's Field Programme this summer, where we will be testing several exploration models for gold and base metals at Thunderstone."

## Commissioning of Remote Sensing Study

The Company has commissioned consultant geologist, Dr Philippa J. Mason (HME Partnership, UK) to carry out a comprehensive remote sensing study covering the Thunderstone Project and adjacent areas utilising Aster, Sentinel-2, Landsat-8 and Arctic DEM satellite data. Dr Mason is a recognised expert in the processing and interpretation of satellite remote sensing data for mineral exploration. She has previously

carried out remoting sensing studies in Greenland for 21<sup>st</sup> North and Greenland's former state-sponsored exploration company, NunaMinerals A/S. In addition to her commercial work, Dr Mason is a lecturer and researcher in remote sensing and Geographical Information Systems ('GIS') at Imperial College London, UK.

The remotely sensed imagery will be prepared and processed to mask the effects of ice/snow and water bodies, as well as correcting for atmospheric influences and allowing for the severe topographic shading effects that are encountered at high latitudes. Multispectral analysis of the processed imagery will assist the Company with mapping lithologies, structures and lineaments throughout the Thunderstone licences. One of the primary objectives is to delineate the distribution of various mineral groups that may be associated with alteration related to mineralising fluids in ore systems, thereby facilitating a rapid assessment of the large Project area. Preliminary target selection and ranking will be delivered to Bluejay prior to the commencement of the Field Programme.

The Arctic DEM data will be used to model stream catchments throughout the Project area. Due to the alpine-like topography that characterises parts of southern Greenland, the catchment areas throughout the licences are restricted, implying that stream sediment anomalies identified by Bluejay are likely locally derived. However, given the coarse sample density of the current stream sediment sampling in South Greenland (*ca.* 1 sample per 6.25 sq km), many catchments remain unsampled. The terrain modelling will be used to identify these unsampled catchments prior to the Field Programme to facilitate in-fill sampling where required.

**Commenting on the remote sensing study for the Thunderstone Project, Dr Phillippa Mason said:** "Passive remote sensing in polar regions is always challenging because of the low solar elevation and high relief terrain but for such vast and underexplored regions, such as South Greenland, it is a fast and cost-efficient way to effectively map out potential surface targets for focused field sampling. Not only is the Ketilidian Orogen a relatively newly identified gold province but it also has known potential to host a wide range of base and critical metal deposits. Thus, we hope these data will prove a fruitful guide for Bluejay's future field campaigns at Thunderstone."

#### The Thunderstone Project - Background Information

Bluejay recently announced that the Company had been awarded two new Mineral Exploration Licences ('the Licences') located on the southern tip of Greenland totalling 2,025 sq km (refer to Figure 1 and Company announcement dated: 15th April 2020). The Licences, collectively known as the Thunderstone Project are centred around the Pelite Zone and southernmost Psammite Zone of the Paleoproterozoic Ketilidian Orogenic Belt and are considered highly prospective for several commodities including gold, zinc-lead-copper-silver and nickel-copper-PGE.

Since acquiring these Licences, the Company has undertaken a projectwide target generation study integrating all available geological, geochemical and geophysical data. In addition, Bluejay commissioned the re-analysis of all available historical stream sediment samples from

the GEUS archives for the area south of 61° North, incorporating Thunderstone and surrounding areas (as previously announced on 15th April 2020). A total of 764 historic samples were analysed by ALS Loughrea, Ireland. The majority of the stream sediment samples were originally collected during a regional sampling programme carried out by the former Geological Survey of Greenland ('GGU', now the Geological Survey of Denmark and Greenland, 'GEUS') and Risø Natural Laboratory in 1979 as part of their SYDURAN (South Greenland Uranium Exploration) programme.

### Gold potential within Thunderstone:

South Greenland is a recognised geochemical and metallogenic gold province. Bluejay's re-assaying programme of the GGU stream sediments built upon earlier re-analysis by Platinova Resources in 1987 and Nunaoil A/S in 1989 who analysed for gold and associated pathfinder elements. Based upon gold anomalies identified from the GGU stream sediments, Nunaoil A/S identified 20 sub-areas in South Greenland that were anomalous in gold and in 1990 carried out an extensive regional HMC sampling programme over these areas, consisting of 1800 samples. Two of the sub-areas sampled by Nunaoil A/S, namely Eggers Ø and Tasersuag, are now located within Bluejay's Thunderstone licences (refer to Figure 2). Tasersuaq returned 12 HMC samples over 100 ppb gold, with a maximum of 967 ppb gold. Significantly these gold concentrations are comparable to those that have led to the discovery of numerous gold deposits to the northwest of the Thunderstone Project. However, despite Nunaoil A/S identifying numerous gold anomalies in HMC at Tasersuag and elevated gold values at Eggers Ø, no systematic follow up sampling was ever carried out over these areas. This will be a priority for Bluejay during the Field Programme.

The highly gold anomalous Tasersuag area is located only 15-30 km southeast of the former Nalunag gold mine (>350,000 oz gold produced at an average grade of ca. 15 g/t gold; now held by AEX Gold Inc). Tasersuaq is considered by the Company to be the southern extension of the NE-SW trending Nanortalik Gold Belt that hosts Nalunaq gold mine as well as several other mafic volcanic and granitoid hosted gold prospects. Bluejay's new gold and silver stream sediment data further supports the gold potential at Tasersuag. Bluejay has applied to the MLSA for an extension of MEL 2020/03 to acquire additional ground surrounding the gold anomalies at Tasersuaq. Bluejay's licence extension application also incorporates an additional cluster of gold anomalies around Tasiussag (refer to Figure 2), located approximately 15 km east of the town of Nanortalik. Here auriferous guartz veins with alteration halos of ankerite and fuchsite are known to occur close to the contact between metavolcanics and metasediments of the Psammite Zone. Bluejay's stream sediment data for gold and associated pathfinder elements indicate that the gold mineralisation at Tasiussag may be more extensive than previously recognised.

### Zinc (± lead-copper-silver) potential within Thunderstone:

Thunderstone is recognised by GEUS as one of the most anomalous areas in the whole of Greenland for zinc based upon a country-wide stream sediment database. Bluejay considers the metasedimentary and the metavolcanics rocks of the Southern domain of the Ketilidian Orogen, interpreted to have formed in a forearc basin setting, as a favourable environment in which to explore for clastic-dominated sediment hosted and volcanic-hosted massive sulphide ('VHMS') zinc-lead  $\pm$  copper-silver deposits, respectively. This is supported by geochemical zinc-lead-copper anomalies associated with the metasediments, as well as several encouraging ore grade zinc-lead-copper-silver samples previously reported from Thunderstone as part of Greenland's annual public mineral hunt 'Ujarassiorit'. The Field Programme will assess favourable environments and follow-up on anomalous geochemical and remote sensing data potentially related to zinc-lead  $\pm$  copper-silver mineralisation.

## Nickel-copper-PGE potential within Thunderstone:

Aside from a small number of analyses by Platinova Resources in the late 1987, Bluejay's re-analysis of the GGU stream sediments represents the first time that they have been analysed for PGE. This has resulted in the identification of several distinct platinum ('Pt') and palladium ('Pd') anomalies, some of which are coincident with stream sediment and HMC nickel, copper, cobalt, and chromium anomalies that may support the presence of mineralised mafic-ultramafic intrusions. As a result, Bluejay

has now submitted an application to the MLSA for an extension of both of the Thunderstone licences (MEL 2020/03 and MEL-S 2020/22) to cover these anomalies as well as several other large gabbro-norite intrusions adjacent to the Company's existing Licences (refer to Figure 1). Bluejay intends to carry out sampling over these intrusions as part of the Field Programme.

The nickel-copper-PGE potential within Thunderstone is further supported by the presence of mineralised intrusions elsewhere in the Ketilidian Orogenic Belt. Minor, locally layered, hornblende peridotite intrusions from the Psammite Zone, centred around Saqqaa and Søndre Sermilik fjords to the northwest of Thunderstone (refer to Figure 2), have returned exceptional PGE grades. The most significant mineralisation occurs within the Sarqâ intrusion which yielded up to 11 g/t combined Pt, Pd and Au, in addition to percentage level nickel and copper values, during historic exploration by the GGU (1960-63) and later Platinova Resources (1986-88, 1995).

Building upon an existing collaboration, Bluejay has initiated a research programme with Professors Thomas Ulrich and Christian Tegner from the Department of Geoscience at Aarhus University, Denmark, to investigate the potential for mafic-ultramafic intrusions throughout the Thunderstone Project area to host orthomagmatic nickel-copper-PGE mineralisation, using lithogeochemistry, isotopic (Nd, Sr, Hf) geochemistry and petrology. The study will also address the current divergence in the published scientific literature on whether the mineralised hornblende peridotite intrusions around Søndre Sermilik fjord belong to the appinite suite or the Ilua plutonic suite, as well as testing if and how these suites are petrogenetically related and their geodynamic context within the Ketilidian Orogenic Belt. This will have implications for exploration targeting nickel-copper-PGE mineralisation at Thunderstone, where voluminous gabbro-norite intrusions (refer to Figure 1) are currently inferred to belong to the Ilua Plutonic Suite. The study, that began in June, will be supplemented with samples collected during the Field Programme. GEUS will also support the project through provision of archived sample material.

**Figure 1.** Geological map showing the principle lithologies of the 2,025 sq km Thunderstone Project in South Greenland and the licence extension applications submitted to the MLSA. Proximity of the Thunderstone Project area to several towns and settlements, as well as two former mines (gold, graphite) and a known uranium prospect are shown.

**Figure 2.** Geological map of the Thunderstone Project in South Greenland showing stream sediment and heavy mineral concentrate geochemistry for gold, as well as known mineral occurences/prospects. The data support a southern

extension of the Nanortalik Gold Belt. Note that Bluejay's re-assayed stream

sediment data covers the area south of  $61^{\circ}$  N, but has been cropped to a 1 km buffer surrounding the Company's licences and licence extension applications for the purposes of this announcement.

#### 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.

#### \*\*ENDS\*\*

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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-coppercobalt-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 and gold 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.

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