14 June 2022

ASX Announcement

SATELLITE IMAGERY ANALYSIS IDENTIFIES NEW TARGETS AT THE IVITTUUT MULTI-COMMODITY PROJECT IN SW GREENLAND

Highlights

- **Analysis of Sentinel-2 satellite imagery over the Ivittuut project and surrounds completed by leading image processing expert Dr Daniel Core of Fathom Geophysics.**
- **Main objective of the satellite imagery analysis was to remotely sense surface features relating to geology and mineralisation.**
- **Analysis identified numerous spectral anomalies indicative of hydrothermal alteration associated with iron oxides, sulphides and/or clays.**
- **Coincident jarosite, goethite and kaolinite mineral index anomalism was identified over the historic Ivittuut mine precinct (particularly over the waste dumps), confirming the effectiveness of the method in the context of the Ivittuut Project.**
- **Two large, coincident jarosite, goethite and kaolinite mineral index anomalies were identified within the Ivittuut Project that have never been sampled or drill tested.**
- **Field reconnaissance of these and several other high-priority spectral anomalies to be completed during the current northern hemisphere summer exploration campaign.**
- **Eclipse Metals' SW Greenland multi-commodity Ivittuut Project comprises the historic Ivittuut cryolite mine, prospective for high-purity quartz, fluorite, base metals and REE, and the Grønnedal-Ika syenite carbonatite complex, prospective for REE.**

Eclipse Metals Ltd (ASX: EPM) (**Eclipse Metals** or the **Company**) is pleased to present results from recently completed satellite imagery analysis over its SW Greenland multi-commodity Ivittuut Project (MEL2007/45).

Eclipse Metals' Executive Chairman Carl Popal said, *"we are delighted that Sentinel-2 satellite imagery analysis, which is a proven and cost-effective technology for screening large areas of exposed rock, has delivered new high-priority targets for REE and base metal mineralisation. We are planning to field check the highest-ranked anomalies as part of the ongoing summer exploration campaign."*

Satellite imagery analysis

The Company contracted leading image processing expert Dr Daniel Core of Ohio-based Fathom Geophysics LLC (Fathom Geophysics) to process and analyse European Space Agency Sentinel-2 data over its SW Greenland multi-commodity Ivittuut Project (MEL2007/45). The main objective of the satellite imagery analysis was to remotely identify surface features relating to geology and mineralisation.

Sentinel-2 is a European multi-spectral imaging mission, comprised of two identical satellites (Sentinel-2A and Sentinel-2B) in the same orbit. The Sentinel-2 mission collects visible bands with 10m resolution and visible to near-infrared (VNIR) and shortwave infrared (SWIR) bands at 20/60m resolution. Where geology is reasonably exposed, spectrally enhanced Sentinel imagery can be a valuable complementary tool for geological mapping and interpretation.

Sentinel-2 data over Ivittuut were sourced from the Copernicus Open Access Hub and stitched together to create a complete dataset covering the entire Ivittuut project. Specialised algorithms were utilised to mask water bodies and eliminate or reduce vegetation signals. Following pre-processing, mineral indexes, spectral correlation and ternary maps were generated to highlight possible geological and hydrothermal mineralisation/alteration features.

Details about the image processing approach can be found in JORC Code (2012) – Table 1.

Key findings

Satellite imagery analysis over Eclipse Metals SW Greenland multi-commodity Ivittuut Project helped to identify numerous spectral anomalies indicative of hydrothermal alteration with associated iron oxides, sulphides and/or clays (Figure 1). The following paragraphs provide brief descriptions of three anomalies identified as part of the satellite imagery analysis.

One of the most prominent anomalies is evident at the historic Ivittuut cryolite mine, which is marked by strong (80th percentile), spatially coincident jarosite index (indicative of the presence of sulphides), goethite index (indicative of the presence of iron oxides) and kaolinite index (indicative of the presence of clays) anomalism, covering an area of approximately 900m by 400m (Figure 2). This anomalism envelops the entire area of historic waste dumps, which are known to contain mineralised rocks with up to 165.00 g/t silver, 0.15% copper, 3.83% lead and 0.37% zinc (ASX release dated 24 March 2022).

Another prominent (80th percentile), spatially coincident jarosite, goethite and kaolinite index anomaly, approximately 700m long and up to 230m wide, was identified within the central-northern Grønnedal-Ika syenite-carbonatite complex. This anomaly is situated in a geological setting that is highly prospective for REE mineralisation as demonstrated by rock chip sample assay results of up to approximately 3.45% total rare elements (TREE) (ASX release dated 2 March 2021). The newly identified anomaly is yet to be field checked and sampled.

Strong (80th percentile), coincident jarosite, goethite and kaolinite index anomalism was also identified over dolerite and basalt dykes cutting the Grønnedal-Ika complex (Figure 3). The area of anomalism shown in Figure 3 contains one of the high amplitude and vertically extensive magnetic bodies identified by Eclipse Metals in three-dimensional (3D) inversion modelling of airborne magnetic data over the Grønnedal-Ika complex (ASX release dated 19 May 2021). As previously reported by Eclipse Metals, geophysical, geochemical and geological information revealed a strong spatial and genetic relationship between areas of strong magnetic anomalism and REE mineralisation. It is encouraging that the satellite imagery analysis highlighted some of the areas of strong magnetic anomalism and coincident REE mineralisation.

Next steps

The new findings provide Eclipse Metals with a raft of targets for field checking and sampling, to be conducted during the summer exploration program currently underway at the Company's Ivittuut project.

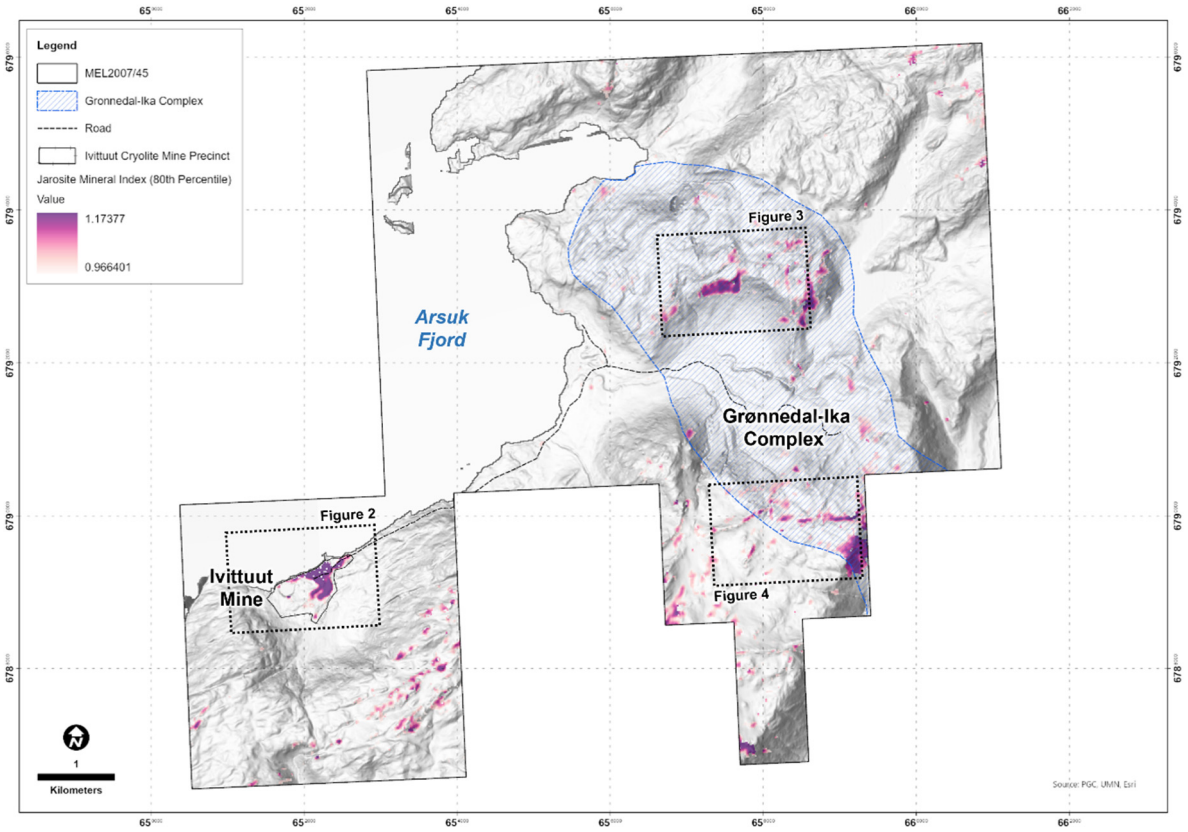

Figure 1a. Jarosite index map of Eclipse Metal's Ivittuut Project (MEL2007/45).

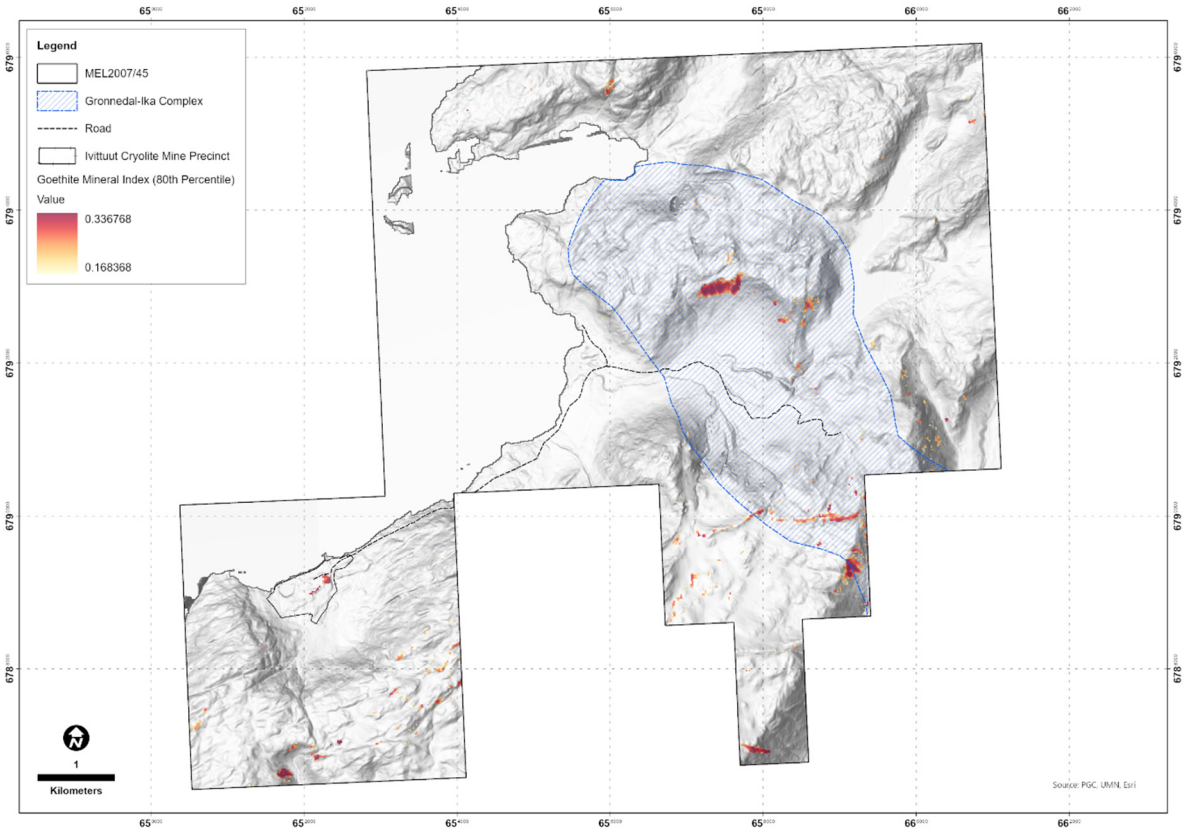

Figure 1b. Goethite index map of Eclipse Metal's Ivittuut Project.

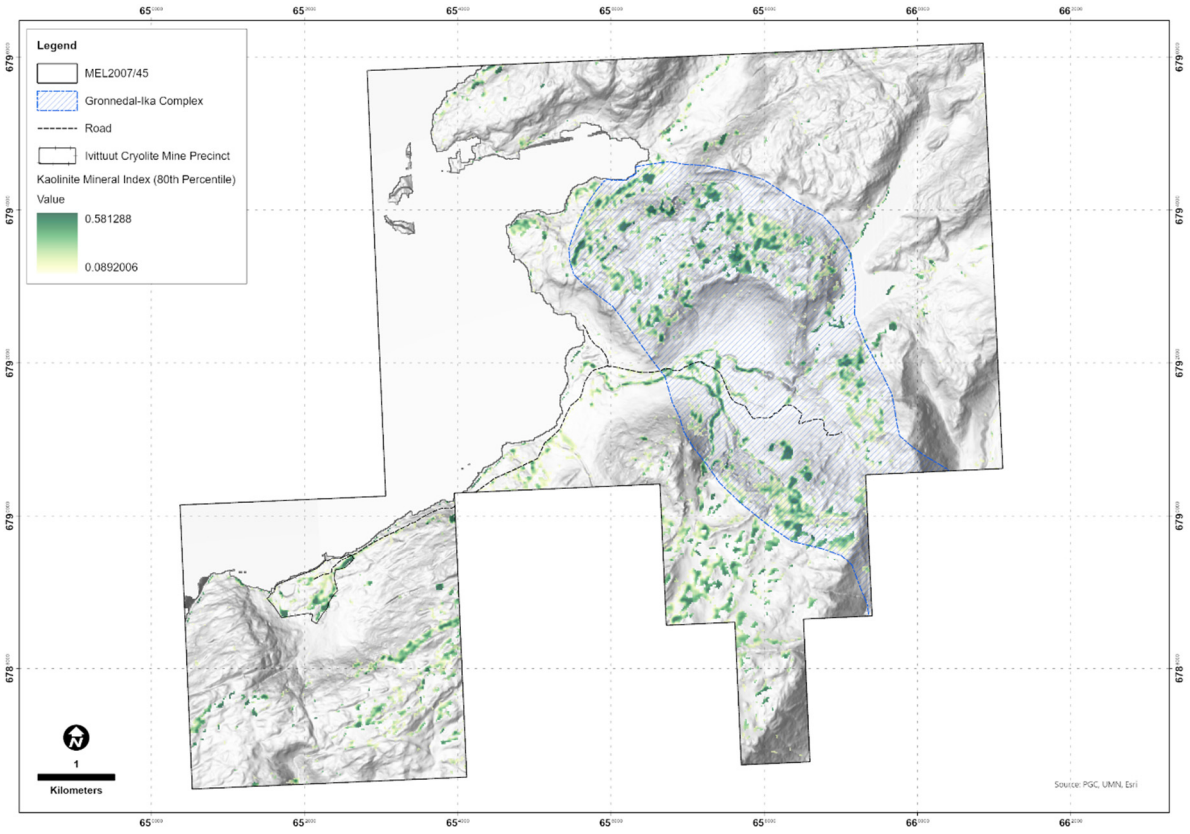

Figure 1c. Kaolinite index map of Eclipse Metal's Ivittuut Project.

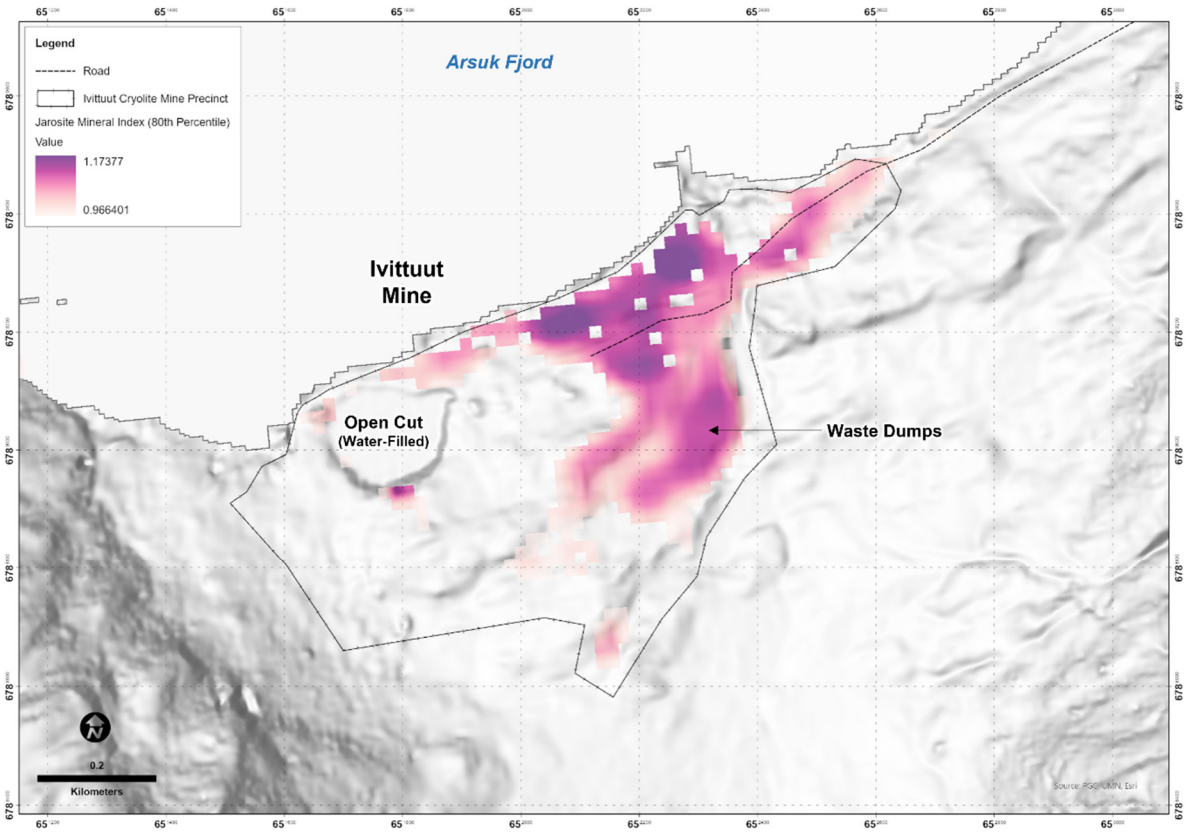

Figure 2a. Jarosite index map of the Ivittuut mine area.

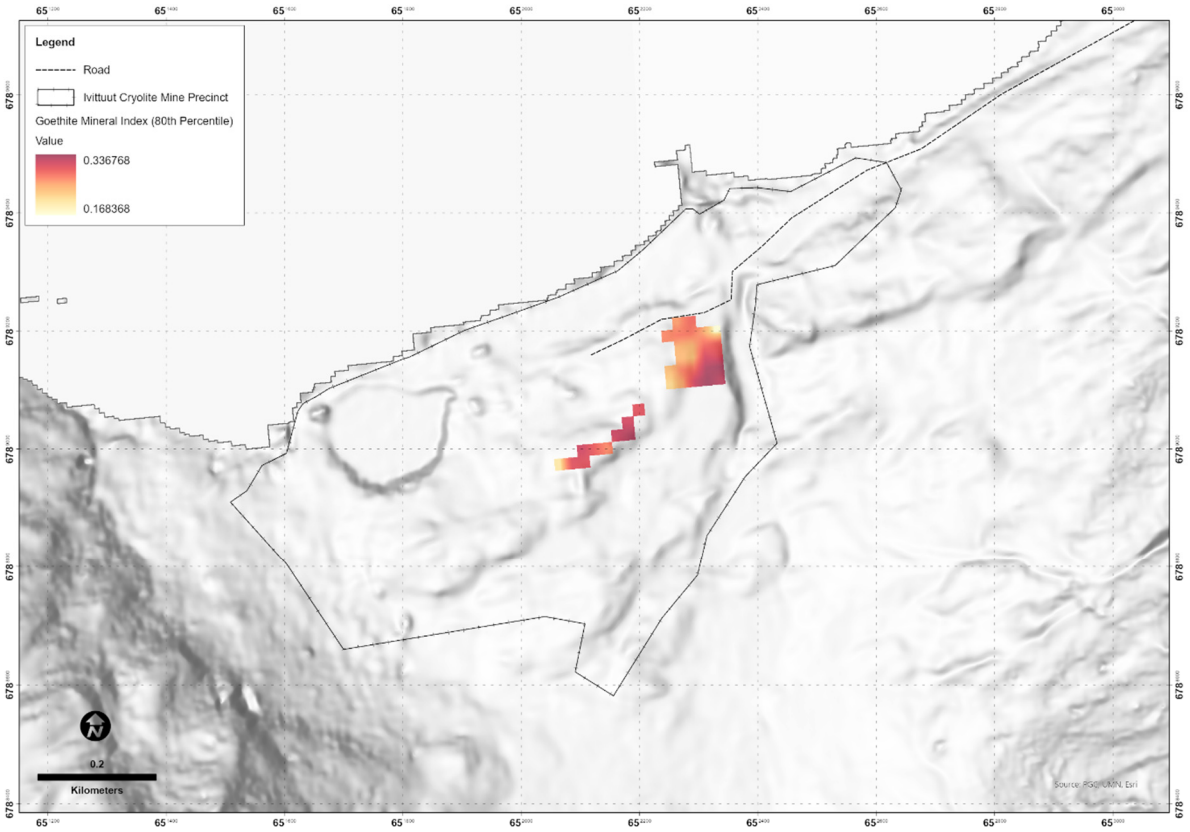

Figure 2b. Goethite index map of the Ivittuut mine area.

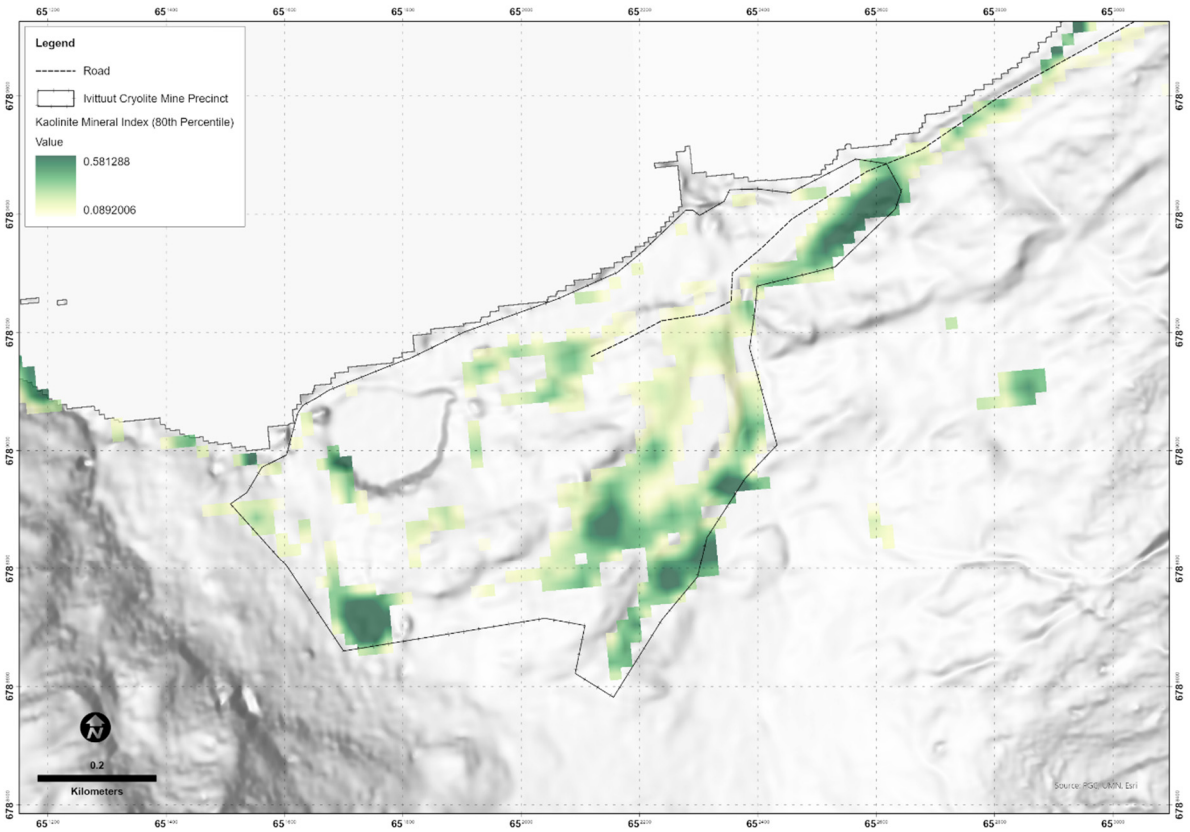

Figure 2c. Kaolinite index map of the Ivittuut mine area.

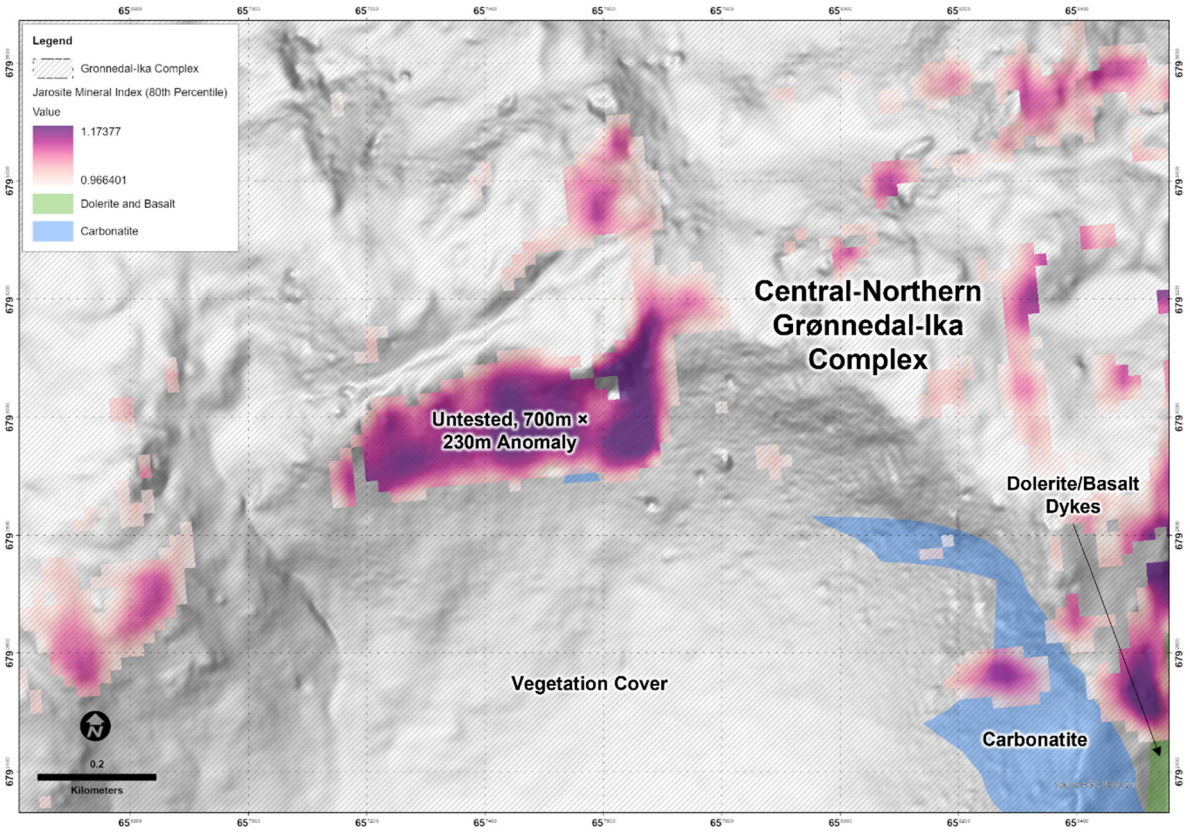

Figure 3a. Jarosite index map of part of the central-northern Grønnedal-Ika complex.

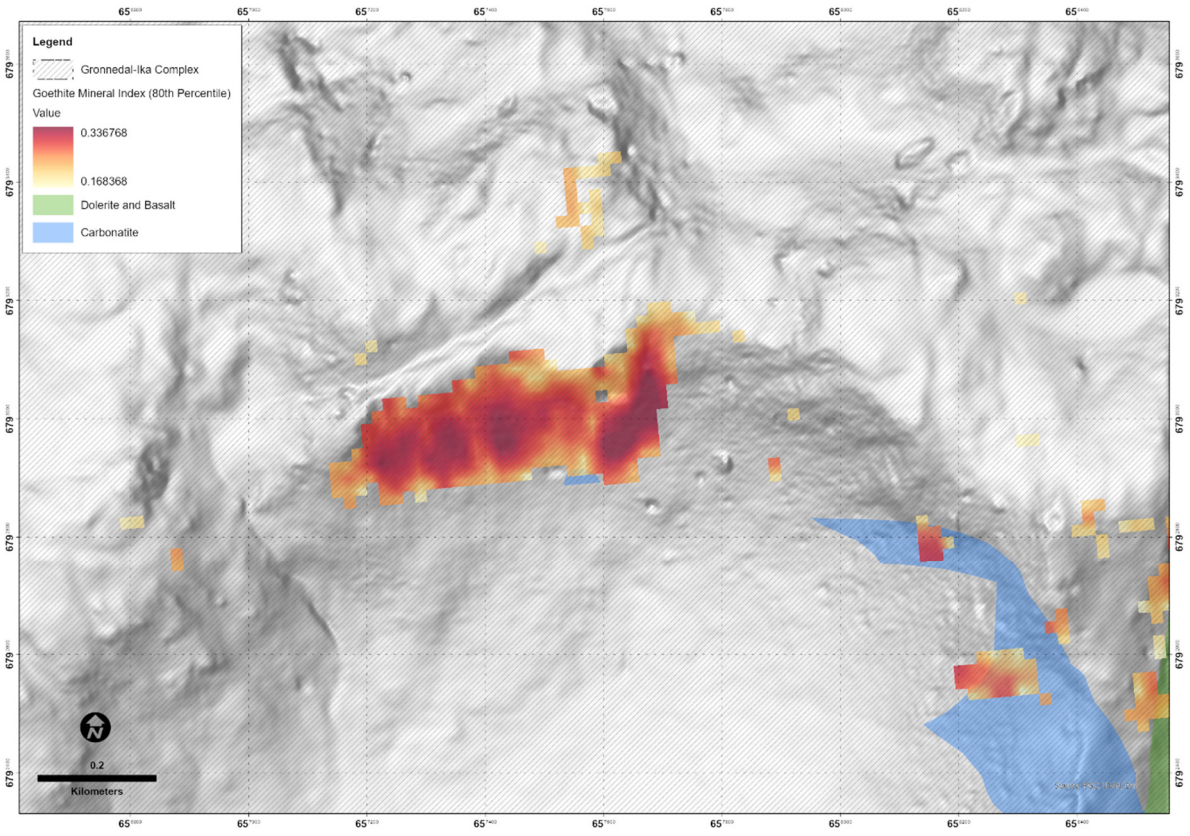

Figure 3b. Goethite index map of part of the central-northern Grønnedal-Ika complex.

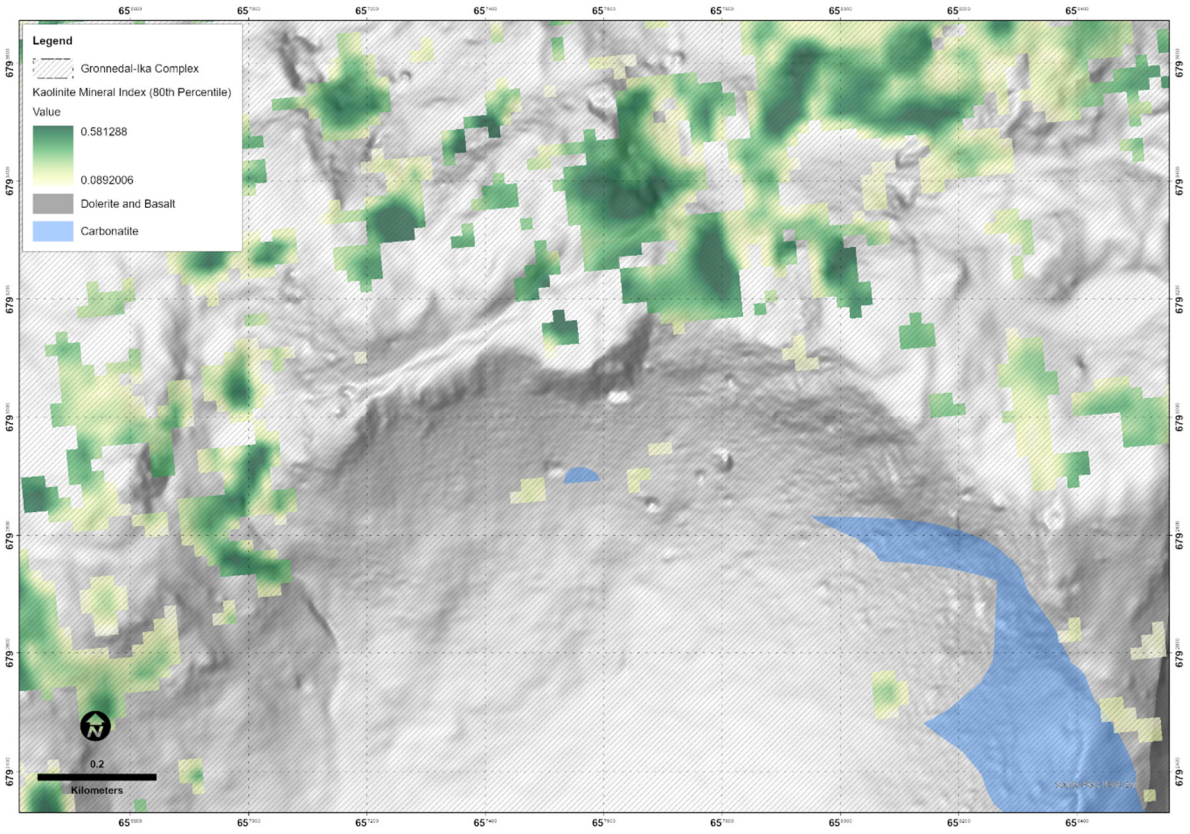

Figure 3c. Kaolinite index map of part of the central-northern Grønnedal-Ika complex.

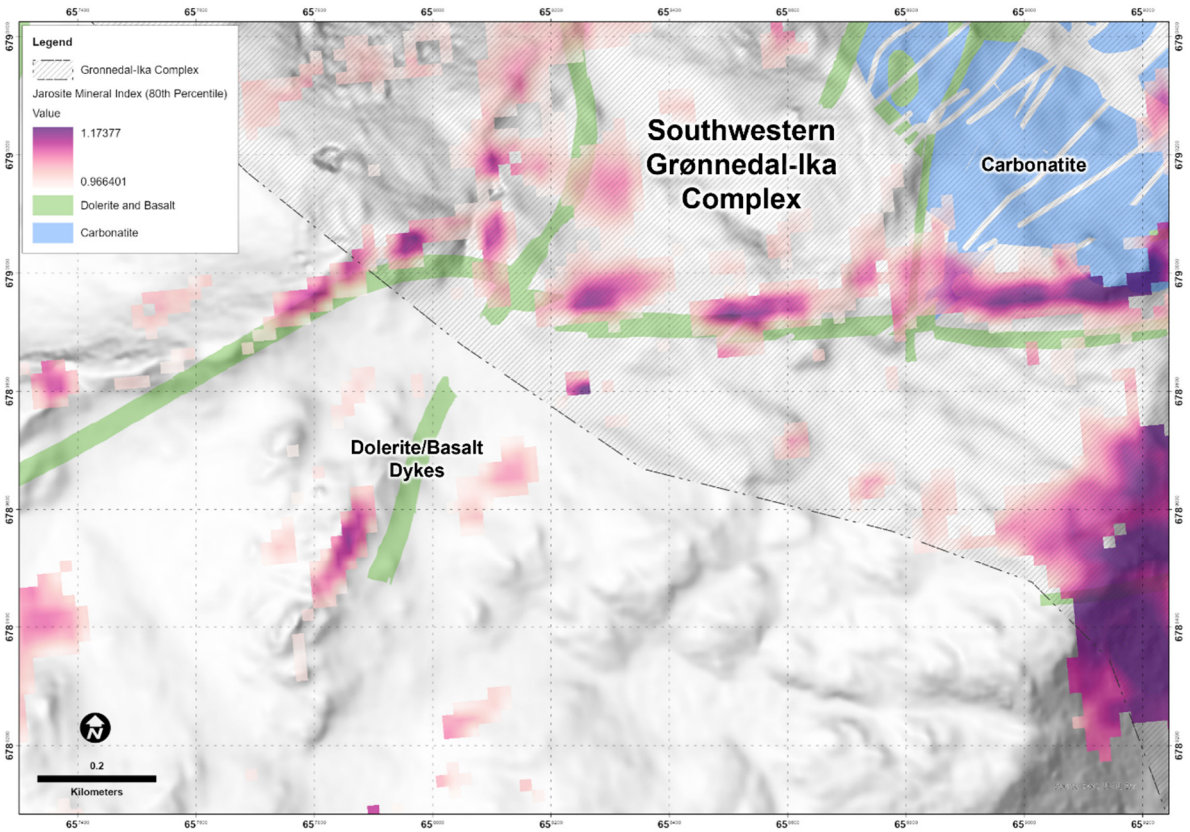

Figure 4a. Jarosite index map of part of the southwestern Grønnedal-Ika complex.

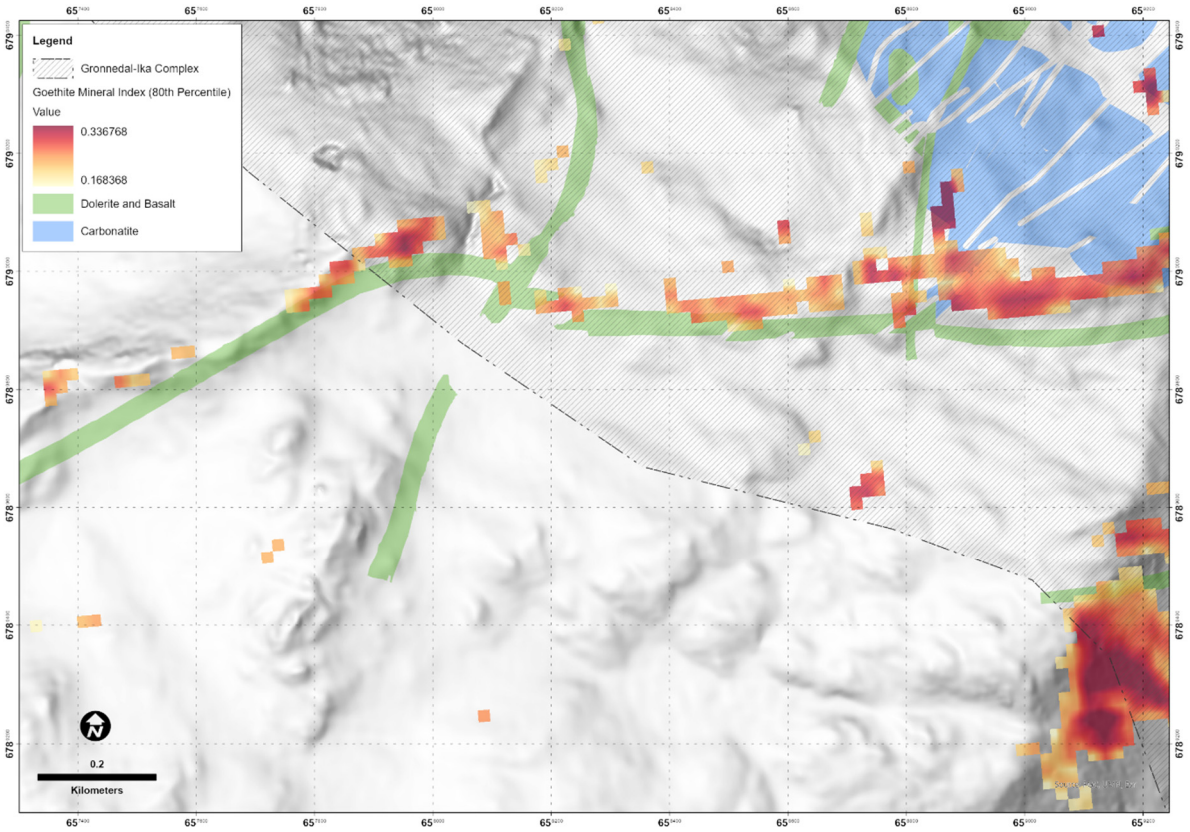

Figure 3. Goethite index map of part of the southwestern Grønnedal-Ika complex.

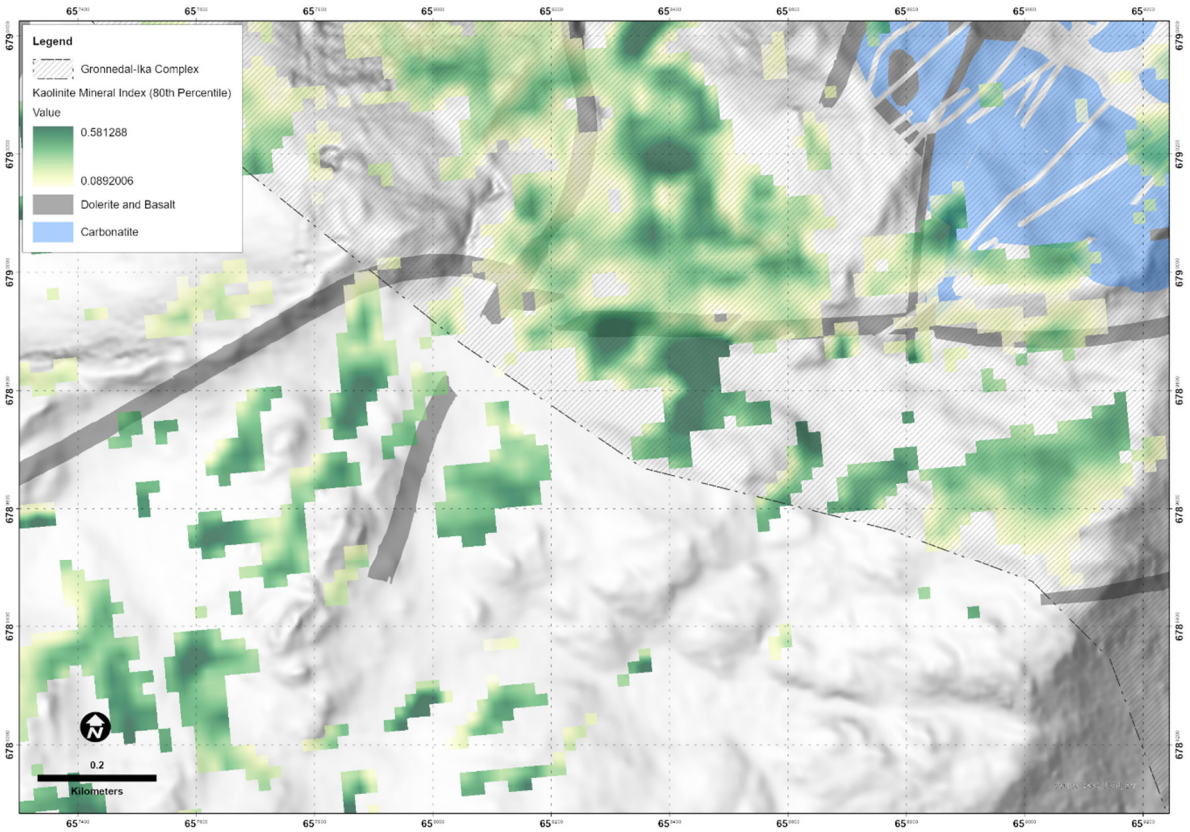

Figure 4c. Kaolinite index map of part of the southwestern Grønnedal-Ika complex.

Authorised for release by the Board

Carl Popal
Executive Chairman

Oliver Kreuzer
Non-Executive Director

About Eclipse Metals Ltd (ASX: EPM)

Eclipse Metals Ltd is an Australian exploration company focused on exploring south-western Greenland, the Northern Territory and Queensland for multi commodity mineralisation. Eclipse Metals Ltd has an impressive portfolio of assets prospective for cryolite, fluorite, siderite, quartz (high purity silica), REE, gold, platinum group metals, manganese, palladium, vanadium and uranium mineralisation. The Company's mission is to increase shareholders' wealth through capital growth and ultimately dividends. Eclipse Metals Ltd plans to achieve this goal by exploring for and developing viable mineral deposits to generate mining or joint venture incomes.

About the SW Greenland Multi-Commodity Project

Ivigtût is located in southwestern Greenland and has a power station and fuel supplies to service this station and local traffic to support mineral exploration. About 5.5km to the northeast of Ivigtût, the twin settlements of Kangilinnguit and Grønnedal, respectively, provide a heliport and an active wharf with infrastructure. The Grønnedal-Ika carbonatite-syenite complex is less than 10km from Ivigtût and only 5km from the port of Grønnedal. This complex is one of the 12 larger Gardar alkaline intrusions in Greenland and is recognised by GEUS as one of Greenland's prime REE targets along with Kvanefjeld and Kringlerne (Tanbreez).

The Gardar Province of southwest Greenland constitutes one of the best-endowed REE provinces worldwide. It represents an ancient continental rift zone that was active between 1,330 and 1,140 Ma (i.e., Mesoproterozoic era). Gardar magmatism produced a raft of extrusive and intrusive rocks, including kilometre-scale alkaline complexes that are among the world's largest alkaline ore deposits. The Ivigtût mineralised system, spatially and genetically associated with an evolved alkaline complex of the Gardar Province, formed 1.3 billion years ago as cooling hydrothermal fluids moved through the Earth's crust.

Competent Persons Statement

The information in this report / ASX release that relates to Exploration Results is based on information compiled and reviewed by Dr Amanda Buckingham, Consultant, and Dr Oliver Kreuzer, Non-Executive Director of Eclipse Metals Ltd. Dr Buckingham holds a PhD in Mathematics and Geophysics from the University of Western Australia, WA. She is a Member of The Australasian Institute of Mining and Metallurgy (AusIMM). Dr Buckingham has sufficient experience relevant to the styles of mineralisation under consideration and to the activity being reported to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Buckingham consents to the inclusion in this report / ASX release of the matters based on information in the form and context in which it appears. Additionally, Dr Buckingham confirms that the entity is not aware of any new information or data that materially affects the information contained in the ASX releases referred to in this report.

Dr Kreuzer holds a Dipl-Geol (MSc equivalent) in Geology, Palaeontology and Mineralogy from the University of Freiburg, Germany, and a PhD in Economic Geology from James Cook University, Townsville, Queensland. He is a Member of The Australasian Institute of Mining and Metallurgy (AusIMM) and a Member and Registered Professional Geologist (RPGeo) in the field of Mineral Exploration of the Australian Institute of Geoscientists (AIG). Dr Kreuzer has sufficient experience relevant to the styles of mineralisation under consideration and to the activity being reported to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Kreuzer consents to the inclusion in this report / ASX release of the matters based on information in the form and context in which it appears. Additionally, Dr Kreuzer confirms that the entity is not aware of any new information or data that materially affects the information contained in the ASX releases referred to in this report.

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	The downloaded data are Level 2A surface reflectance data obtained from the European Space Agency's (ESA) Copernicus Open Access Hub (https://scihub.copernicus.eu/dhus/#/home). The downloaded data were collected on 22 August 2021 by the Sentinel-2A satellite. The downloaded data were delivered by the ESA with coordinates in WGS84 UTM Zone 23N. The downloaded data were collected with a sun zenith angle of 50.4 degrees and a sun azimuth angle of 171.0 degrees.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	Not applicable as no drilling has been carried out by Eclipse Metals Limited (Eclipse Metals).
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	Not applicable as no drilling has been carried out by Eclipse Metals.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*	Not applicable as no drilling has been carried out by Eclipse Metals.

Criteria	JORC Code explanation	Commentary
	• *The total length and percentage of the relevant intersections logged.*	
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Not applicable as no drilling or sampling have been carried out by Eclipse Metals.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	Not applicable as no sampling has been conducted by Eclipse Metals.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	Not applicable as no sampling or assaying have been conducted by Eclipse Metals.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	The Sentinel-2 data are orthorectified by the European Space Agency. The locations should be accurate to within 15m.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications*	Band resolutions are 10m for bands 2, 3, 4, and 8 and 20m for bands 5, 6, 7, 8A, 11, and 12. A full description of the bands (resolutions and wavelengths) can be found here: https://sentinels.copernicus.eu/web/sentinel/user-guides/sentinel-2-msi/resolutions/spatial

Criteria	JORC Code explanation	Commentary
	applied. • *Whether sample compositing has been applied.*	
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	The satellite samples uniformly. The resulting data do not have any preferred orientation.
Sample security	• *The measures taken to ensure sample security.*	Not applicable as no sampling has been conducted by Eclipse Metals.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	Not applicable as no sampling has been conducted by Eclipse Metals.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	Mineral Exploration Licence (MEL) 2007-45 is held in the name of Eclipse Metals Greenland Limited, a wholly owned subsidiary of Eclipse Metals. Licence issued by Greenland Minerals Licence and Safety Authority.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Results from previous exploration accessed through Greenland Mineral Licence and Safety Authority and acknowledged in body of report.
Geology	• *Deposit type, geological setting and style of mineralisation.*	Syenite nepheline intrusive into Archean basement.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should*
		Not applicable as no drilling has been carried out by Eclipse Metals.

Criteria	JORC Code explanation	Commentary
	clearly explain why this is the case.	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	Not applicable as no data aggregation has been carried out by Eclipse Metals.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	Not applicable as no drilling has been carried out by Eclipse Metals.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Geological map and remote sensing interpretation diagrams included in report.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Not applicable as no new sampling or drilling results are presented in this report.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical testresults; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	All relevant information and data included in report.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling*	Ground truthing of remote sensing anomalies and surface sampling planned for the 2022 field season. Ground truthing of the anomalies may include collection of spectra with a field portable spectroradiometer.

Criteria	JORC Code explanation	Commentary
	areas, provided this information is not commercially sensitive.	Further remote sensing work may be undertaken based on the results of the field checking. This work may include acquisition and processing of ASTER data to obtain additional information about the remotely sensed clay minerals.