21st June 2023 ASX Announcement

PROMISING MINERALOGICAL RESULTS AT GRØNNEDAL RARE EARTH PROSPECT, GREENLAND

- **Encouraging mineralogical determinations from Grønnedal**
- **Composite ferro-carbonate mineral containing elevated medium to heavy REE**
- **Grønnedal Pr+Nd account for 55% of the measured 4REE (La+Ce+Pr+Nd)**
- **On-going assessment of material found over a wide area in Grønnedal**
- **Located within the Ivigtût multi-commodity project in SW Greenland**
- **Assays from drilling at Ivigtût project are expected this quarter**

Eclipse Metals Ltd (**Eclipse** or the **Company**) (ASX: EPM) is pleased to provide an update on the Company's **mineralogical determinations and percussion drilling program for its Grønnedal prospect** within the Ivigtût multi-commodity project in SW Greenland.

Ongoing mineralogical assessment of **pink-orange mineralised material found over a wide area (1.5 km x 3 km) in Grønnedal**, including scanning electron microscope (SEM) examination at CSIRO, has identified **composite ferro-carbonate minerals containing elevated medium to heavy REE**.

Figure 1: Grønnedal surface sample shows pink/orange REE mineral. *Visually estimated to comprise of ~25% pink-orange material and 75% iron oxides and oxidised carbonatite.*

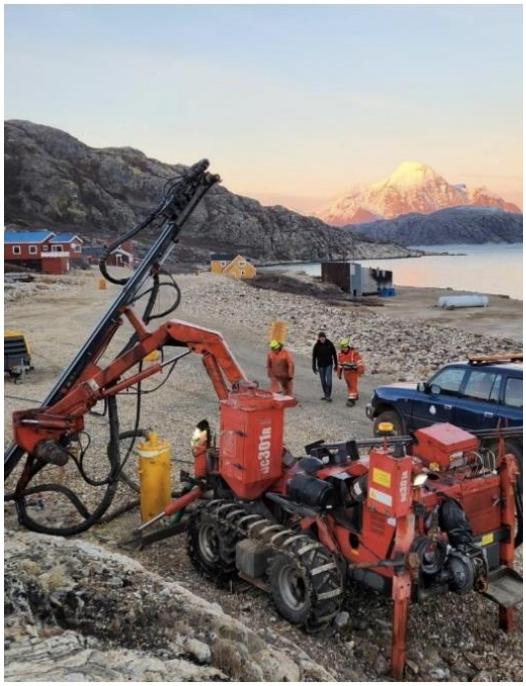

Figure 2: 2022 Maiden drilling and sampling program at Ivigtût multi-commodity project

Cautionary Statement

Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations.

Executive Chairman Carl Popal commented: *"These initial results at Grønnedal are of great significance for Eclipse and follow up the sampling of drill core from the Ivigtût pit which also confirmed the presence of REE mineralisation. The REE prospectivity at both Ivigtût and Grønnedal aligns with our strategy of becoming a leading supplier of metals and minerals used in the green energy industry. Eclipse will continue to actively explore the historic Ivigtût pit and the nearby Grønnedal prospect during 2023."*

Previous ambiguous mineralogical determination attempts could not name the pink/orange coloured minerals containing these REEs with anomalous Pr, Nd and Dy content. Precise mineralogical identification is essential in processing REE and is an important step in prefeasibility studies.

The pink-orange coloured minerals were first submitted by Eclipse for mineralogical determinations in 2021, which initial assessment determined that there is a possible combination of several minerals. During 2022, an XRD assessment was conducted by the St Andrews University School of Earth Science which identified possible bastnasite and proposed further thorough assessment to identify the precise composite nature of the minerals (ASX release 1 November 2022).

Previous laboratory and pXRF assay results from Grønnedal rock chip samples using polished thin sections (ASX release 17 November 2021) and now Scanning Electron Microscopy (SEM) have confirmed the presence of rare earth minerals in three of the four rock samples examined at CSIRO. SEM/EDS (SEM with Energy Dispersive X-ray Spectroscopy) analysis of one sample returned chemistry corresponding to the rare earth minerals **Parisite** and **Ancylite.** These two minerals were distinguished by the difference in CaO values showing a composite mineral structure containing REEs with elevated Pr, Nd and Dy values.

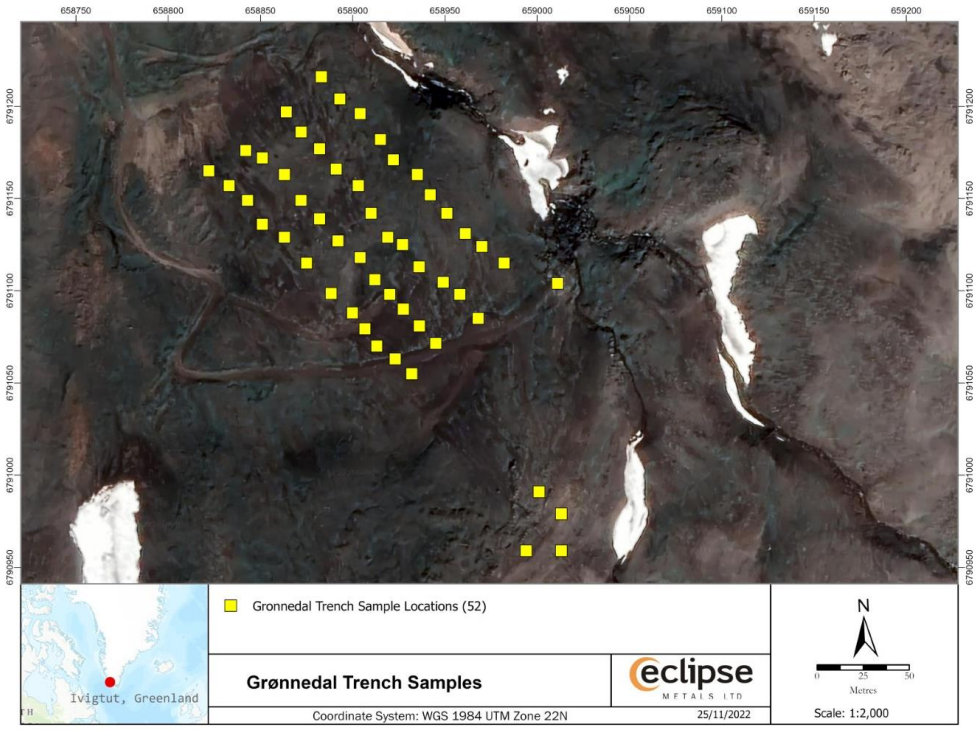

Figure 3. Grønnedal trenching area marked in yellow.

Drilling and trenching at Grønnedal identified this material within part of a widespread dolerite dyke system intruding the carbonatite. Analysis of historical geological and geophysical work has indicated that the dolerite dykes are deep-seated.

Drill and trench samples collected at Ivigtût and Grønnedal in October 2022 are currently being analysed by a laboratory in Australia, with results due during the next few weeks. The laboratory has confirmed significant progress in its work with some samples exceeding the limit of detection (ME-MS61L method). The Company anticipates assay results to be received by the end of July. To ensure accuracy, these samples will undergo further testing using the over-limit methods by the laboratory.

Grønnedal Carbonatite

Drill sample analysis using a portable XRF analyzer (pXRF) on five 1.5m composite samples from drillhole L3-9, returned an intersection average of 7.5m @ 0.8% La_2O_3+Ce_2O_3+Pr_2O_3+Nd_2O_3 (4REO), with **praseodymium (Pr)/lanthanum (La) and neodymium (Nd)/cerium (Ce) ratios of about 1:2,** plus base metal values of 0.49% Zn+Pb+Ni (Refer ASX announcement 28 November 2022)

Importantly, the pXRF readings suggest that **Pr and Nd are significantly enriched** in drillhole L3-9 **compared to La and Ce**, an observation that is consistent with academic studies as well as laboratory results received previously (Refer ASX announcement 28 November 2022).

Previous laboratory and pXRF assay results from Grønnedal rock chip samples

- On 17th November 2021, the Company reported pXRF results indicating potentially significant rare-earth element content. Subsequent laboratory results from samples tested by pXRF confirmed significant 4REE (La+Ce+Pr+Nd) (reported on 9 March 2022).

- On 22nd November 2021, Eclipse reported laboratory assays from historical Grønnedal drill core sample IVT 21-4, which yielded 2.1% TREO, including 0.12% Pr_2O_3 and 0.46% Zn.

- On 9th March 2022, the Company reported highly anomalous heavy REE laboratory assay results for six rock chip samples (G21010, G21011, G21014, G21016, G21017 and G21019), demonstrating that the Grønnedal carbonatite complex is – at least in part – enriched in Pr and Nd.

- On 24th March 2022, Eclipse reported the final laboratory assay results for the above samples with G21016 having returned 4.66% TREO, 0.13% Gd_2O_3 and 3.3% BaO, and sample G21011, collected from an aplite cutting the Grønnedal complex, returned analyses of 0.93% Nb_2O_5, 0.07% Rb_2O and 1.77% ZrO_2.

Discussion

Overall, analysis of the Grønnedal rock chip samples demonstrated unusual patterns for Pr/La and Nd/Ce ratios compared with other REE-mineralised carbonatite complexes such as Mountain Pass (California) and Mt Weld (Western Australia).

Lower La and Ce content measured by pXRF, if confirmed by laboratory assay results across the Grønnedal complex or a significant part thereof, would indicate that REE mineralisation at Grønnedal contains a higher proportion of the commercially more valuable magnetic REE, Pr and Nd. The latter are often termed the 'magnet feed' REE which are critical elements for high-performance magnets in high demand from the automotive sector and for wind turbines.

More specifically, pXRF readings and laboratory assay results recorded thus far show a relatively large proportion of Pr and Nd, comprising up to 55% of the measured 4REE.

This can be compared with other rare earth deposits:

i)	**Grønnedal Pr+Nd:**	**55% of the measured 4REE (La+Ce+Pr+Nd)**
ii)	Mountain Pass* Pr+Nd:	17% of the measured 4REE (La+Ce+Pr+Nd)
iii)	Mount Weld CLD* Pr+Nd:	25% of the measured 4REE (La+Ce+Pr+Nd)

** Reference: Technology Metals Research, TMR (2015)*

Such a difference in composition for the project could have positive implications for the so-called "basket price". The basket price is described as the sum of proportions of individual REOs in the product multiplied by the price of the individual REOs.

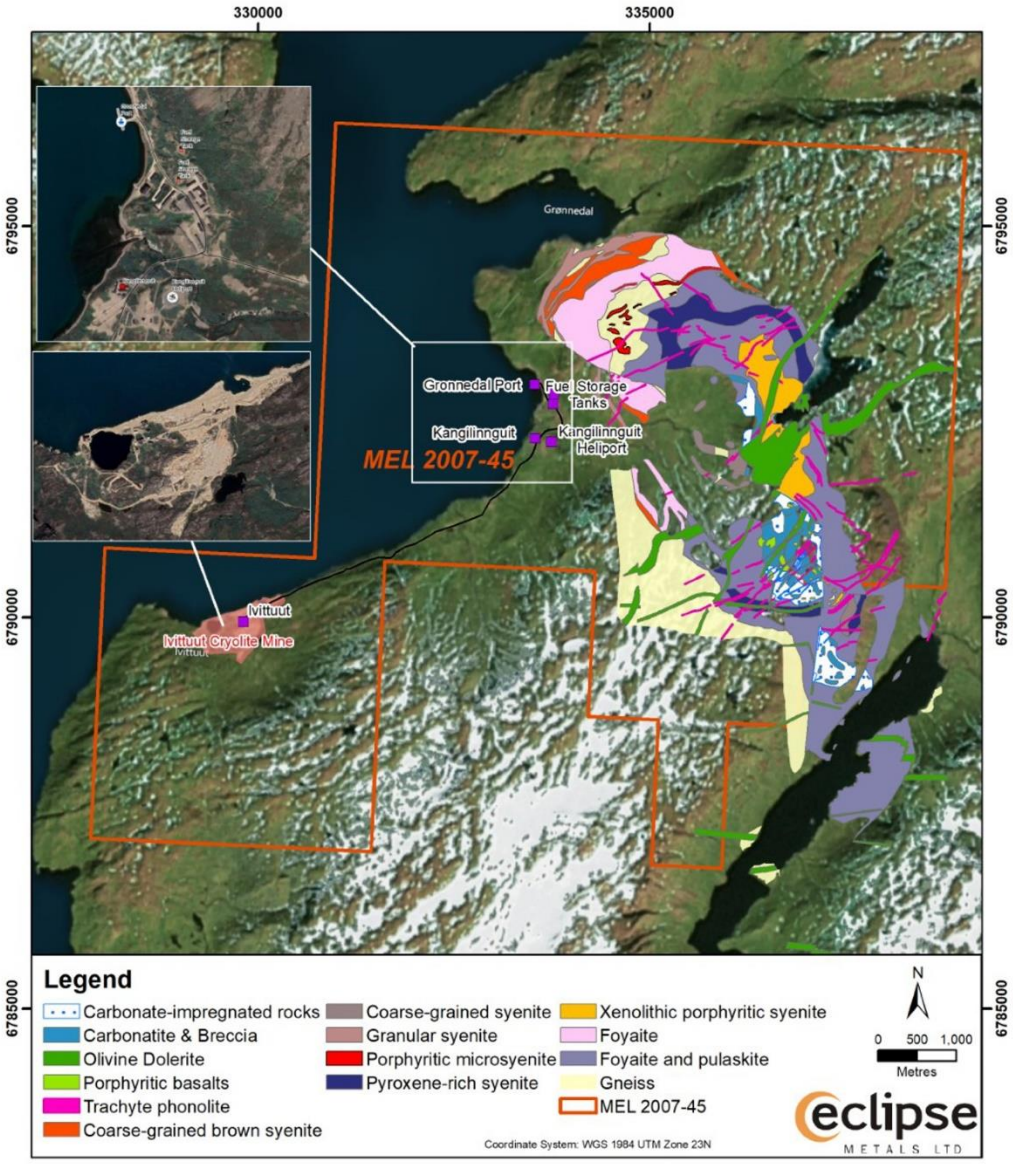

Figure 4. MEL 2007-45 Location Map, showing the geology of the Grønnedal covering nepheline syenite with a carbonatite plug.

Authorised for release by the Board of Eclipse Metals Ltd.

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Executive Chairman

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Investor Relations
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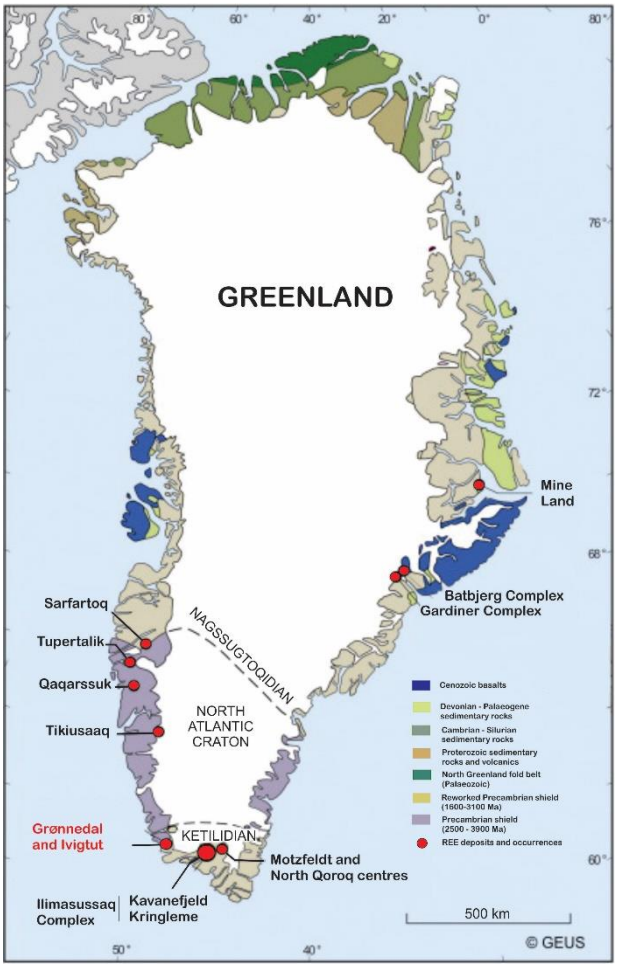

Figure 5. Greenland REE Deposits and location of Grønnedal and Ivigtût

About Eclipse Metals Ltd (ASX: EPM)

Eclipse Metals Ltd is an Australian exploration company focused on mineral exploration in South-western Greenland, Northern Territory and Queensland for multi commodity mineralisation. Eclipse Metals Ltd has an impressive portfolio of assets prospective for cryolite, fluorite, siderite, quartz, 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.

Competent Persons Statement

The information in this report / ASX release that relates to Exploration Results and Exploration Targets is based on information compiled and reviewed by Mr. Rodney Dale, Non-Executive Director of Eclipse Metals Ltd. Mr. Dale holds a Fellowship Diploma in Geology from RMIT, is a Fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM) and 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. Mr Dale 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, Mr Dale 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.*	• Grønnedal carbonatite samples represent outcropping rock formations; qualitative only. • Initial field tests by hand-held XRF assumed to be indicative only. Instrument not calibrated. • Chemical analyses to assess levels of elements contained, not for ore-grade estimates.
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).*	• No drilling was undertaken as part of the grab sampling program.
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.*	• No drilling was undertaken as part of this grab sampling program.

Criteria	JORC Code explanation	Commentary
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.* • *The total length and percentage of the relevant intersections logged.*	• Samples geologically logged before submission for analysis for identification only. Not quantitative.
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.*	• Samples for geological determination and identification only. Not quantitative. • No duplicates collected or determined.
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.*	• Diamantina Laboratories, Report 24693, SEM Analysis for Rare Earths in Rock Sample #2. • No new laboratory results reported. Previous reports cited- • Standard laboratory procedures for sample preparation, elemental determination, QA / QC. • XRF instrument used only to select mineralised samples for shipment to reduce quantity and weight of samples sent from Greenland to Australia. • Standard laboratory procedures with blanks and duplicates. No external laboratory checks warranted at this stage.
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*	• No drilling was undertaken as part of this grab sampling program.

Criteria	JORC Code explanation	Commentary
	storage (physical and electronic) protocols. • *Discuss any adjustment to assay data.*	
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.*	• Handheld GPS locations:- Grønnedal – within 100m of 658880mE : 6791300mN. No grid. Handheld GPS only and correlation with hard-copy maps.
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 applied.* • *Whether sample compositing has been applied.*	• Grab samples were collected at random sites, determined by outcrop availability. • No assumption of continuity or resource estimation. • Samples not composited.
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.*	• No drilling was undertaken as part of this grab sampling program.
Sample security	• *The measures taken to ensure sample security.*	• Samples secured on-site and transported by airline to Australia under normal security procedures.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits have been completed yet.

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*	• MEL 2007 / 45 granted to Eclipse Metals in February 2021 for a period of 3 years with extensions subject to activities and expenditure. • Granted by Government of Greenland.

Criteria	JORC Code explanation	Commentary
	operate in the area.	
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	**GEUS Report File No. 20236** The Planning of the Ivigtût Open Pit of Kryolitselskabet Oresund A/S - Mining of the Flouritic Orebody"; Outokompu OY Mining Consultants, 1987. This report provided 18 cross sections showing drill traces with cryolite (kry), fluorite (fs) and siderite (sid) values together with pit profiles, resource blocks and tabulated tonnage estimates on each section with an SG of 2.95. **GEUS Report File No. 20238** "The Planning of the Ivigtût Open Pit of Kryolitselskabet Oresund A/S – Report of the First Phase, Investigation of the Quantity and Quality of Extractable Ore from the Ivigtût Open Pit"; Outokompu OY Mining Consultants, 1986. This report contained 23 sections showing drillhole traces and contoured cryolite/fluorite grades with an overlay of resource blocks. These sections were used to check positions of drillholes relative to those shown in the above report (GEUS 20236). Resource tonnages are provided. **GEUS Report File No. 20335** Kryolitselskabet Oresund A/S, De Resterende Mineralreserver I Kryolitforekomsten Ved Ivigtût, Ultimo 1987" This report is the most useful of the reports. It provides: - Drillhole location plan - Complete cross section locations - Pit survey points - Plans of underground and in-pit ramp - 38 cross section showing drillhole traces, geological interpretation and ore blocks - Tabulated ore blocks with cryolite, fluorite and siderite grades and tonnages (back-calculated blanket SG of 3) **GEUS Report File No. 21549** "Ivigtût Mineopmaaling, 1962" This report is a survey record of the open pit and includes 28 sections, each of which show the pit profile together with drillhole traces and, on some sections, underground workings. **GEUS Report File No. 20241** Kryolitselskabet Oresund A/S, Lodighedsdistribution I, Ivigtût Kryolitbrud, 31.12.1985" (Danish) 108 pages of drillhole analytical data in %: hole ID, from

Criteria	JORC Code explanation	Commentary
		to, cryolite, fluorspar, Fe, Cu, Zn, Pb, S
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Late stage granitic / syenitic / carbonatite intrusions into crystalline 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 clearly explain why this is the case.*
		• No drilling was undertaken as part of this grab sampling program.

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.*	• No drilling was undertaken as part of this grab sampling program.
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').*	• No drilling was undertaken as part of this grab sampling program.

Criteria	JORC Code explanation	Commentary
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.*	• Appropriate maps are provided in the body of the text.
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 in relation to the project's available data.
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 test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• The exploration by Eclipse Metals of the Ivigtût and Grønnedal prospects is at an early stage with field work to date consisting of reconnaissance sampling and a maiden drilling program. The Company expects to be able to report substantive exploration data once it has completed it's 2023 field season at the prospects.
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 areas, provided this information is not commercially sensitive.*	• Geological mapping; remote sensing; drilling. • Detailed geological assessments planned for 2023 field season.