28th November 2022

ASX Announcement

ECLIPSE RECEIVES ENCOURAGING EARLY REE RESULTS FROM MAIDEN DRILLING AND TRENCHING PROGRAM IN GREENLAND

Highlights

- **Eclipse has completed a maiden percussion drilling and trench sampling program across the Ivigtût and Grønnedal targets at its southwest Greenland multi-commodity project**
- **Initial XRF analysis has returned encouraging results for rare earth elements praseodymium (Pr) and neodymium (Nd)**
- **Eclipse has prepared the samples for shipment to an Australian laboratory for further analysis**
- **First laboratory results are expected in Q1 CY2023.**

Eclipse Metals Ltd (ASX: EPM) (**Eclipse** or the **Company**) is pleased to announce the successful completion of a maiden percussion drilling and trench sampling program at its SW Greenland multi-commodity project. The drill and trench samples collected at Ivigtût and Grønnedal are booked for shipment to a laboratory in Australia for comprehensive analysis.

XRF analysis of composite samples recorded in Greenland before shipment have returned encouraging values for praseodymium (Pr) and neodymium (Nd) ratios, discussed in detail below. The results indicate that the Grønnedal carbonatite complex could be significant on a global basis with respect to its Pr and Nd content.

Details of sample preparation procedures adopted by Eclipse are presented in appended JORC Table 1.

GRØNNEDAL CARBONATITE

Drill sample testing using portable XRF analyzer (pXRF)

At the Greenland sample preparation facility, pXRF readings, taken 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 1.2:1,** as well as 0.49% Zn+Pb+Ni (Table 1).

Eclipse cautions that the pXRF tests are not definitive in nature with all samples yet to be analysed at an Australian laboratory for REE and base metals as well as other major and trace elements.

Although these pXRF results are preliminary, Eclipse has interpreted them to indicate that the commercially more valuable rare earth elements (REE) **Pr and Nd are significantly enriched** in drillhole L3-9 **relative to** lower value **La and Ce**, an observation that is consistent with academic studies as well as laboratory results received previously.

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, having returned 0.93% Nb_2O_5, 0.07% Rb_2O and 1.77% ZrO_2.

Discussion of preliminary results

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

The lower La and Ce contents 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 used by and in high demand from the automotive sector and for wind turbines.

More specifically, the pXRF readings and laboratory assay results collected 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 a positive implication on the so-called "basket price". The basket price is described by the sum of the proportions of the individual REOs in the product multiplied by the price of the individual REOs.

pXRF results for samples from drillhole L3-9

DH L3-9 (azimuth/dip: 140/-70)									
Sample id	**From (m)**	**To (m)**	**Interval (m)**	**4REO* (%)**	**Zn+Pb+Ni (%)**	**Fe**	**Ca**	**Si**	**Mag****
27990	1.0	2.5	1.5	0.83%	0.15%	38.8%	3.1%	6.9%	2.6
27991	2.5	4.0	1.5	0.85%	0.56%	49.1%	1.5%	0.9%	2.0
27992	4.0	5.5	1.5	0.69%	0.27%	50.0%	2.2%	0.5%	2.0
27993	5.5	7.0	1.5	0.87%	0.64%	46.3%	5.6%	0.7%	2.1
27994	7.0	8.5	1.5	0.66%	0.82%	48.9%	2.8%	0.8%	2.2
Total Intersection			**7.5**	0.8% rounded	**0.49%**	46.6%	3.0%	2.0%	2.2

Table 1: *p-XRF testing of drill hole L3-9 indicates an intersection average with 0.8% (rounded) 4REO* ($La_2O_3+Ce_2O_3+Pr_2O_3+Nd_2O_3$) and 0.49% Zn+Pb+Ni. The intersection is non-magnetic but with abundant Fe and low Si, indicating the dominant carbonate iron facies (siderite). ** Mag is magnetic susceptibility as 10^{-3} SI.*

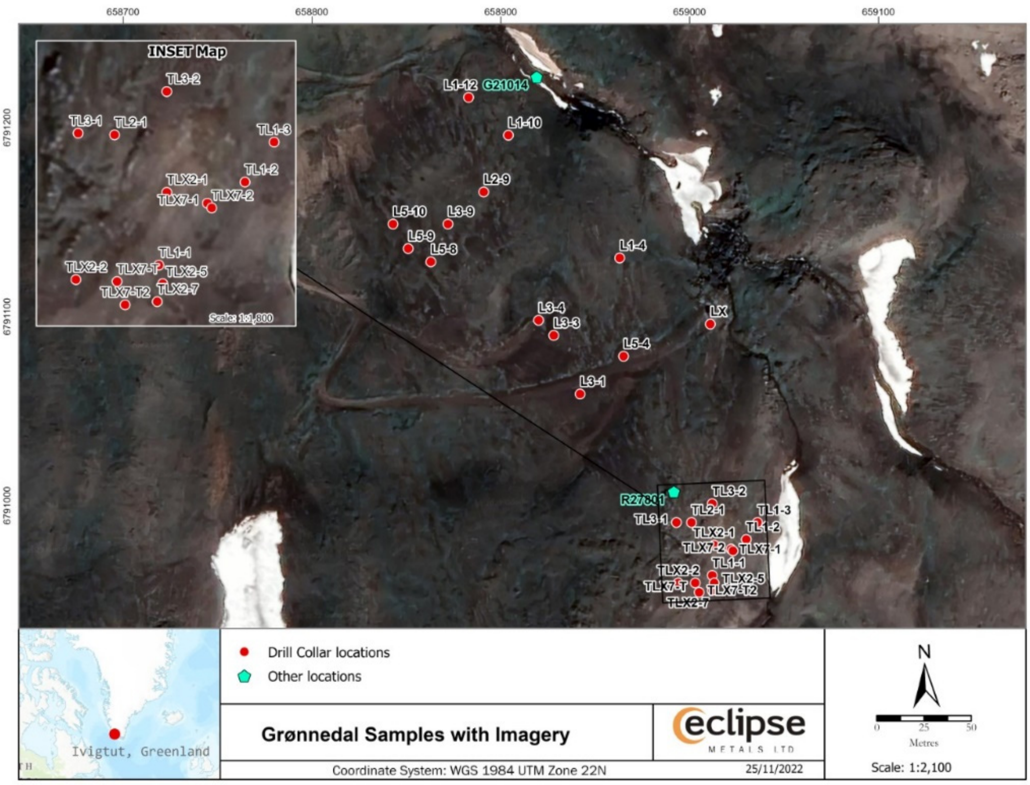


Figure 1: ***Grønnedal target area. Drill collars are marked with red dots while the two REE mineralisation styles are marked with green points. Assays are expected to be available toward the end of Q1-2023.***

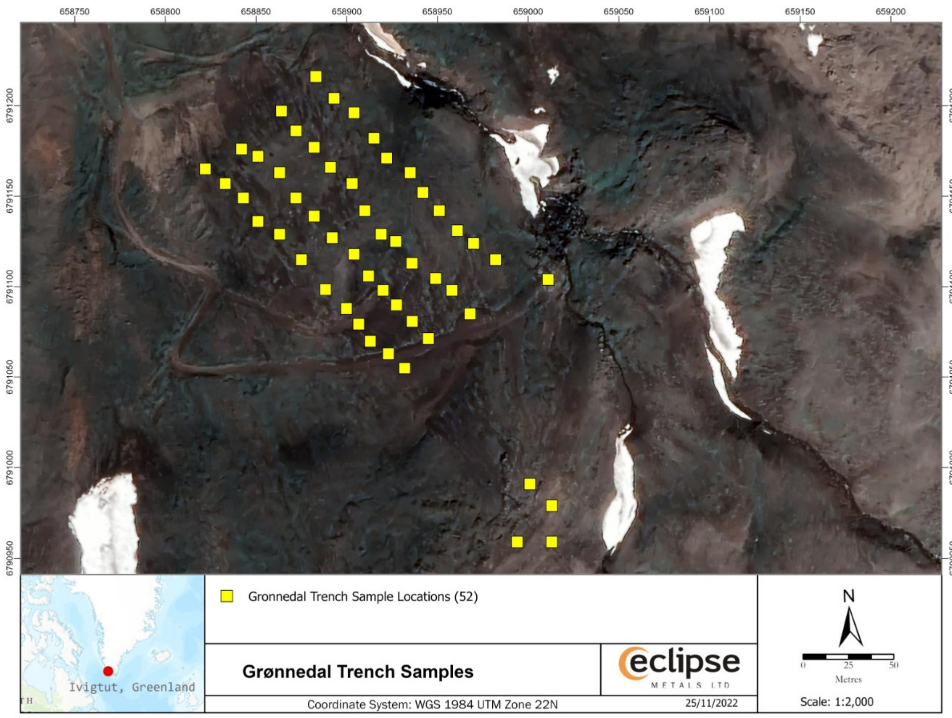


Figure 2: Grønnedal trenching area marked in yellow.

IVIGTÛT

Mineralised waste dump sampling

Eclipse bulk sampled five mineralised waste dumps (ROM size) from the Ivigtût historical cryolite mine to assess the mineral and chemical content. These dumps contain a substantial volume of mineralised material that may be suitable for processing to recover saleable products. Previous laboratory assessments have indicated the polymetallic nature of mineralisation in the pit from which the large volume of mineralised waste was produced, as shown in earlier laboratory results.

- The Company's previous surface sample I21012 provided encouraging results of 165g/t silver, 0.15% copper, 3.83% lead and 0.37% zinc (ASX Announcement dated 24 March 2022).
- Laboratory assessment of a historical drill core sample IVT 21 - 11(1) returned 9.86% Zn (ASX Announcement dated 22 November 2021).

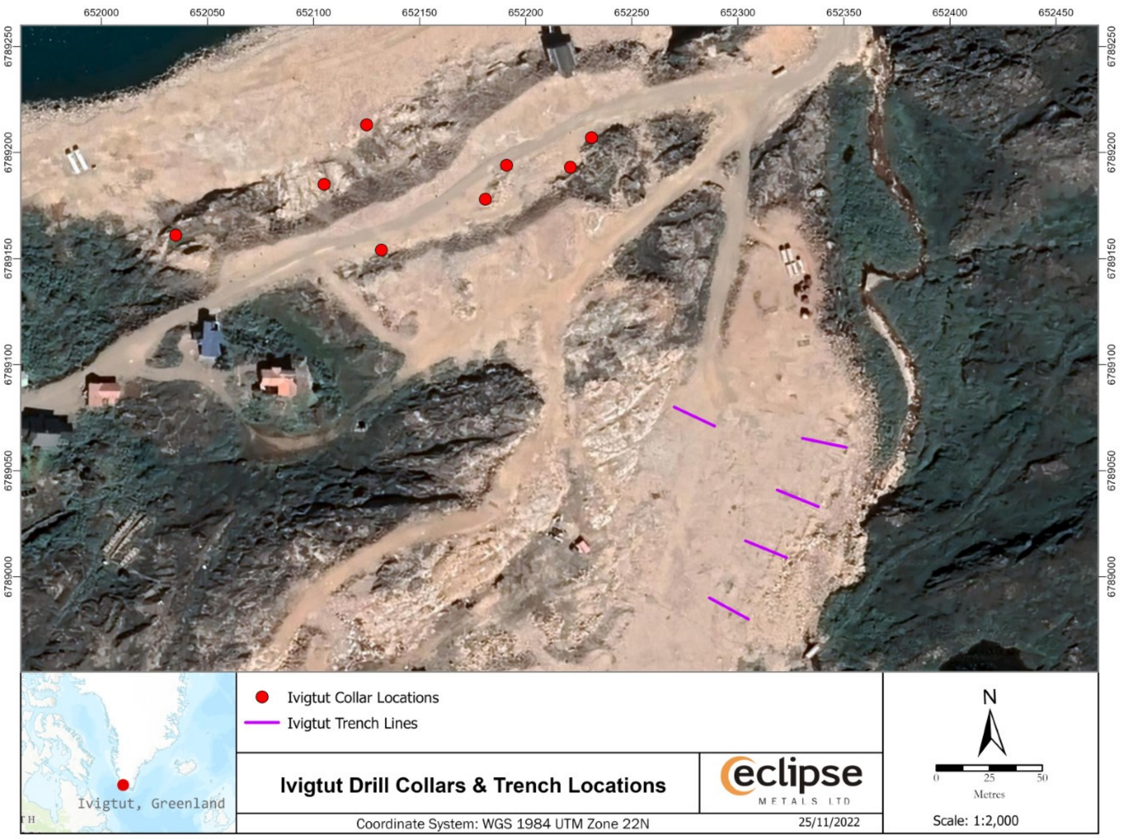


Figure 3: Ivigtût target area. Drill collars are marked with red dots. Bulk sample trenches are marked with purple lines. Assays are expected to be available toward the end of Q1 2023.

Figure 4: Crushing material from the Ivigtût waste dumps in Greenland down to 30mm.

Figure 5: Crushing material from the Ivigtût waste dumps in Greenland down to 30mm.

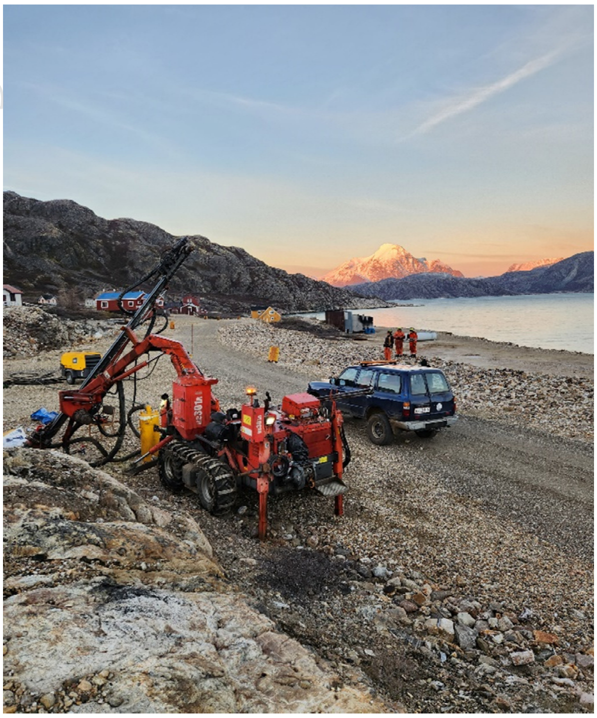
Surface sample from waste dumps provided encouraging results of 165g/t silver, 0.15% copper, 3.83% lead and 0.37% zinc (ASX Announcement dated 24 March 2022).

Laboratory results from the mineralised waste dumps returned relatively low TREO values, ranging from 2.26 to 161.44ppm, however the ratio of high-demand heavy to light REE is considered to be very encouraging. Chemical and petrological assessment of the bulk samples in Australia will provide the Company with data to estimate commercial potential in the waste dumps.

Eclipse is considering a Ground Penetrating Radar (GPR) survey for the Ivigtût precinct to assist with an assessment of the potential volume of mineralised waste material. By calculating the size of the open pit and access tunnels and subtracting the cryolite concentrate that has been exported, it can be estimated that 2 to 5Mt of ROM waste was deposited in the dumps as well as for landfill purposes during a century of mining. There has been no comprehensive commercial assessment for other critical metals.

Figure 6: Samples are packed in containers for shipment to Perth, WA.

Figures 7-12 below: Images from Eclipse's recent drilling program in Greenland



Hole ID	UTM-East	UTM-North	Elevation-metres	Azimuth degrees [˚]	Dip degrees [˚]
L3-9	6791149	658872	366	140	70

***Table 2**: Hole L3-9 Drill Collar Information*

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, 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 report template

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.*	• Percussion drilling was carried out at the Ivigtût / Grønnedal project in South Western Greenland. • All samples to be analysed at an Australian laboratory for rare earth elements and base metals but routinely also for other major and trace elements. • QA/QC procedures include duplicate sub-set of samples.
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).*	• Hydraulic top-hammer percussion drilling, bit diameter 51 mm. • Dust / chip sampling equipment Using 1.5 and 2m sample intervals, the typical sample size was between 5 and 15kg.
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.*	• All samples weighed. • Most samples came out with more than 90% recovery. • Few of the samples came out with a recovery less than 50% due to a combination of topographic challenges, the nature of the geology, limitations of equipment. Recorded in logs.
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.*	• All drill intersections were logged using a standard protocol. • Particle size from percussion drilling is sand to silt. • Logging include description of color, magnetic susceptibility and scintillometer (total) readings of each sample.

Criteria	JORC Code explanation	Commentary
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Length of intersection and weight of sample recorded.
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.*	• Most samples were split twice using a riffle splitter so that about 25% representative sample was shipped for assays and about 75% of the sample was kept as reference. Samples less than 10 kg were only split once. • Samples were dry. • Sample splitter and sample containers were cleaned using compressed air after each sample. • The weight of each sample and sample length were recorded prior to splitting. • The sample sizes appear to be appropriate to medium- to fine grained nature of the exposed rocks. • Samples were labelled and bagged in plastic bags that was sealed. • Samples where packed in drums in number order. Drums were clearly marked with consecutive numbers.

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.*
		• All samples are to be analysed at an Australian laboratory for rare earth elements and base metals but routinely also for other major and trace elements.
		• All samples were tested in the field for magnetic susceptibility, and with scintillometer readings using:
		  ○ KT-10 handheld magnetic susceptibility meter.
		  ○ RS-120 handheld scintillometer.
		• Randomly selected drill holes were tested in the field using:
		  ○ Niton XL3t handheld XRF.

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.*	• All field geological data is logged into excel spreadsheets.
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.*	• Location of all drill holes at Grønnedal and Ivigtut were recorded in the field using handheld GPS and stored in the drill hole database. • Drill holes were shorter than 25 meters and holes were not surveyed.

Criteria	JORC Code explanation	Commentary
	• *Quality and adequacy of topographic control.*	
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.*	• Drill holes were short (less than 25 meters) reconnaissance holes and not designed for continuity testing. • Drilling was for purely reconnaissance purposes and not for resource estimation.
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.*	• Drill holes were short (less than 25 meters) reconnaissance holes. • The orientation of mineralized structures is unknown.
Sample security	• *The measures taken to ensure sample security.*	• Samples are put into plastic bags, packed into drums, four drums are placed on a pallet and then loaded into a 20-foot sea container and shipped directly to ALS Australia.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits undertaken.

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.*	• All drilling has been completed within exploration licence MEL2007-45 with licence terms outlined by the Greenland Minister of Finance, Industry and Minerals Resources. The licence holder is Eclipse Metals Greenland (wholly owned subsidiary of Eclipse Metals Ltd). • The tenure is in good standing with no impediments.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Kryolitselskabet Øresund mined the Cryolite deposit from 1854 to 1987. Minor galena mining also took place in the early years. After second world war about 200 holes were drilled totaling approx. 20,000 metres at or close to the mine site. • Kryolitselskabet Øresund conducted a magnetic survey covering the area around Grønnedal. 6 holes totaling 750 metres were drilled and

Criteria	JORC Code explanation	Commentary
		two 100 metre long trenches dug to test the iron ore (magnetite) potential of the area.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Ivigtût cryolite deposit belongs to the geological Gardar province that elsewhere in South Greenland is host to large resources of critical minerals. The deposit was mined between 1854 and 1987 during which a total of 3.7 Mt high grade cryolite ore was produced. The mining economy relied almost exclusively upon the value of the cryolite itself, even though many secondary minerals also occurred. The mine left a hole with a diameter of approximately 200 meter and a depth of 60-70 meter as well as two access tunnels. Mine waste consists primarily of run of mine (ROM) material in the range of 10 kg in size. • The Ivigtût cryolite ore occurs as a coherent body in the upper part of a columnar granite intrusion. The granite has a diameter of about 300 m, while the cryolite body in the centre occupied an oval shaped lens with a cross sectional area of 100 x 200 m and a thickness of 50-60 m. The granite is surrounded by a crush zone (breccia) that indicates a forceful emplacement, breaking through the basement rocks. A series of volatile elements separated from the still liquid deeper part of the magma and became concentrated in a residual smelt. This enriched residue migrated upwards and invaded the top of the columnar granite body where the volatile elements reacted with the already solidified part of the intrusion. The fluorine-rich magma phases crystallised as a number of cryolite bodies. The very unusual chemical composition of the cryolite occurrence has meant that the cryolite deposit also contains many rare minerals. A total of 114 different minerals have been recorded of which many were new and described for the first time with Ivigtût as their type locality. • The Grønnedal-Ika Complex belongs to the geological Gardar Province that elsewhere in South Greenland is host to a number of critical elements. The complex is dominated by layered nepheline syenites which were intruded by a xenolithic syenite and a central plug of calcite to calcite–siderite carbonatite. A classical carbonatite type LREE-dominated rare earth mineralisation has been known in the area. During the last couple of years unusual, rare earth mineralised rocks have been located in the area with Pr/La and Nd/Ce ratios around 1:2.

Criteria	JORC Code explanation	Commentary
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.*	• All details are tabulated in tables with the announcement
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.*	• Awaiting analytical results.
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').*	• All details will be captured and recorded with full analytical results. .
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.*	• to be completed on receipt of analytical results.
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.*	• Awaiting analytical results.
Other substantive	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical*	• Re-logging of historic drill core is planned. Comprehensive report to be compiled on receipt of analytical results and assembly of

Criteria	JORC Code explanation	Commentary
exploration data	*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.*	geological / geophysical data.
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.*	• Further work dependent on results from current program. • A comprehensive report will be compiled on receipt of all results.