28 July 2023

Quarterly Activities Report and Appendix 5B

For the Quarter ending 30 June 2023

Eclipse Metals Ltd (ASX: **EPM**) (**Eclipse** or the **Company**) (ASX: **EPM** | FSE: **9EU**) is pleased to report its activities for the quarter ending 30 June 2023.

HIGHLIGHTS

IVIGTÛT AND GRØNNEDAL PROJECTS

- **Sampling of deep diamond drillhole (Hole A) drilled into the centre of the historic Ivigtût mine in 1948 provides new insights into the polymetallic mineralisation.**
- **Hole A intersected a 12.7m upper zone of iron-zinc mineralisation and a 3.7m lower iron-zinc-copper zone, both accessible from Ivigtût's existing pit.**
- **Historic drill holes into these zones returned maximum assay values of 1.7% Cu, 18.2% Zn and 7.7% Pb.**
- **pXRF analysis of the historic drill core has detected gold, silver, bismuth, tin and tungsten within the iron-zinc ± copper zones, warranting further investigation.**
- **Analysis also detected elevated niobium in the greisen body underlying the lower iron-zinc-copper zone. The greisen is known to be enriched in REE, niobium, tin, tantalum and tungsten. Further investigation is warranted.**
- **Encouraging mineralogical determinations from Grønnedal, with composite ferro-carbonate mineral containing elevated medium to heavy REE**
- **Grønnedal Pr+Nd account for 55% of the measured 4REE (La+Ce+Pr+Nd)**
- **Ongoing assessment of material found over a wide area in Grønnedal**
- **Eclipse completes scoping phase of Environmental and Social Impact Assessments for Ivigtût and submitted reports to Greenland's Mineral Licence and Safety Authority (MLSA) to progress the Ivigtût project**
- **Completion of these are integral to applying to the MLSA for a Mining Licence**
- Field Work Application approved by Greenland's Mineral Licence and Safety Authority (MLSA).
- **Collaboration with University of Delaware regional development study expected to assist with Eclipse's Social Impact Assessment**
- **Working closely with the laboratory in Australia to analyse samples from Ivigtût and Grønnedal**

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IVIGTÛT (IVITTUUT) PROJECT– GREENLAND

Sampling of Historic Ivigtût Drill Core confirms Polymetallic Mineralisation

During the quarter, Eclipse gained access to historic drill core from Exploration Drillhole A (Hole A) (Figure 1), which was drilled vertically into the centre of the Ivigtût multi-commodity deposit in Greenland in 1948.

Examination of Hole A by Eclipse has served to visually corroborate reports of mineralisation remaining under the present Ivigtût pit floor (Bondam, 1991). The assessment has also served to substantiate significant grades of zinc in a previously identified southwest-dipping tabular body (Domain 2) located directly beneath Domain 1 of the mined cryolite-fluorite body (Figures 2 and 3) (ref ASX announcement dated 10th March 2021).

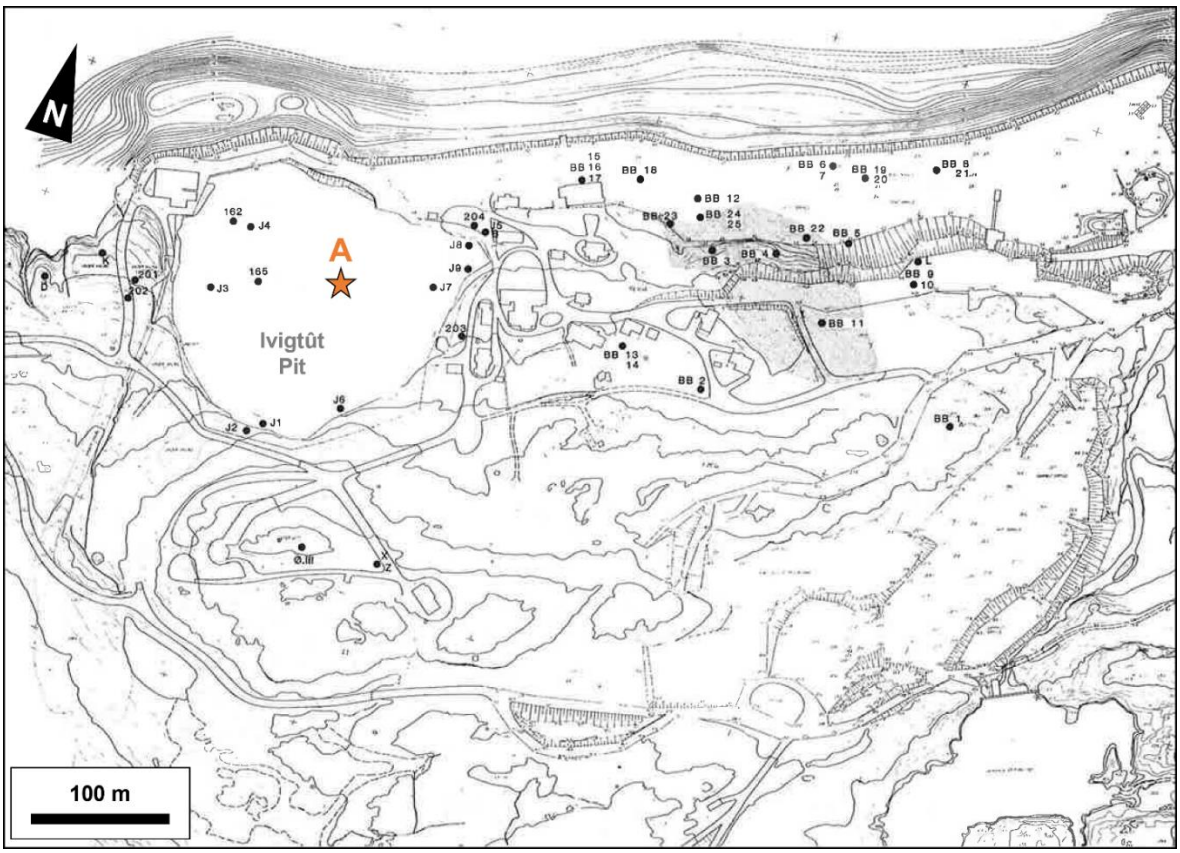

Figure 1. Location of Exploration Drillhole A, which was drilled vertically from the bottom of the pit (54.00m below sea level) into the centre of the Ivigtût multi-commodity deposit in 1948. Collar details are provided in Table 1.

Spot measurements taken with a portable X-ray fluorescence analyser (pXRF) returned promising zinc and niobium results from certain downhole intervals of Hole A, along with highly anomalous spot values of lead, copper, gold, silver, bismuth, tin and tungsten (Figure 4). Whilst zinc (results ranging from 0.3% to 18.2% Zn), copper (0.04% to 1.7% Cu) and lead (0.05% to 7.7% Pb) are known from the historic Ivigtût drillhole assay data (ref ASX announcement dated 10th March 2021), the presence of niobium as well as gold, silver, bismuth, tin and tungsten warrants further investigation.

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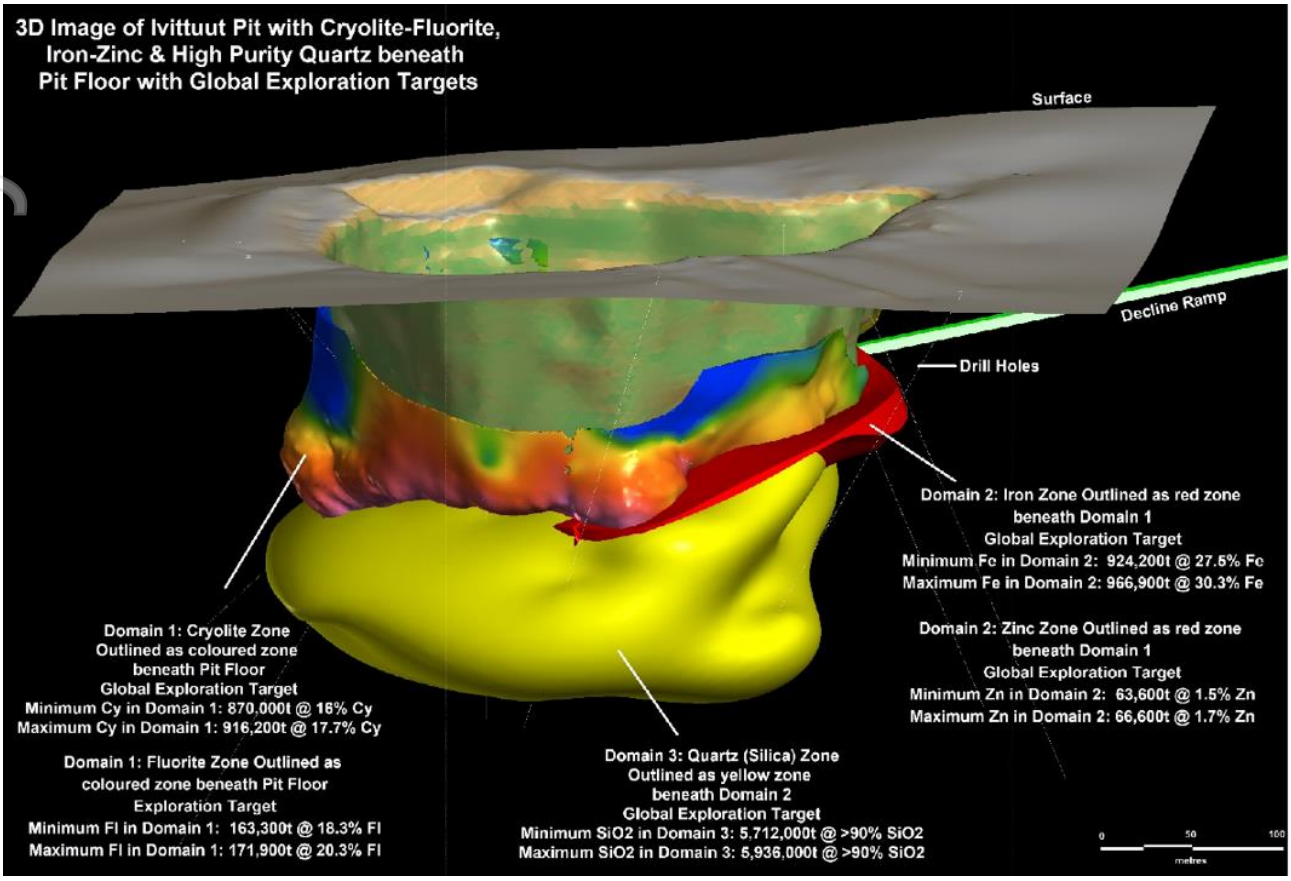

Figure 2. 3D oblique image showing modelled metallogenic domains D1, D2 and D3 below the Ivigtût pit floor. Also shown is the decline, which leads to the historic underground workings (ref ASX announcement dated 29th March 2021). Cautionary Statement: The potential quantity and grade of the Exploration Targets is conceptual in nature. There has been insufficient exploration work conducted to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. The Exploration Target has been prepared based on actual exploration results described in this report including historical drilling data and geological modelling.

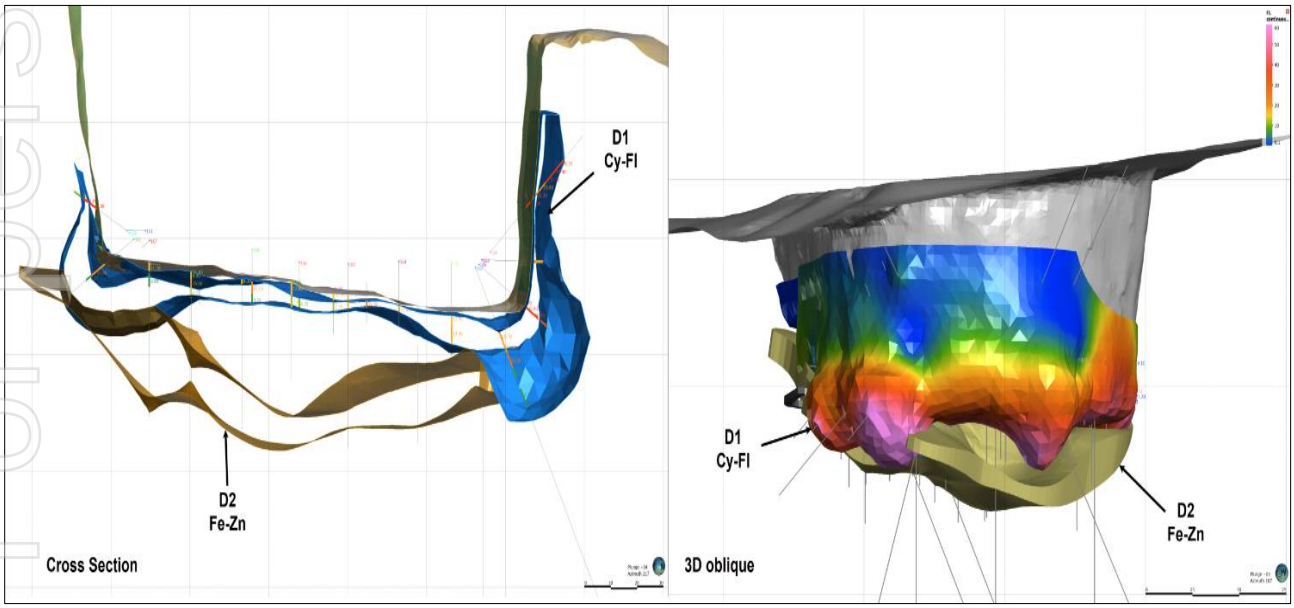

Figure 3. Cross section and 3D view of metallogenic domains D1 (cryolite and fluorite) and D2 (iron and zinc) (ref ASX announcement dated 10th March 2021).

About Exploration Drillhole A (Hole A)

Hole A, a diamond drillhole drilled vertically from near the centre of the Ivigtût pit floor (Figure 1), was collared 54.00m below sea level and drilled a total length of 502.62 m (Table 1). The hole was completed in 1948.

The main aim of Hole A was to locate additional cryolite zones below the 1948 pit floor, as cryolite was the focus of previous mining at Ivigtût.

The historic drill core from Hole A is held by the University of Copenhagen, Denmark, and available for visual, non-destructive inspection.

Metallogenic domains of the Ivigtût multi-commodity deposit

The Ivigtût deposit can be broadly divided into three metallogenic domains (Figures 2 and 3) (ref ASX announcements dated 10th March 2021 and 29th March 2021):

Domain 1 (D1) (cryolite and fluorite) is a circular feature measuring approximately 200m in diameter, developed immediately below the base and lower edges of the open pit. Immediately below the open pit this domain averages 6m, ranging between 4m and 25m true thickness. At the lower corners of the pit the domain bulges out to a thickness of up to 30m.

Domain 2 (D2) (iron and zinc) is an essentially flat to shallow southwest-dipping tabular body located directly beneath D1. Under the central part of the pit the vertical separation between D1 and D2 is approximately 25m. Towards the pit perimeter, the two zones intersect. Zinc mineralisation within D2 is considered to have a very close association with occurrence of siderite (iron carbonate). Historical drilling campaigns only assayed for base metals to a limited extent with little work focusing on potential zinc mineralised lodes. Some of the drilling has yielded high grade base metal values such as 1.7% Cu, 18.2% Zn and 7.7% Pb (ref ASX announcement dated 10th March 2021) hosted within the iron (siderite) mineralised lode. There is evidence of limited historic underground extraction below the northern part of the pit. These workings appear to have focused on a zone of higher-grade zinc below D1. Most of the zinc mineralisation is hosted within >30% Fe-rich zones and remains largely untested.

Domain 3 (D3) (quartz) lies directly below the cryolite-fluorite and iron-zinc zones. It forms a flat roughly circular intrusive body 220m in diameter with a thickness of approximately 90m comprising of high-grade quartz.

Inspection of Hole A

Logging of the upper portion of Hole A, from 0m to 221m down hole, identified several distinct zones (Figure 4), including cryolite, siderite, zinc, greisen, quartz and zinc-copper zones, which are broadly consistent with the previously identified and modelled domains D1 (cryolite and fluorite) and D2 (iron and zinc) and D3 (quartz) (ref ASX announcements dated 10th March 2021 and 29th March 2021).

The zinc-rich mineralisation intersected in Hole A (Figures 4 to 6) corresponds to D2 with the upper zone from 27.15m being 12.7m thick. and lower iron-zinc-copper zone from 86.2 m being 3.7 m thick. The iron-zinc zones are separated by a 49.7 m thick interval of quartz.

The upper iron-zinc zone (Figure 5) is comprised of quartz, siderite, sphalerite and marmatite (a black, iron-rich variety of sphalerite). Spot pXRF measurements also detected trace concentrations of copper and gold.

The lower iron-zinc-copper zone has many similarities with that of the upper zinc zone but the marmatite of the lower zone is intergrown with chalcopyrite, galena and pyrite (Figure 6). Spot pXRF measurements detected appreciable levels of copper, gold and silver.

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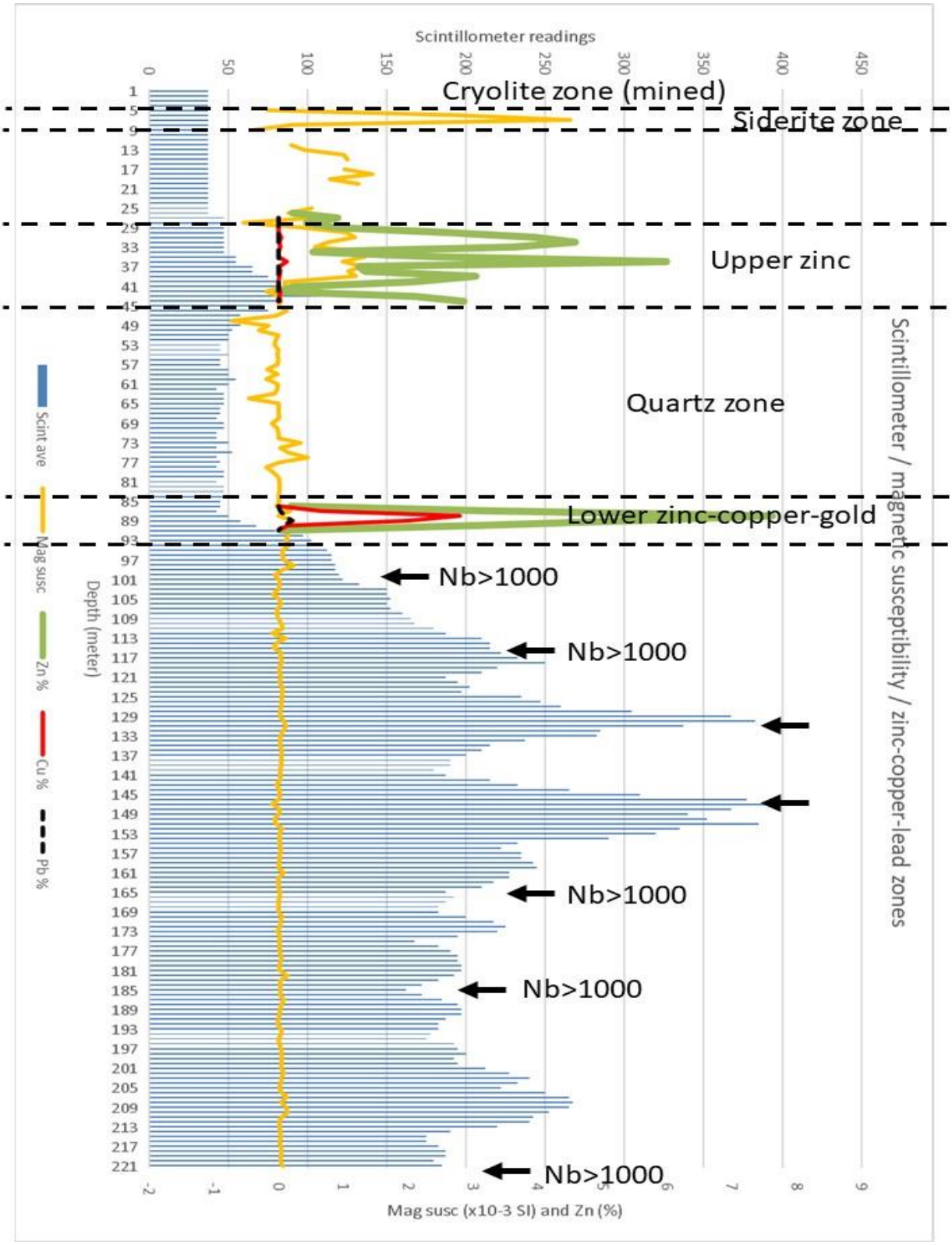

Figure 4. Downhole log for the upper 221 m of Hole A showing scintillometer, magnetic susceptibility and generalised zinc (Zn), copper (Cu), lead (Pb) and niobium (Nb) pXRF readings.

Ivigtût mine dump samples collected by Eclipse, which returned assay results of up to 165.00 g/t silver, 0.14% copper, 3.83% lead and 0.37% zinc (sample I21012; ref ASX announcements dated 10th March 2021), further corroborate the multi-commodity potential of the Ivigtût deposit and clearly demonstrate the need to better understand the distribution of these metals within the deposit, and whether some of these metals could represent economically viable by-products.

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***Figure 5**. Diamond drill core from Hole A, upper zinc zone (approximately 26.8 to 35.2m down hole), showing siderite and sphalerite mineralisation in a quartz host with black marmatite, an iron-rich variety of sphalerite.*

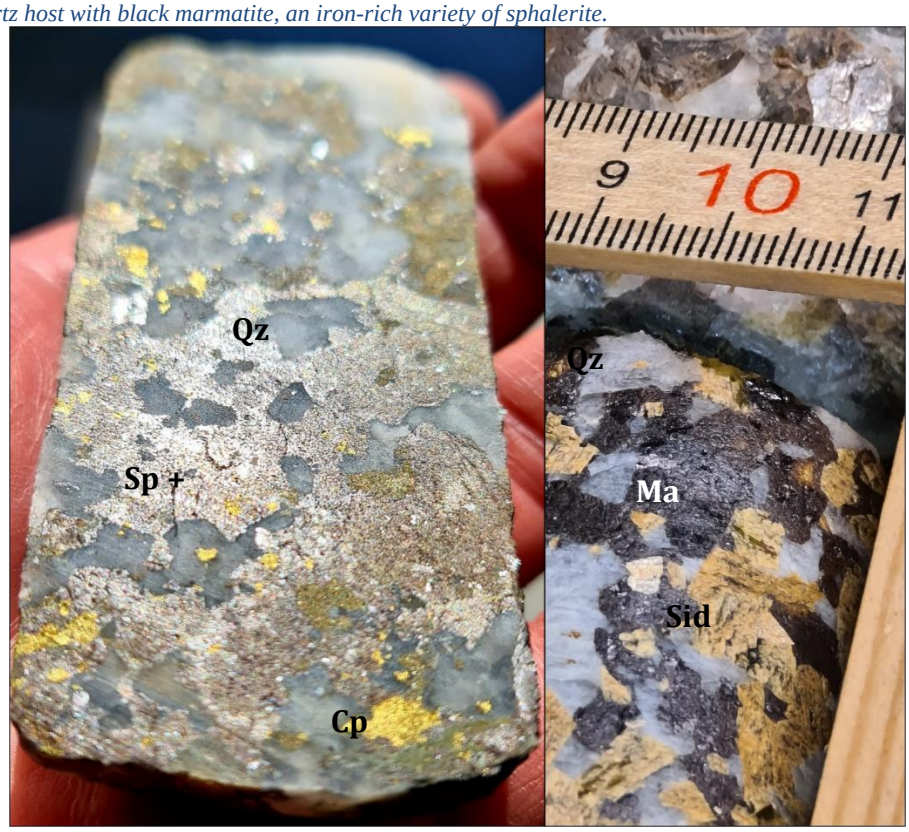

***Figure 6.** Left image: Half-core (width approximately 40mm) showing semi-massive marmatite (Mar), sphalerite (Sp) and chalcopyrite (Cpy) in a quartz (Qz) host. The piece of core shown is from the lower zinc-copper zone (86.2 to 89.9m), which has been visually estimated to consist of ~40% quartz (Qz) and ~60% sulphides with the sulphides comprising ~40% sphalerite, ~5% marmatite and ~5-10% chalcopyrite. The balance (~5-10%) is comprised of sulphide minerals that are too small to positively identify. Right image: Drill core showing semi-massive, coarse-grained siderite (Sid) and marmatite (Mar) in a quartz (Qz) host. The piece of core shown is from the upper zinc zone (27.15m to 39.85m), which has been visually estimated to consist of ~50% quartz, ~40% siderite and ~2 to 10% sulphides with the sulphides almost exclusively comprising of marmatite.*

Analysis of the historic drill core by pXRF has also detected elevated niobium in the greisen body underlying the lower iron- zinc-copper zone. The greisen is known to be enriched in REE, niobium, tin, tantalum, and tungsten (ref ASX announcement dated 24th March 2022).

Further investigation of the mineralisation potential of the greisen is clearly warranted. Figure 1a. Location of Exploration Drillhole A, which was drilled vertically from the bottom of the pit (54.00m below sea level) into the centre of the Ivigtût multi-commodity deposit in 1948.

Academic studies:

Towards the end of the quarter, the Company collaborated with academic universities to fast-track research studies into the environmental and social impact of the project area. In early July, a team of six scholars from three European universities visited the project site for ten days to conduct various studies and sample the area. The company requested a specific assignment from two prominent academics, Professor Adrian Finch from the University of St Andrews and Professor Henrik Friis from the University of Oslo, for a better understanding of the Lithium and Gallium potentials in the Ivittuut environment. The professors further explored the potential of Gallium and Lithium which had been delineated in surface sample laboratory results.

The Company announced anomalous Lithium concentration in the Greenlandic project area on March 23rd, 2022 and on 24 March 2022, the Company's sampling results from the project area identified the potential of a multi-commodity polymetallic pit environment within Ivittuut . Eclipse's bulk sampling was targeting industrial minerals and metals in Ivittuut waste dump and delineated Gallium values of above 70ppm in sample I21007. The bulk samples also delineated Cryolithionite (Li3Na3Al2F12), a globally rare lithium-bearing fluoride mineral first described from Ivigtût . During early July 2023, Professor Adrian Finch from the University of St Andrews and Professor Henrik Friis from the University of Oslo visited the project and collected various samples for further assessment of Gallium and Lithium-bearing mineral Cryolithionite.

Approval for program of work

During the quarter, the Company compiled submissions for a program of work that included diamond drilling to be completed in the upcoming field seasons. The program of work also includes water sampling from the pit environment as a requirement for dewatering the pit and to suffice for impact assessment. In addition, a trenching and wet saw cutting of the dykes surrounding the pit environment is proposed for future work in order to better understand the breccia outcrop which are known to contain rare earth elements (REE).

Promising Mineralogical Results at Grønnedal REE Prospect

During the quarter promising results were received in relation to Eclipse'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.

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Figure 7: 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 8: 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.

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.

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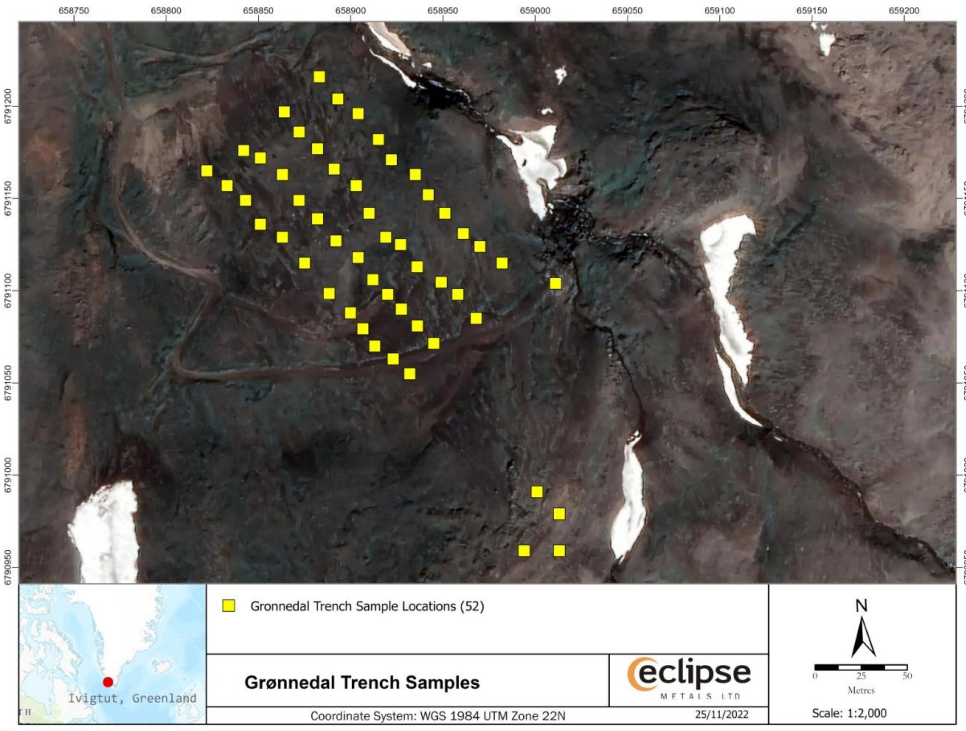

Figure 9. Grønnedal trenching area marked in yellow.

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.

Grønnedal Trenching Results Confirm Neodymium-Rich REE Mineralisation

Subsequent to the quarter on 25 July 2023 the Company announced the assay results from 52 trenches completed at Grønnedal in October 2022. Trench sample assays confirm high neodymium oxide (Nd_2O_5) ratios of up to 56% of total rare earth oxides (TREO) with an average of 31%. Pr+Nd assay results account for 60% of calculated TREO, indicating that the Grønnedal mineralisation is enriched in the more valuable REE of Pr and Nd.

- Best assay results from Grønnedal trenching program include:
  - L1-2: 1.0m @ 16,444 ppm TREO from 1.0-2.0m (Nd_2O_5 ratio = 26%);
  - L1-4: 0.5m @ 15,923 ppm TREO from 0.0-0.5m (Nd_2O_5 ratio = 27%);
  - L2-11: 0.5m @ 10,571 ppm TREO from 0.0-0.5m (Nd_2O_5 ratio = 29%);
  - L2-3: 2.0m @ 12,911 ppm TREO from 1.0-2.0m (Nd_2O_5 ratio = 27%);
  - L3-8: 1.0m @ 9,341ppm TREO from 0.0-1.0m (Nd_2O_5 ratio = 56%);
  - L3-5: 1.0m @ 13,452 ppm TREO from 1.0-2.0m (Nd_2O_5 ratio = 36%);
  - L5-11: 1.5m @ 11,630ppm TREO from 0.0-1.5m (Nd_2O_5 ratio = 30%); and
  - L5-12: 0.5m @ 6,317ppm TREO from 0.0-0.5m (Nd_2O_5 ratio = 45%).

Laboratory results for the over-limit values (+1,000ppm) for 28 out of 52 (C. 54%) trench samples have now been received following further testing using appropriate methods.

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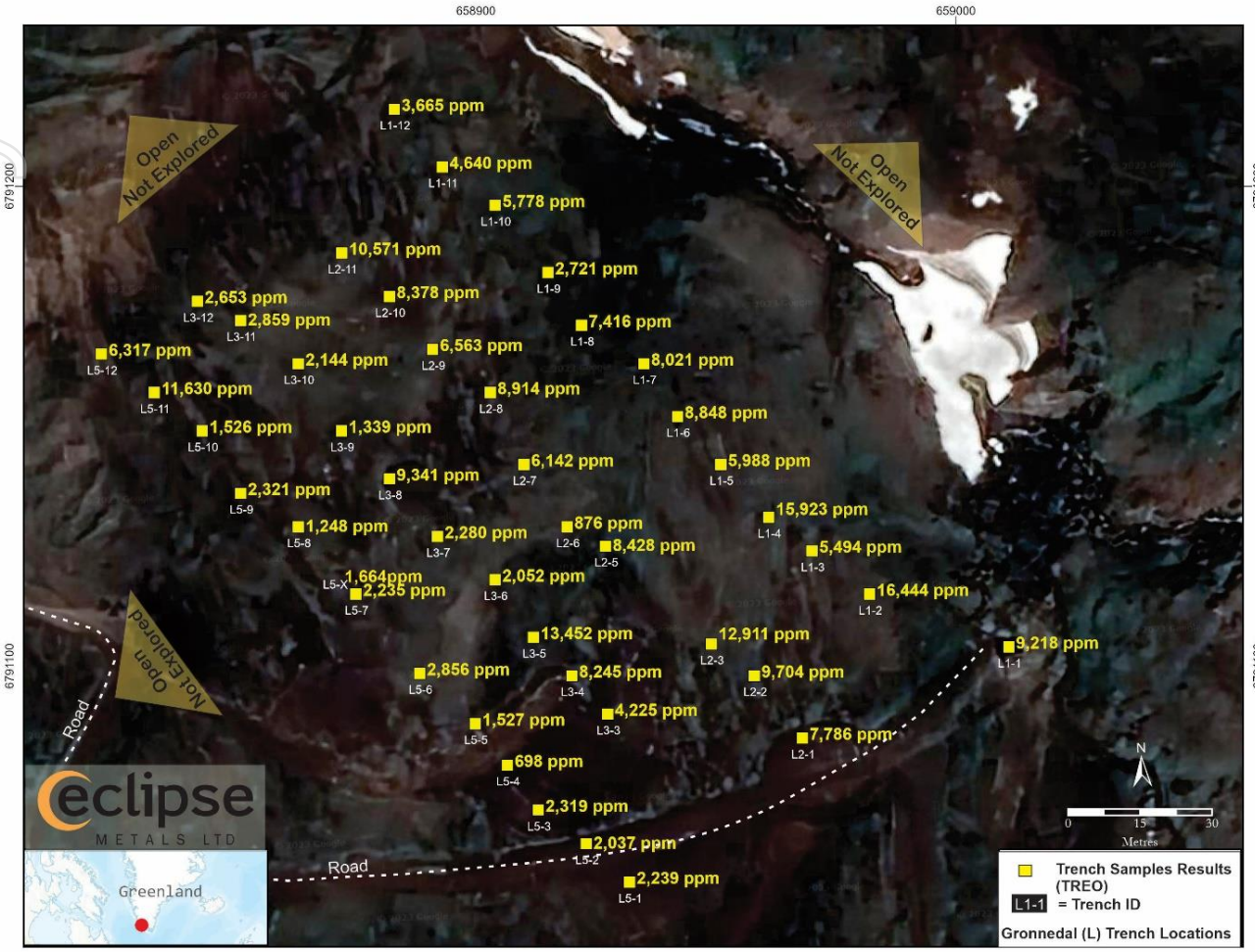

Figure 10. Grønnedal trench sample results in the lower section with REO mineralisation in all trenches. Note that, to date, only a small fraction of this prospect has been explored and that the system is open in all directions.

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 laterally extensive and deep-seated (refer to ASX announcement dated 19 May 2022).

There are three types of Gardar intrusions at the Ivigtût multi-commodity project:

A) Late-stage, mainly carbonatite dykes.
B) The Grønnedal alkaline intrusion with its associated carbonatites.
C) The Ivigtût cryolite pipe (adjoining Bunka Breccia).

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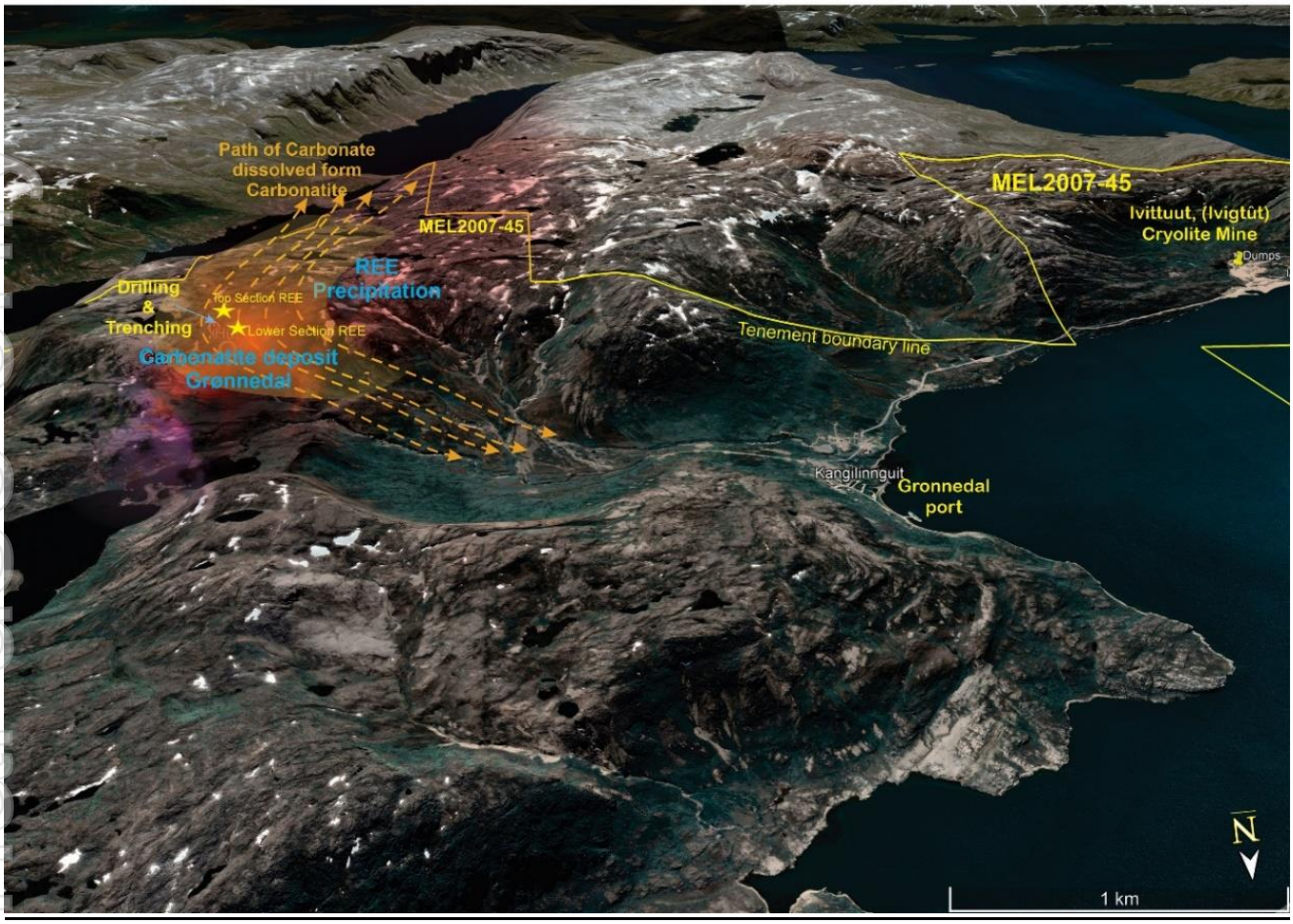

Figure 11: Grønnedal prospect exploration area and the concept of leaching $CaCO_3$ from carbonatite with the REE precipitating at the top of the hill.

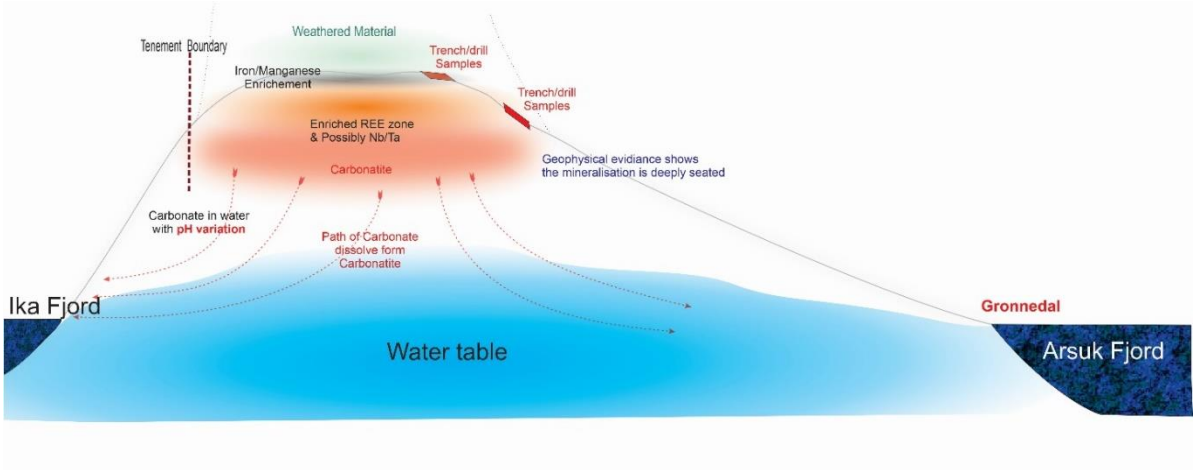

Figure 12: Conceptual illustration of the REE precipitation with carbonatite leaching $CaCO_3$ into the water table between the two fjords, concentrating remaining REE.

Trends associated with the distribution of the REE are complex, indicating enrichment at depth through leaching and precipitation below the surface. The diagram above shows calcium carbonate ($CaCO_3$) leaching in rainwater from higher areas via fault and fracture systems with $CaCO_3$ precipitating in cold sea water as the famous Ikka Columns, located outside the tenement boundary.

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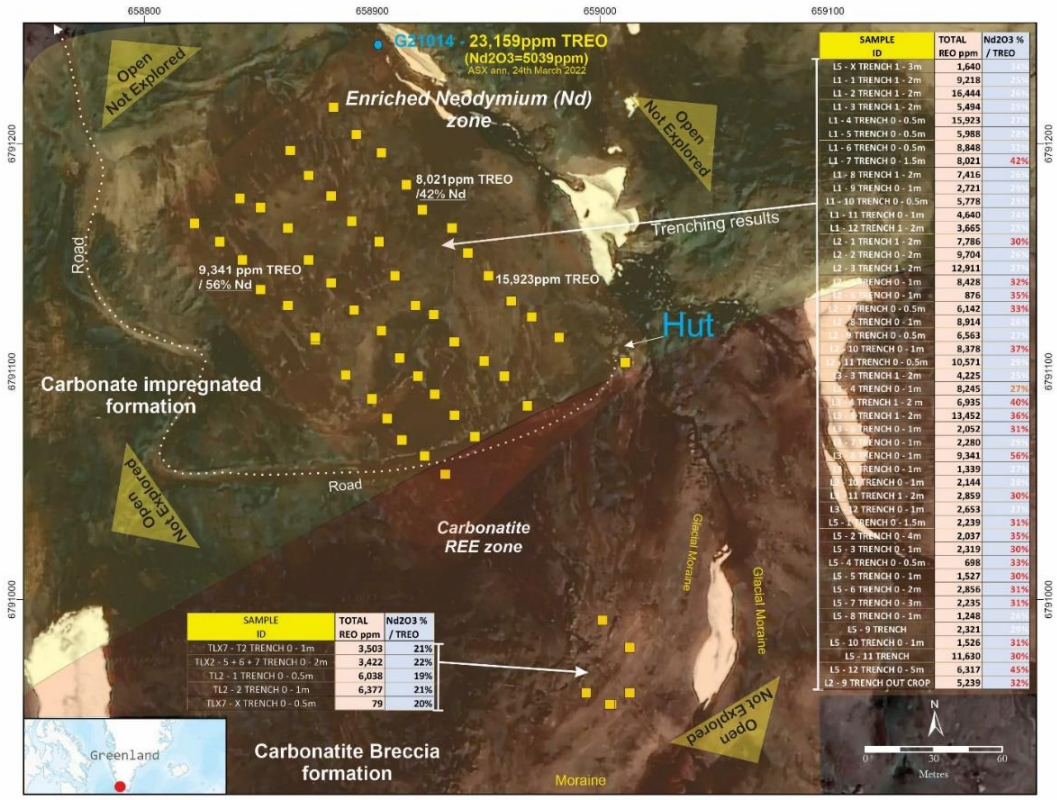

Figure 13: Conceptual overlapping styles of carbonate impregnated formations and carbonatite breccia formation within the carbonatite REE mineralisation

Discussion

Overall, analysis of the Grønnedal trench samples in the carbonate-impregnated formation 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, has been confirmed by laboratory assay results across the Grønnedal complex or a significant part thereof, and 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. Laboratory results also show a relatively large proportion of Pr and Nd comprising up to 60% of TREO in Trench L3 - 8.

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)*

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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 the proportions of individual REOs in the product multiplied by the price of the individual REOs.

Table A: Significant neodymium percentages in TREO results are highlighted in red.

SAMPLE ID	TOTAL REO ppm	Nd_2O_3 % / TREO	Pr_6O_{11} % / TREO	(Pr_6O_{11} + Nd_2O_3)%	SAMPLE ID	TOTAL REO ppm	Nd_2O_3 % / TREO	Pr_6O_{11} % / TREO	(Pr_6O_{11} + Nd_2O_3)%
L5 – X - 1 - 3m	1,640	34%	7%	41%	L3 - 4 - 0 - 1m	8,245	27%	6%	33%
L1 - 1 - 1 - 2m	9,218	25%	6%	31%	L3 - 4 - 1 - 2 m	6,935	40%	5%	45%
L1 - 2 -H 1 - 2m	16,444	26%	6%	32%	L3 - 5 T- 1 - 2m	13,452	36%	6%	42%
L1 - 3 - 1 - 2m	5,494	25%	6%	31%	L3 - 6 - 0 - 1m	2,052	31%	6%	37%
L1 – 4- 0 - 0.5m	15,923	27%	6%	33%	L3 - 7 - 0 - 1m	2,280	29%	7%	36%
L1 - 5 - 0 - 0.5m	5,988	28%	6%	34%	L3 - 8 - 0 - 1m	9,341	56%	4%	60%
L1 - 6 - 0 - 0.5m	8,848	32%	6%	38%	L3 - 9 - 0 - 1m	1,339	27%	5%	32%
L1 - 7 - 0 - 1.5m	8,021	42%	5%	47%	L3 - 10 - 0 - 1m	2,144	28%	7%	35%
L1 - 8 - 1 - 2m	7,416	26%	6%	32%	L3 - 11 - 1 - 2m	2,859	30%	6%	36%
L1 - 9 - 0 - 1m	2,721	29%	6%	35%	L3 - 12 - 0 - 1m	2,653	27%	6%	33%
L1 - 10 - 0 - 0.5m	5,778	25%	6%	31%	L5 - 1 - 0 - 1.5m	2,239	31%	6%	37%
L1 - 11 - 0 - 1m	4,640	24%	6%	30%	L5 - 2 - 0 - 4m	2,037	35%	7%	42%
L1 - 12 - 1 - 2m	3,665	25%	5%	30%	L5 - 3 - 0 - 1m	2,319	30%	6%	36%
L2 - 1 - 1 - 2m	7,786	30%	6%	36%	L5 - 4 - 0 - 0.5m	698	33%	7%	40%
L2 - 2 - 0 - 2m	9,704	26%	6%	32%	L5 - 5 - 0 - 1m	1,527	30%	6%	36%
L2 - 3 - 1 - 2m	12,911	27%	6%	33%	L5 - 6 - 0 - 2m	2,856	31%	6%	37%
L2 - 5 - 0 - 1m	8,428	32%	6%	38%	L5 - 7 - 0 - 3m	2,235	31%	6%	37%
L2 - 6 - 0 - 1m	876	35%	6%	41%	L5 - 8 - 0 - 1m	1,248	26%	7%	33%
L2 - 7 - 0 - 0.5m	6,142	33%	6%	39%	L5 - 9 - - 0 - 1m	2,321	29%	7%	36%
L2 - 8 - 0 - 1m	8,914	26%	6%	32%	L5 - 10 - 0 - 1m	1,526	31%	7%	38%
L2 – 9-H 0 - 0.5m	6,563	27%	6%	33%	L5 – 11- - 0 - 1m	11,630	30%	6%	36%
L2 - 10 - 0 - 1m	8,378	37%	6%	43%	L5 – 12 0 - 0.5m	6,317	45%	5%	50%
L2 – 11- 0 - 0.5m	10,571	29%	6%	35%	L2 - 9 OUT CROP	5,239	32%	6%	38%
L3 – 3 - 1 - 2m	4,225	25%	6%	31%					

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% Gd2O3 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.

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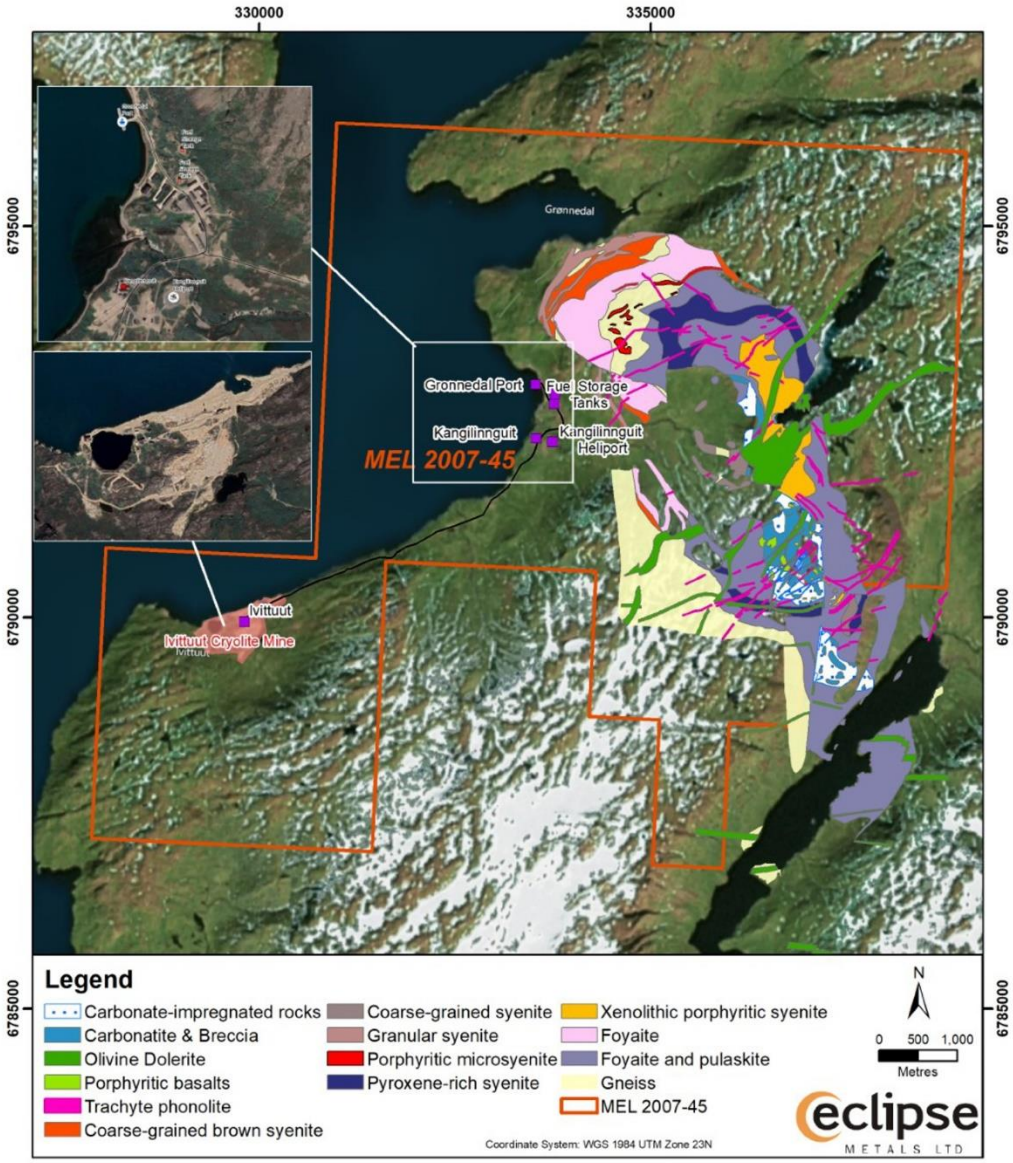

Figure 14. MEL 2007-45 Location Map, showing the geology of the Grønnedal covering nepheline syenite with a carbonatite plug.

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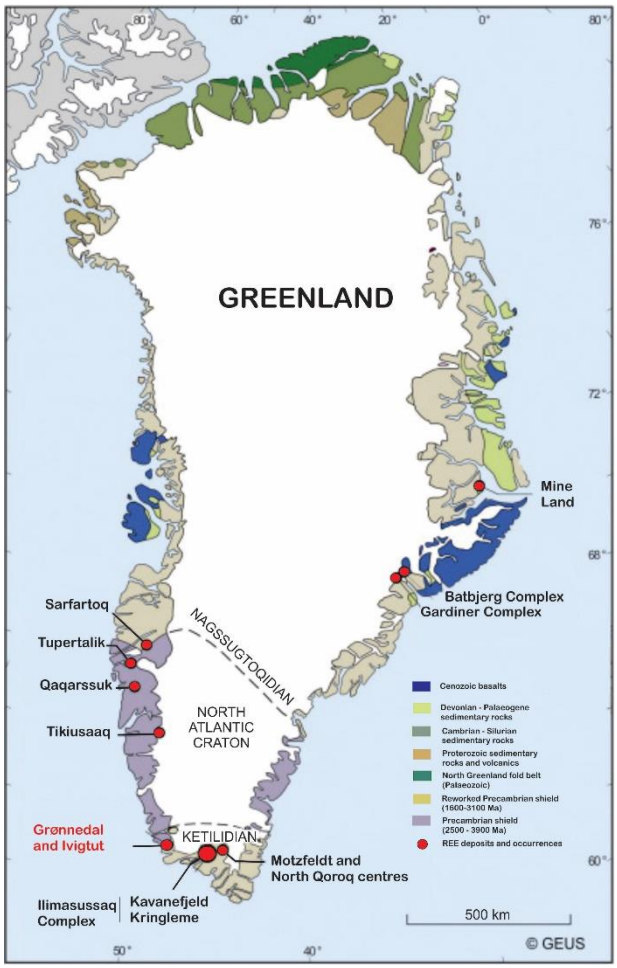

Figure 15. Greenland REE Deposits and location of Grønnedal and Ivigtût

First phase of Environmental and Social Impact Studies

Eclipse completed scoping phase reports of Social and Environmental Impact Assessments for its Ivigtût project in southwestern Greenland, with the assistance of Danish consultancy, COWI. Eclipse has submitted the reports to Greenland's Mineral Licence and Safety Authority (MLSA) to progress the Ivigtût project.

The scoping phase of the Environmental and Social Impact Assessments aims to identify potential environmental, social, and socioeconomic issues related to the project. This study is essential to the pre-consultation and early involvement of the various stakeholders in the Greenland project.

Data for each of the studies will be collected through published literary reviews, sampling and fieldwork, surveying, local knowledge, data entry, analysis and reporting. Results and findings of these studies will be used to form part of the final assessments, which are required as part of the application to the MLSA for a mining licence in Greenland.

The Environmental Impact Assessment (EIA) will focus on pollution, impacts to flora and fauna, local use, and determining the chemical composition and acid generating potential of ore, waste rock, tailings, and other products, including process chemicals. Ecological toxicity tests will also be carried out as part of the environmental scoping study.

The Social Impact Assessment (SIA) will run in parallel with the EIA and will present and analyze information about the social, economic, and health conditions in Greenland. It will construct a baseline of socio-economic data, including monitoring changes in communities that may be affected by the project components. As part of the study, the Company will interact with affected residents and communities during data collection to

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exchange information on project activities and allow stakeholders to provide feedback about relevant issues to include in the baseline.

NORTHERN TERRITORY – URANIUM PROJECTS

The Company has been liaising closely with Central Land Council (CLC) in further progressing tenements in the Northern Territory. The company is also in discussions with the CLC regarding agreements & applications for Mines Management plans in Northern Territory, which has now been completed for tenements EL2480 & EL32080.

CORPORATE

During the quarter the following securities were released from voluntary escrow:

Security	Restriction period ended
40,500,000 Fully paid ordinary shares	28 May 2023
25,000,000 Unquoted options exercisable at 1.5c and expiring 28/05/2024	28 May 2023
10,000,000 Unquoted options exercisable at 5.0c and expiring 28/05/2026	28 May 2023

ASX Additional Information

1. ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the quarter was $114,000. Full details of exploration activity during the quarter are set out in this report.
2. ASX Listing Rule 5.3.2: There was no substantive mining production and development activities during the quarter.
3. ASX Listing Rule 5.3.5: Payment to related parties of the Company and their associates during the quarter: $67,000 cash. The Company advises that this relates to non-executive, executive directors' fees and consulting fees only. Please see the Remuneration Report in the Annual Report for further details on Directors' Remuneration.

For further information please contact:

Carl Popal
Executive Chairman

Aiden Bradley
Investor Relations
aiden@nwrcommunications.com.au

Competent Persons Statement

The information in this report that relates to Exploration Results and Exploration Targets together with any related assessments and interpretations is based on information compiled by Mr. Rodney Dale, a Non-Executive director of Eclipse Metals Limited. Mr. Dale 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 has verified the data disclosed in this release and consents to the inclusion in this release of the matters based on the information in the form and context in which it appears.

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ADDENDUM - ECLIPSE METALS TENEMENT INTERESTS ASX -Listing Rule 5.3.3.

Mining tenements held at the end of the quarter and their locations listed below.

Granted Tenements

Tenement	Project Name	Commodity	Status	State	Holder	%	Graticular Blocks
MEL2007-45	Ivittuut Project	Cryolite & Rare Earths	Granted	Green land	Eclipse Metals Limited Greenland	100	50km^2
EL 24808	Cusack's bore	Uranium	Granted	NT	Eclipse Metals Ltd	100	27
EL 32080	North Ngalia	Uranium	Granted	NT	Eclipse Metals Ltd	100	63
EPM 17672	Mary Valley	Manganese	Granted	Qld	Walla Mines Pty Ltd[1]	100	7
EPM 17938	Amamoor	Manganese	Granted	Qld	Walla Mines Pty Ltd[1]	100	4
EL27584	Devil's Elbow	Uranium, Gold, Palladium	Granted	NT	North Minerals Pty Ltd [3]	100	30

Tenement Applications

Tenement	Project Name	Commodity	Status	State	Holder	%	Graticular Blocks
ELA 24623	Eclipse	Cu, Uranium	Application	NT	Eclipse Metals Ltd	100	305
ELA 24861	Lake Mackay	Uranium	Application	NT	Eclipse Metals Ltd	100	50
ELA 26487	Yuendi	Cu, Uranium	Application	NT	Whitvista Pty Ltd[2]	100	320
ELA 31065	Liverpool 1	Uranium	Application	NT	Eclipse Metals Ltd	100	68
ELA 31499	Ngalia 1	Uranium	Application	NT	Eclipse Metals Ltd	100	249
ELA 31500	Ngalia 2	Uranium	Application	NT	Eclipse Metals Ltd	100	250
ELA 31501	Ngalia 3	Uranium	Application	NT	Eclipse Metals Ltd	100	250
ELA 31502	Ngalia 4	Uranium	Application	NT	Eclipse Metals Ltd	100	226
ELA 31770	Liverpool 2	Uranium	Application	NT	Eclipse Metals Ltd	100	50
ELA 31771	Liverpool 3	Uranium	Application	NT	Eclipse Metals Ltd	100	240
ELA 31772	Liverpool 4	Uranium	Application	NT	Eclipse Metals Ltd	100	51
ELA 32077	Central Ngalia	Uranium	Application	NT	Eclipse Metals Ltd	100	195
ELA 32078	Central Ngalia	Uranium	Application	NT	Eclipse Metals Ltd	100	248
ELA 32079	Central Ngalia	Uranium	Application	NT	Eclipse Metals Ltd	100	248

1 Walla Mines Pty Ltd is a subsidiary of Eclipse Metals Ltd
2 Whistvista Pty Ltd is a subsidiary of Eclipse Metals Ltd
3 North Minerals Pty Ltd is a subsidiary of Eclipse Metals Ltd

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Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

ECLIPSE METALS LIMITED

ABN	Quarter ended ("current quarter")
85 142 366 541	30 June 2023

Consolidated statement of cash flows		Current quarter $A'000	Year to date (12 months) $A'000
1.	**Cash flows from operating activities**		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	(74)	(514)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	-	-
	(e) administration and corporate costs	(130)	(733)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	3	12
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (provide details if material) BAS	66	150
1.9	**Net cash from / (used in) operating activities**	**(135)**	**(1,085)**
2.	**Cash flows from investing activities**		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) exploration & evaluation *	(40)	(640)
	(e) investments	-	-
	(f) other non-current assets	-	-

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Consolidated statement of cash flows		Current quarter $A'000	Year to date (12 months) $A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Cash acquired on acquisition	-	-
2.6	**Net cash from / (used in) investing activities**	**(40)**	**(640)**

3.	**Cash flows from financing activities**		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	2,047
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	(99)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	**Net cash from / (used in) financing activities**	**-**	**1,948**

4.	**Net increase / (decrease) in cash and cash equivalents for the period**		
4.1	Cash and cash equivalents at beginning of period	1,054	659
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(135)	(1,085)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(40)	(640)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	1,948

Consolidated statement of cash flows		Current quarter $A'000	Year to date (12 months) $A'000
4.5	Effect of movement in exchange rates on cash held	-	(3)
4.6	**Cash and cash equivalents at end of period**	**879**	**879**

* Prior quarter amounts have been re-positioned for consistency with current quarter disclosures.

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter $A'000	Previous quarter $A'000
5.1	Bank balances	879	1,054
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	**Cash and cash equivalents at end of quarter (should equal item 4.6 above)**	**879**	**1,054**

6.	Payments to related parties of the entity and their associates	Current quarter $A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	67
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.

Payments of Directors fees $67K (excl. GST)

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7.	**Financing facilities** *Note: the term "facility' includes all forms of financing arrangements available to the entity.* *Add notes as necessary for an understanding of the sources of finance available to the entity.*	**Total facility amount at quarter end $A'000**	**Amount drawn at quarter end $A'000**
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	**Total financing facilities**	-	-
7.5	**Unused financing facilities available at quarter end**		-
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8.	**Estimated cash available for future operating activities**	**$A'000**
8.1	Net cash from / (used in) operating activities (item 1.9)	(135)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(40)
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(175)
8.4	Cash and cash equivalents at quarter end (item 4.6)	879
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	879
8.7	**Estimated quarters of funding available (item 8.6 divided by item 8.3)**	**5.0**

Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.

8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:

8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?

Answer: N/A

8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

Answer: N/A

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8.8.3	Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?
Answer: N/A	
Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.	

Compliance statement

1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.

2 This statement gives a true and fair view of the matters disclosed.

Date: 28 July 2023

Authorised by: the Board.
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.

2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.

3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.

4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [*name of board committee – eg Audit and Risk Committee*]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".

5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.

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