22 November 2021

ASX Announcement

DRILL SAMPLES FROM ECLIPSE'S IVITTUUT PROJECT CONFIRM HIGH-GRADE RARE EARTH RESULTS

Highlights

- **Core sample analysis has confirmed the polymetallic potential of the historic Ivittuut mine in Greenland with anomalous zin and tin – values up to 9.86% Zn and 3.54% Sn and anomalous REE values.**
- **Historical drill core samples from nearby Gronnedal-Ika returned high-grade results up to 1,245 ppm Pr_2O_3 (praseodymium oxide) with anomalous zinc values.**
- **Drill core samples from the Ivittuut pit area returned anomalous and high zinc and silver values.**
- **Maximum uranium value of 24.3ppm from all results is well below Greenland Government's legislated maximum of 100ppm uranium.**
- **Eclipse is progressing petrological and mineralogical determinations as a guide for future exploration at Ivittuut.**
- **Further field samples received in Perth for laboratory analysis.**

Eclipse Metals Ltd (ASX: **EPM**) (**Eclipse Metals** or the **Company**) is pleased to announce further laboratory analyses of core samples from historical diamond drilling within exploration licence MEL2007-45 in southwestern Greenland, have returned high-grade rare earth results and confirmed the project's potential to also contain high-grade quartz, cryolite, siderite, sphalerite, cassiterite and carbonate material.

Analysis by an Australian laboratory using ME-MS81h, ME-ICP61 and Zn-OG62 methods identified multi-commodity mineralisation within the project area. Very low uranium values ranging from 0.7 to 24.3ppm were recorded, which are well below the Greenland Government's recently legislated maximum of 100ppm.

Samples from Gronnedal-Ika and Ivittuut have returned anomalous and significant analyses for praseodymium (Pr), zinc (Zn), tin (Sn), silver (Ag) and copper (Cu) in addition to anomalous TREO values from the Ivittuut pit precinct – see summary Table A below.

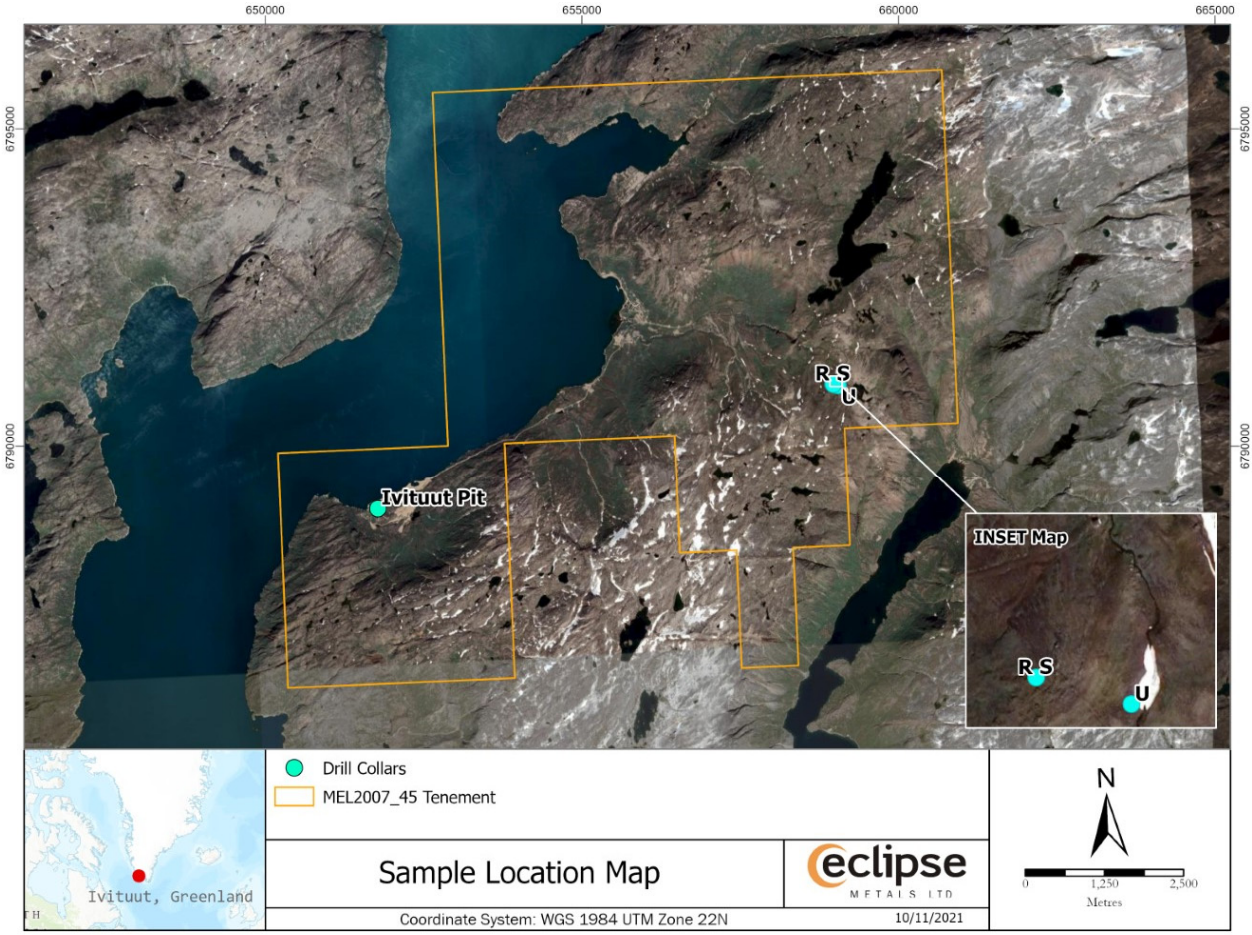

Figure 1: MEL2007-45 with location of Ivittuut Mine and Gronnedal-Ika. Inset shows location of three historic drill holes.

SAMPLE DESCRIPTION	Prospect	Pr_2O_3 ppm	TREO ppm	Ag ppm	Cu ppm	Zn %
IVT 21 - 1	Gronnedal-Ika	**367.5**	**8348**	<0.5	3	0.09
IVT 21 - 2	Gronnedal-Ika	**567.6**	**11089**	<0.5	<1	0.05
IVT 21 - 3	Gronnedal-Ika	**928.1**	**22694**	2.9	2	0.03
IVT 21 - 4	Gronnedal-Ika	**1245.0**	**21483**	1.7	2	**0.46**
IVT 21 - 6	Ivittuut	1.9	43	<0.5	8	0.00
IVT 21 - 8	Ivittuut	3.9	96	<0.5	6	0.01
IVT 21 - 10	Ivittuut	2.3	**207**	**10.6**	48	0.02
IVT 21 - 11(1)	Ivittuut	14.7	**536**	2.1	100	**9.86%**
IVT 21 - 11(2)	Ivittuut	0.7	17	**27.6**	**2880**	0.01
IVT 21 - 13	Ivittuut	1.0	72	0.5	31	0.00
IVT 21 - 14	Ivittuut	1.3	77	2.5	92	0.02
IVT 21 - 15	Ivittuut	0.3	12	0.5	32	**0.77**
IVT 21 - 17	Ivittuut	0.0	1	<0.5	4	0.02
IVT 21 - 18	Ivittuut	1.0	21	1.7	314	0.00
IVT 21 - 21	Ivittuut	1.8	43	**19.6**	117	0.07
IVT 21 -22(2)	Ivittuut	0.4	9	<0.5	8	0.10
IVT 21 - 23	Gronnedal-Ika	217.1	**4951**	<0.5	2	0.08

Table A. Summary of significant analysis from drill core samples

IVITTUUT SAMPLES

Both heavy and light rare earth elements were noted in assays from Ivittuut core samples; see Summary Table above. A sample from the Ivittuut pit environment returned a high-grade tin result of 3.54% Sn.

Figure 2: Road from Gronnedal to Ivittuut mine in background.

Figure 3: Drill core sample from Ivittuut pit precinct

GRONNEDAL-IKA SAMPLES

Samples of core from three diamond holes drilled in the Gronnedal-Ika carbonatite complex in the 1940s returned very significant analyses for rare earth elements, with up to 22,695ppm total rare earth oxides (ASX announcement 15 November 2021). These holes were originally drilled to explore for deposits of magnetite (iron ore) which had developed in the contact area of later intrusive dolerite dykes.

Figure 4: Gronnedal-Ika Sample (IVT 21 – 4) carbonatite, magnetite with assay results returning 203.8 ppm Eu_2O_3 and 1,245 ppm Pr_2O_3 from 2.8m

Magnetite intersections were shown to be narrow and intermittent but recent sampling has returned very significant analyses of light and heavy rare earth elements (ASX Announcement 17 November 2021)

Historical sampling results also indicate very high europium values compared to other REE deposits. Europium has been recognised throughout the carbonatite intrusion at several times greater concentration than average for rocks elsewhere in this part of Greenland and many times that normally expected in carbonatites. Europium is in extremely short supply around the world.

Overall, the results confirm there is excellent REE potential at the surface in Gronnedal-Ika. The REE prospectivity fits well with Eclipse's mission to excel in the commercialisation of metals and minerals demanded in the production of green energy and required by industry to reduce pollution. Historical exploration records indicate the potential for rapid development and production of cryolite, fluorite, quartz, REE, carbonate, zinc, tin and siderite.

GRONNEDAL-IKA CARBONATITE COMPLEX

The Gronnedal-Ika carbonatite / nepheline syenite complex and later dolerite dykes are intruded into crystalline Archean basement rocks centred on 48º03'W: 61°14'N, about 10km to the northeast from Ivittuut.

The drill holes examined in the first visit were originally sited to obtain samples of nepheline syenite for ceramic manufacture but intersected contact areas of later olivine dolerite dykes carrying magnetite.

REE occurs throughout the carbonatite complex, especially in late-stage veins where it occurs as various strontium REE carbonate minerals.

Minerals identified within the complex include apatite, monazite, stronianite and synchysite which host LREE, as well as zircon and monazite which host HREE (LREE = light rare-earths. HREE = heavy rare-earths).

Carbonate rock from this complex could also provide a neutralising agent for mine and process water for other operations in the region.

Analysis of geophysical data from Gronnedal-Ika carbonatite/dyke geological units has confirmed this complex to be far more extensive than previously known which is further encouragement for potential REE and sulphide mineralisation. An historical Dighem survey defined seven conductive targets which are recommended for follow up exploration and ground truthing.

Petrological and mineralogical determinations are continuing and will be used as a guide for future exploration.

RECENT EXPLORATION

A recent helicopter borne reconnaissance field program included collection of samples from the Ivittuut mine dumps and Gronnedal-Ika carbonatite intrusive outcrops. Initial XRF field testing has returned promising results for rare earth minerals (ASX Announcement 17 November 2021).

Eclipse's drill core sample analyses have provided additional significant information on the prospectivity of both the Ivittuut mine precinct, the carbonatite occurrence and mafic dykes. Availability of an extensive library of core from this project area will save considerable costs in providing a guide to future drilling to explore for REE mineralisation in this prospect.

Further surface samples from Gronnedal-Ika and from the Ivittuut low-grade tailing dump have been received in Australia for analysis for REE elements, cryolite and quartz. The Company will announce results progressively from testing in due course.

This initial evaluation of drill core has provided significant additional information on the prospectivity of the Gronnedal-Ika carbonatite and mafic dyke occurrence. Encouraging silica analyses and REE results from the Ivittuut pit precinct provide strong encouragement for future development.

Identification of scarce heavy REE's has cemented the conclusion of the uniqueness and polymetallic nature of the Ivittuut pit precinct. These results highlight the potential for much of the mineralisation within the pit to have economic value, thus enhancing potential economics for re-development of this mine. Future exploration will include evaluation of the granite and greisen wall-rocks of the pit for REE potential.

The results from Gronnedal-Ika have confirmed the potential for magnetically anomalous zones to be associated with REE mineralization, which will be used as a guide for future exploration drilling.

A priority for further examination will be splitting and analysis of samples from core drilled during the 1940s.

ABOUT THE IVITTUUT PROJECT

Ivittuut is located in southwestern Greenland and has a power station and fuel supplies to service this station and local traffic to support mineral exploration. About 5.5km to the northeast of Ivittuut, the twin settlements of Kangilinnguit and Gronnedal respectively provide a heliport and an active wharf with infrastructure.

The Gronnedal-Ika carbonatite complex is less than 10km from Ivittuut and only 5km from the port of Gronnedal. This complex is also one of the 12 larger Gardar alkaline intrusions in Greenland and is recognised as one of the prime REE targets in Greenland by GEUS along with Kvanefjeld and Kringlerne (Tanbreez).

Authorised for release by the Board

Carl Popal
Executive Chairman

Rodney Dale
Non-Executive Director

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.

About Eclipse Metals Ltd (ASX: EPM)

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

Table 1A: Drill Collar File Gronnedal-Ika

Id	LABEL	LAT	LONG	EASTING m	NORTHING m	RL (m)
1	S	61.22078536	-48.03950844	658970.1419	6790980.731	424
2	R	61.22078536	-48.03950844	658970.1419	6790980.731	424
3	U	61.22056973	-48.03814895	659044.1963	6790960.038	421
4	Ivittuut Pit (J)	61.20592642	-48.17485179	651777.355	6789004.96	-

Table 1B: Drill Collar File Ivittuut Local Grid

Prospect	Drillhole ID	Easting m	Northing m	AHDRL	Datum	Dip	Azimuth	Depth (m)	Year
Ivittuut	J4	983	1098	-58	Local Grid	-90	0	138	1948
Ivittuut	J5	1016	1207.5	-7.2	Local Grid	-90	0	115.93	1948
Ivittuut	85-5	1143.9	978.1	-64	Local Grid	-90	0	31	1985
Ivittuut	85-7	1184.7	907.2	-54	Local Grid	-90	0	33.9	1985
Ivittuut	85-9	1121.8	927.7	-59	Local Grid	-90	0	21.2	1985
Ivittuut	85-34	1141.4	916.4	-62.4	Local Grid	-90	0	39.7	1985
Ivittuut	85-35	1185.9	923.5	-59	Local Grid	-90	0	39.2	1985
Ivittuut	85-36	1169.2	911.9	-56.9	Local Grid	-90	0	36.7	1985
Ivittuut	85-38	1220.7	942.1	-53.9	Local Grid	-90	0	35.3	1985
Ivittuut	85-41	1169.7	1010.2	-62.7	Local Grid	-90	0	24.9	1985
Ivittuut	85-42	1157.8	928.3	-59	Local Grid	-90	0	49	1985

Table 2: All Results from further analysis in ppm

SAMPLE DESCRIPTION	Prospect	Drillhole ID	Pr_2O_3 ppm	Ag ppm	Cu ppm	Ni ppm	Zn ppm
IVT 21 - 1	Gronnedal	85_9		<0.5	3	4	942
IVT 21 - 2	Gronnedal	S		<0.5	<1	45	525
IVT 21 - 3	Gronnedal	R		2.9	2	61	319
IVT 21 - 4	Gronnedal	R	1,245	1.7	2	105	**4,450**
IVT 21 - 6	Ivittuut	J4		<0.5	8	1	6
IVT 21 - 8	Ivittuut	J5		<0.5	6	3	122
IVT 21 - 10	Ivittuut	85-42		**10.6**	48	<1	172
IVT 21 - 11(1)	Ivittuut	85-42		**2.1**	100	1	**98,600**
IVT 21 - 11(2)	Ivittuut	85-42		**27.6**	2,880	<1	103
IVT 21 - 13	Ivittuut	85-41		0.5	31	2	39
IVT 21 - 14	Ivittuut	85-42		2.5	92	3	224
IVT 21 - 15	Ivittuut	85-38		0.5	32	2	**7,770**
IVT 21 - 17	Ivittuut	85-35		<0.5	4	5	168
IVT 21 - 18	Ivittuut	85-34		1.7	314	4	9
IVT 21 - 21	Ivittuut	85-9		**19.6**	117	3	703
IVT 21 -22(2)	Ivittuut	85-36		<0.5	8	4	1,040
IVT 21 - 23	Gronnedal	U		<0.5	2	17	765

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.*	• Selected core chips representing different rock types from two areas within the Company's Greenland MEL2007-45. • Core chips are from diamond holes drilled in approximately 1940, 1948 and 1985. • Samples are not representative of an orebody and were collected for initial geological, petrological and geochemical evaluation.
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).*	• Conventional diamond drilling.
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 are from holes diamond drilled in 1940, 1945 and 1985. • Records of procedures and recoveries not presently available. • Full core yet to be re-logged and sampled under controlled conditions.
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.*	• Geologically logged and recorded as a guide for future field work and exploration planning. • Logging only qualitative in nature.

Criteria	JORC Code explanation	Commentary
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.*	• Small sections of half core originally sawn in approx. 1940, 1948 and 1985. • Samples not representative of whole mineralisation. • Quality control not applicable.
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.*	• Full, certified Australian laboratory procedures with QA/QC selected to be appropriate for whole rock and selected determinations, eg. REE and high-level silica, strontium, fluorine and related elements. • Normal procedure for duplicates and blanks under independent control of laboratory. • Determinations for geochemical evaluation only.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Not applicable
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.*	• UTM coordinates for Gronnedal-Ika historical drilling tablulated. • Lat / Lon for local grid at Ivittuut mine tablulated.
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.*	• Not applicable as selected geological and geochemical samples collected to represent different rock types with no resource implication.

Criteria	JORC Code explanation	Commentary
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.*	• Not applicable.
Sample security	• *The measures taken to ensure sample security.*	• Samples dispatched by secure airfreight and held in high security laboratory environment.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews have been conducted on the project.

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.*	• MEL2007-45 granted to Eclipse Metals Greenland (wholly owned subsidiary of Eclipse Metals Ltd) by the Greenland Minister of Finance, Industry and Minerals Resources, as announced to ASX on 17 February 2021
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• 19,000m of diamond drill cores stored in government facility yet to be fully logged and re-sampled. • Data and results from exploration conducted by other parties is being accumulated and assessed for reporting and as a guide to future exploration. • Historical results have been used to prepare preliminary exploration models for planning future activities.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Nepheline syenite and carbonatite intrusion into Archean 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*
		• All available information tabulated within body of report.

Criteria	JORC Code explanation	Commentary
	○ *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.*	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Not applicable
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Not applicable as no resources estimated.
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.*	• Not applicable
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.*	• All analyses reported as received.
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.*	• All reported as appropriate to keep the market informed to the highest level available and references provided to earlier reports.