6th April 2022

ASX Announcement

# IVITTUUT BULK SAMPLE ANALYSIS RETURNS 99.9% SILICA RESULT

## Highlights

- **Eclipse analysis confirms high silica grade quartz (99.9% $SiO_2$) from Ivittuut mine dumps.**
- **Large (c. 220m-wide and 90m-thick) cylindrical body of in-situ high silica grade, low impurity quartz below the Ivittuut pit floor defined by historic drilling.**
- **Historical assays of individual quartz intersections returned high grades ranging from 99.02 to 99.98% silica ($SiO_2$).**
- **Historical averaged drill intersections include:**
    - **Drill Hole 153 – 54m @ 97.6% $SiO_2$ from 32m**
    - **Drill Hole 165 – 24m @ 93.2% $SiO_2$ from 12m**
    - **Drill Hole 165 – 53m @ 94.8% $SiO_2$ from 45m**
- **Analysis determined the quartz can be further purified with simple processing to substantially increase grade, making it potentially suitable for semiconductors**
- **Eclipse has defined an Exploration Target for high silica grade quartz at Ivittuut.**
- **Eclipse plans further exploration with a view to preparing a maiden JORC 2012-compliant resource estimate for the quartz body at Ivittuut, expected in H2 2022.**
- **Global quartz market is projected to reach $13.61 billion by 2026, growing at a CAGR of 6.9% from 2020 to 2030 (Persistence Market Research July 2020).**

Eclipse Metals Ltd (ASX: **EPM**) (**Eclipse Metals** or the **Company**) is pleased to announce that recent Australian laboratory analysis of a quartz bulk sample from its Ivittuut multi-commodity project in southwest Greenland has confirmed the high silica, low impurity nature of the sample of several kilograms of quartz collected from the historical mine dumps (Figure 1) and shipped to Perth for analysis (refer to ASX release dated 17 November 2021).

Accurate analysis of quartz from below Ivittuut's historic pit determined it can be further purified with a simple acid wash process to substantially increase grade by removing impurities, potentially making it suitable for the high-tech semiconductor industry, further increasing the deposit value. Analytical results from this bulk sample, collected to assess Ivittuut's quartz quality, confirms results reported by North Atlantic Mining Associates (GEUS report 23656).

Modelling of historical exploration data from the Ivittuut deposit indicates the presence of a large (c. 220m-wide and 90m-thick) cylindrical body of in-situ high silica grade, low impurity quartz immediately below the pit floor as defined by historic drilling (Figures 2 to 4). The modelling, which supports an estimated exploration target of between 5.70 million tonnes and 5.94 million tonnes of quartz ranging between 90%

and 95% silica (refer to ASX release dated 29 March 2021), further confirms the Company's view of the significant economic potential to exploit this high silica grade quartz body.

*Cautionary Statement: The potential quantity and grade of the Exploration Target 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.*

**Eclipse Metals Executive Chairman Carl Popal commented:** *"Our evaluation of historical data has unveiled massive economic potential at Ivittuut, being the world's only known commercial mine of naturally occurring cryolite but with potential to be a multi-commodity project. Our recent sampling program has verified the potential of both Ivittuut and Grønnedal-Ika to host REE mineralisation as well as base and critical metals, and now confirmed a quantifiable mass of low impurity quartz containing up to 99.9% $SiO_2$.*

*"Identification of scarce heavy REEs and rare critical metals and high purity quartz has cemented our conclusion of the uniqueness of the polymetallic nature of the Ivittuut pit precinct. Overall, the recent exploration results highlighted the potential for much of the mineralisation within the pit to have economic value, thus enhancing potential economics for the redevelopment of this mine.."*

## BULK SAMPLE ANALYSIS

| Analytic Method | ME-PKG85 | ME-PKG85 | ME-PKG85 | ME-PKG85 | ME-PKG85 | OA-GRA05x |
|---|---|---|---|---|---|---|
| SAMPLE | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | $TiO_2$ | $Cr_2O_3$ | LOI 1000 |
| DESCRIPTION | % | % | % | % | ppm | % |
| **I21005 acid washed** | **99.9** | 0.011 | 0.002 | 0.001 | <1 | 0.08 |
| **I21005 no-acid-wash** | 99.4 | 0.137 | 0.113 | 0.005 | 3 | 0.16 |

***Table 1: $SiO_2$ assay results showing effects of acid wash reducing impurities.***

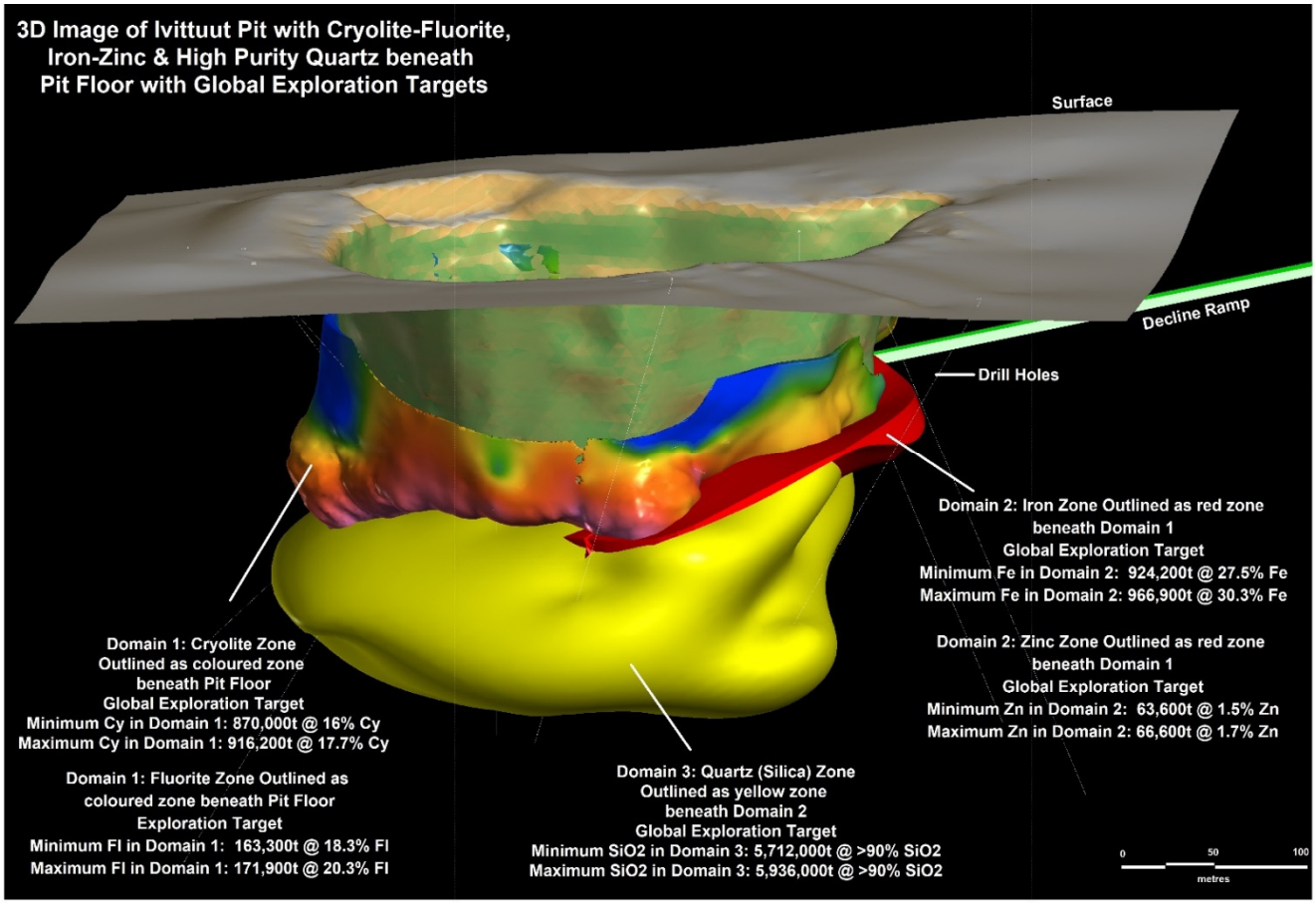


***Figure 1: Oblique 3D view of the historic Ivittuut open cut with cryolite and fluorite (Domain 1), iron and zinc (Domain 2) and high grade quartz (Domain 3) bodies immediately below the historic pit floor*** [1]

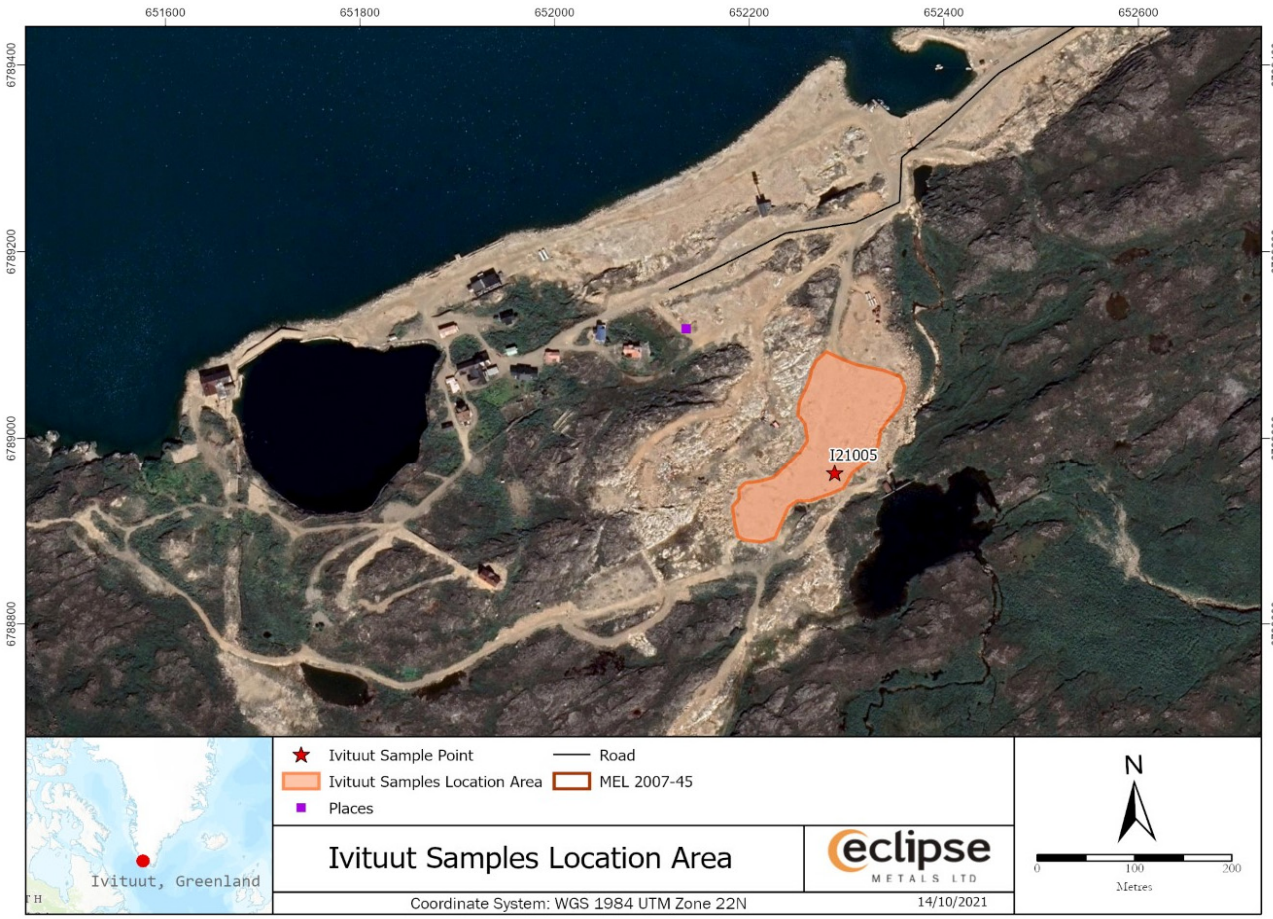


***Figure 2: Image of the historic Ivigtût pit and waste dumps showing collection location for samples I21005***

## DRILL HOLE DATA

Overall, 18 historical diamond drillholes intersected the body of quartz in Domain 3. In 2012, only samples from two historical drill holes were analysed for quartz purity . Analytical data associated with each hole has been digitally captured to form a database (ASX announcement 29th March 2021).

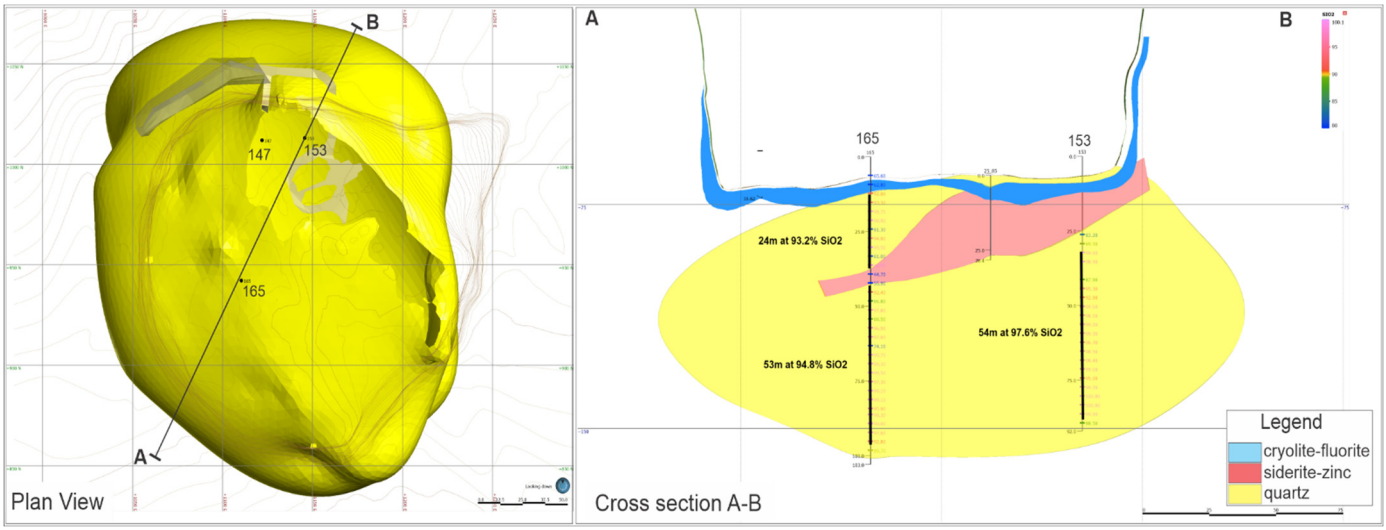


***Figure 3: Plan view of the Ivittuut Pit showing Cross Section (A to B)***

The analytical data in 3D formed the basis for geological modelling (ASX announcement 29th March 2021). The high-grade quartz lies directly below the cryolite-fluorite and iron-zinc zones with the silica grade increasing below the iron-zinc zone in the northern portion of the pit (Figure 2). The zones with higher percentages of impurities coincide with the modelled zones of siderite (iron), sphalerite (zinc) and cryolite. Based on the data from the two holes which provided a total of 54 samples; 24 or 44% of the samples were higher than 98% in silica. A 95% silica cut-off represents 61% of the samples.

## GEOLOGICAL MODELLING

Geological domaining of the historic drill hole data (Figures 2 to 4) (refer to ASX release dated 29 March 2021) defined a large (c. 220m-wide and 90m-thick) cylindrical body of quartz below the Ivittuut pit floor. The modelled quartz body represents in-situ mineralisation that could be accessed 5m to 10m below the central cryolite-fluorite zone. Immediately below the historic open pit, the quartz body thickens along an east-west axis.

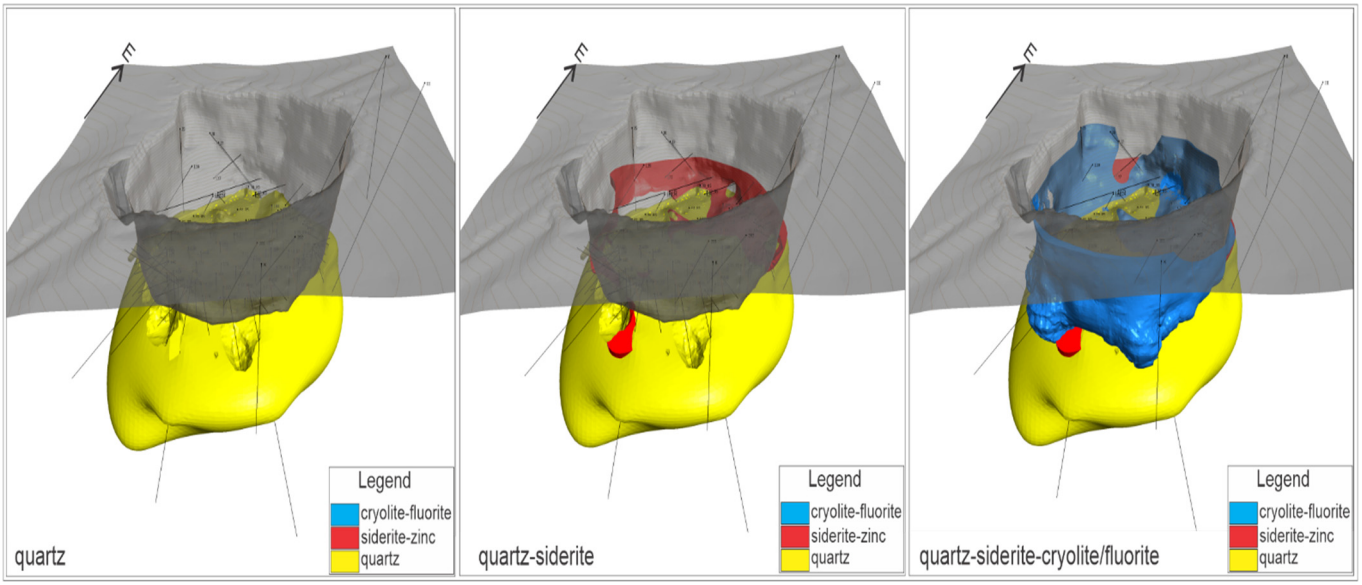


***Figure 4: Oblique views of the Ivittuut Geological Model***

Exploration Targets (**Table 2**) are based on exploration results from 18 diamond drill holes, representing 1,764m of drilling within and around the historic pit. The assay data used includes 1,062 analytical results. Bulk density measurements were assigned using a lower value of SG 2.55 and an upper value of SG 2.65.

**Table 2: Exploration Target reported by Mineral Domains**

| Range | Zone | Domain | Cut Off % | Quartz Tonnage lower range t | Quartz Tonnage higher range t | Quartz Grade Lower % | Quartz Grade Upper % |
|---|---|---|---|---|---|---|---|
| **Exploration Target** | **Quartz** | **3** | **0** | **5,700,000** | **5,940,000** | **90** | **95** |

Cautionary Statement: The potential quantity and grade of the Exploration Target 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 5: High silica grade quartz from Drill Hole 153***

## FORWARD STRATEGY

Subject to COVID restrictions, the Company is planning further exploration activities to enable calculation of a JORC Code 2012 compliant resource estimate for the Ivittuut project at the earliest opportunity, targeting delivery in H2 CY22. Further analytical work is required for the quartz zones as previous explorers did not assay all quartz intersections for contaminants. Numerous drill holes which intersected quartz mineralisation will be systematically split and analysed for contaminants to enable calculation of silica content as part of JORC (2012) compliant resource estimation work. Additional drilling may be required and will be based on further evaluation of historical exploration.

## BACKGROUND INFORMATION ON THE SILICA INDUSTRY

A constantly growing glass industry in Europe demands increasing amounts of appropriate raw materials, including the most important one: glass silica. High quality quartz is composed of silica which is characterised as having minimum 95% $SiO_2$ and low impurities of less than 0.01%. Quartz with higher contaminant levels is in demand by many industries.

Silica of varying qualities may be used not only for glass production, but also to make casting moulds in foundries; ingredients in ceramics; proppants in shale hydrocarbons extraction; fillers and extenders in polymers, paints and rubber; for water filtration and for many other uses. Quartz can also be the starting point for the manufacturing of water-soluble sodium silicates and other downstream silicon chemicals.

The global quartz market was valued at $8.23 billion in 2018 and is projected to reach $13.61 billion by 2026, growing at a CAGR of 6.9% from 2020 to 2030 (Persistence Market Research July 2020). The EU market for quartz exceeds 30 million tonnes per year (including more than 15 million tonnes per year for glass production), which is sourced through domestic production, especially in the Netherlands, Italy, France, Germany, Poland, the UK, Spain, Bulgaria and Belgium. Quartz resources for high-quality silica production are limited mostly to the above-mentioned countries, especially the Netherlands, Germany, UK, Poland and Chechnya.

The price of quartz is based on the grade – simply put, the lower the level of impurities, the higher the price. The price can be adversely affected by the quantity and the type of impurities present (Table 3).

**Table 3: Pricing analysis by Grade**

| Grade | Price Range | Weighted ASP |
|---|---|---|
| Powder | US$ 1,000 – US$ 1,500 | US$ 1,276 |
| Grade I | US$ 3,500 – US$ 5,500 | US$ 4,460 |
| Grade II | US$ 7,500 – US$ 11,500 | US$ 8,975 |
| Grade III | US$ 12,500 – US$ 19,000 | US$ 15,126 |

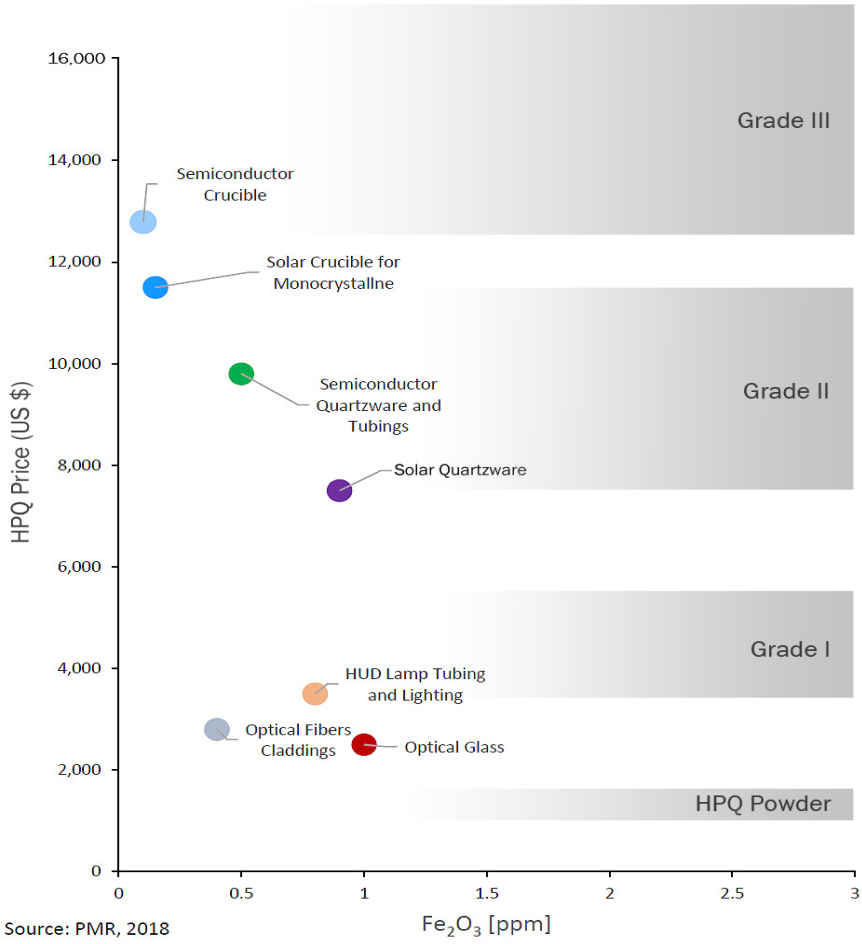


***Figure 6: Chart showing high purity quartz grades, uses and relative prices***

## Authorised for release by the Board

Carl Popal
***Executive Chairman***

**Oliver Kreuzer**
***Non-Executive Director***

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### *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. Alfred Gillman, Director of independent consulting firm, Odessa Resource Pty Ltd. Mr. Gillman, a Fellow and Chartered Professional of the Australasian Institute of Mining and Metallurgy (the AusIMM) 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 Gillman 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 Gillman 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.*

*The Competent Person does not consider the current data to be sufficiently verified to enable preparation of a classified resource estimate. The estimated volumes of the mineral domains are based on historical analytical data and are thus indicative only. Additional work programs, including site visits, resampling of drill core and representative bulk density determination, are required prior to the estimation and reporting of a classified resource as defined by the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC) 2012.*

## *Forward Looking Statements Disclaimer*

*This news release contains "forward-looking information" within the meaning of applicable securities laws. Generally, any statements that are not historical facts may contain forward-looking information, and forward looking information can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget" "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or indicates that certain actions, events or results "may", "could", "would", "might" or "will be" taken, "occur" or "be achieved." Forward-looking information is based on certain factors and assumptions management believes to be reasonable at the time such statements are made, including but not limited to, continued exploration activities, commodity prices, the estimation of initial and sustaining capital requirements, the estimation of labour costs, the estimation of mineral reserves and resources, assumptions with respect to currency fluctuations, the timing and amount of future exploration and development expenditures, receipt of required regulatory approvals, the availability of necessary financing for the project, permitting and such other assumptions and factors as set out herein.*

*Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including but not limited to: risks related to changes in commodity prices; sources and cost of power and water for the Project; the estimation of initial capital requirements; the lack of historical operations; the estimation of labour costs; general global markets and economic conditions; risks associated with exploration of mineral deposits; the estimation of initial targeted mineral resource tonnage and grade for the project; risks associated with uninsurable risks arising during the course of exploration; risks associated with currency fluctuations; environmental risks; competition faced in securing experienced personnel; access to adequate infrastructure to support exploration activities; risks associated with changes in the mining regulatory regime governing the Company and the Project; completion of the environmental assessment process; risks related to regulatory and permitting delays; risks related to potential conflicts of interest; the reliance on key personnel; financing, capitalisation and liquidity risks including the risk that the financing necessary to fund continued exploration and development activities at the project may not be available on satisfactory terms, or at all; the risk of potential dilution through the issuance of additional common shares of the Company; the risk of litigation.*

*Although the Company has attempted to identify important factors that cause results not to be as anticipated, estimated or intended, there can be no assurance that such forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information. Forward looking information is made as of the date of this announcement and the Company does not undertake to update or revise any forward-looking information this is included herein, except in accordance with applicable securities laws*

**Appendix A**

**JORC Code, 2012 Edition – Table 1 report**

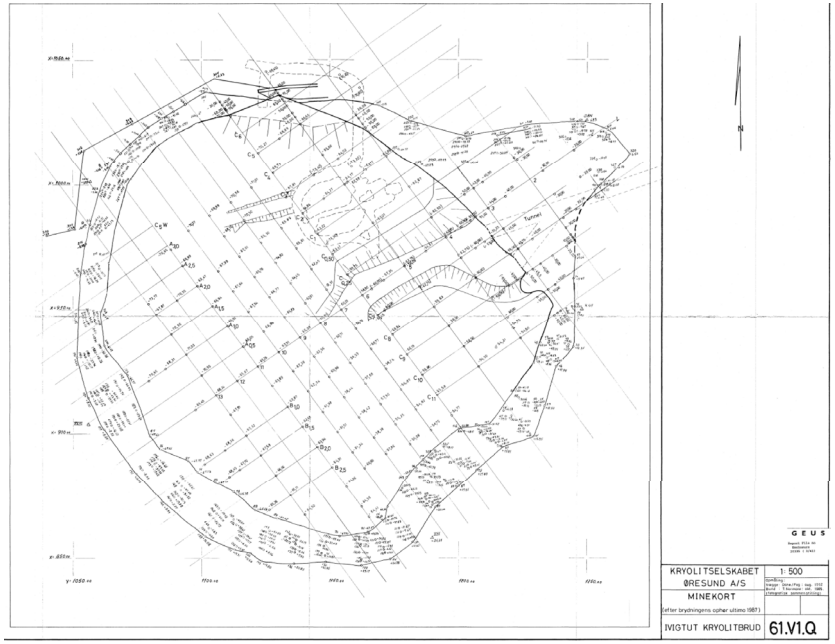
**Section 1 Sampling Techniques and Data**

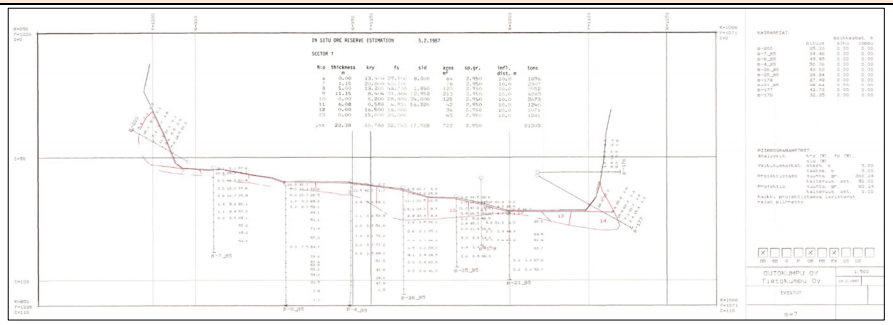
(Criteria in this section apply to all succeeding sections)

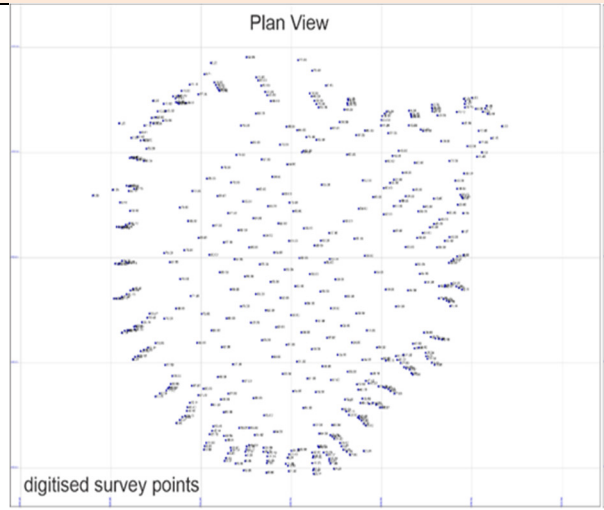
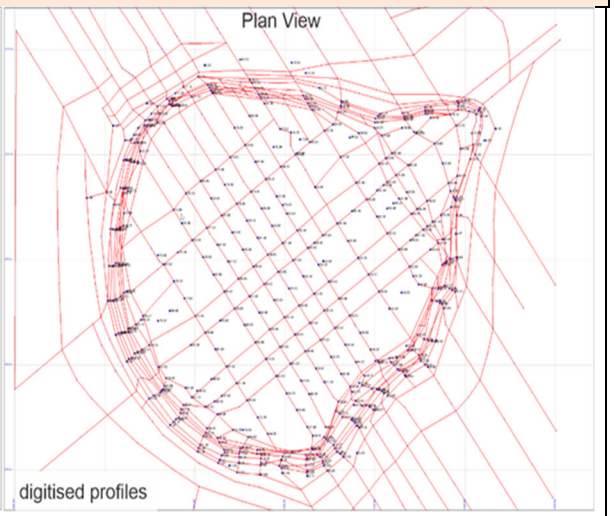
| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Sampling techniques*** | *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or 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* | Historical Diamond drilling completed within the pit area, totalled approximately 8,100m with 98% of core still available in Greenland with core from two other diamond holes located in Denmark (refer to Table 1).<br><br>After selecting the cores, a mark was placed every 3 meters and the diamond drill core photographed. A sample was taken at each mark by splitting the core in two with a diamond saw. Each sample collected was between 150-450 grams.<br><br>All information regarding the project has been downloaded from the Geological Survey of Greenland and Denmark (GEUS).<br><br>Drill samples were analysed for quartz. Assays results are given as a percentage.<br><br>Approximately 10kg of random samples of quartz lumps were collected from the mine waste dumps on the surface within the old mine precinct and shipped to Perth for analysis. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.* | |
| ***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).* | All information sourced from the literature has stated approx. 19,000m diamond drilling was completed. No details of the drilling methods have been identified in the historic data. From the information reviewed there was no information regarding core orientated or down hole surveys taken during drilling programs. Most of diamond drill hole were drilled vertically into the pit. |
| ***Drill sample recovery*** | *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>*Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>*Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.* | No information has been provided if the drilled metres were weighted with no sample recovery numbers given within the reports.<br><br>Core recovery/sample data – yet to be determined.<br><br>Relationship between sample recovery and grade is unknown – no information has been stated within the historical reports. |
| ***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.*<br>*Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*<br>*The total length and percentage of the relevant intersections logged.* | Geological logging was completed for all drill holes.<br><br>The geological logs appear to be relatively qualitative and quantitative in nature.<br><br>Photographs were taken of each sample submitted and are available in the reports. |

| 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.*<br>*If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>*For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>*Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>*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.*<br>*Whether sample sizes are appropriate to the grain size of the material being sampled.* | Some core has been sawn in half and some quartered. No details have been provided of the sub-sampling or sample preparation methods. Based on the absence of data, no comment can be made on the appropriateness of the sample preparation techniques historically undertaken.<br><br>No evidence of control/procedures adopted for sub-sampling stages.<br>Specific Gravity was determined for for certain core intervals. An average value of 2.65 was used for specific gravity for the quartz zone. No duplicate samples have been stated within historical reporting or whether the samples are appropriate for the material sampled |
| ***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.*<br>*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.*<br>*Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of* | All assaying and determination of quartz core was carried out by the owner/operator on the mine site at the time. Internal company quality control assurance has not been documented within the reports.<br><br>Base metal assays were carried out by Northern Atlantic Mining Associates Ltd consultants.<br><br>No information has been supplied regarding duplicates and laboratory checks.<br><br>No information provided regarding quality control procedures adopted by the various exploration companies.<br><br>Analysis of recent bulk quartz samples was conducted under standard, controlled mineral laboratory conditions and QA/QC procedures with duplicates and replicates (refer appended laboratory data-sheet) |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *bias) and precision have been established.* | |
| ***Verification of sampling and assaying*** | *The verification of significant intersections by either independent or alternative company personnel.*<br>*The use of twinned holes.*<br>*Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>*Discuss any adjustment to assay data.* | Based on historical drill-sample results reported, verification of significant intersections has been conducted<br><br>There is no evidence of twinned holes in the project area.<br><br>Documentation of primary data, data entry procedures, data verification protocols have been completed.<br><br>Historical data was sourced from reports lodged to the Greenland authorities.<br><br>  <br><br>Drillhole collar positions digitised and checked on historic drill plans |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | |  <br>Location and values of analytical data verified on historic cross sections |
| ***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.*<br>*Specification of the grid system used.*<br>*Quality and adequacy of topographic control* | All drill holes collars were reported as being located on a local grid system.<br><br>Adequate topographic control has been completed by digitizing the pit through surveyed cross section to form a 3D Model<br><br>A total 262 survey points were digitized from the pit survey plan included in GEUS 20656; capturing X, Y and Z coordinates. Additional survey points and pit profile lines were digitized as each data source appeared to have a different interpretation of the pit surface particularly at the base of the pit where undercut mining had taken place. Digitized survey points, where available, took precedence over the other data.<br><br>Bulk quartz samples are from mine production waste and cannot be assigned a physical location but are clearly part of historical mine production. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | |   |
| ***Data spacing and distribut*** | *Data spacing for reporting of Exploration Results.*<br>*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.*<br>*Whether sample compositing has been applied.* | Drill Holes are spaced between 10 and 15m apart within the pit area.<br><br>Data spacings and distribution at this stage are not satisfactory for estimation of a Mineral Resource or Ore Reserve, as the quality of the drill hole data precludes its use for these estimations.<br><br>Quartz has been determined by subtracting the determined value of impurities analysed in core samples. |
| ***Orientation of data in relat 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.*<br>*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.* | Most holes were drilled vertically to obtain geological and structural information; some were steeply inclined to sample mineralisation in the pit walls.<br><br>No information is known if the core sampling in the historic campaigns has introduced any significant bias. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Sample security*** | *The measures taken to ensure sample security.* | No information relating to the sample security have been identified. |
| ***Audits or reviews*** | *The results of any audits or reviews of sampling techniques and data.* | No details observed on any previous sampling reviews or audits. It's assumed that industry standard practices and procedures were implemented at that time. |

## 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.*<br>*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.* | MEL27007-45 with an area of 50sqkm has been transferred to Eclipse Metals Limited.<br><br>Security over the tenure by agreement with vendor and Greenland mines department. |
| ***Exploration done by other parties*** | *Acknowledgment and appraisal of exploration by other parties.* | GEUS Report File No. 20656<br>"Ivigtut Annual Report 2012 Exploration Licence 2007/45" During the year a joint Nama-Rimbal task face re-examined all old data, examined all cores in both Kangerlussuaq plus those in Copenhagen to review:<br>(a) How much quartz was within the structure?<br>(b) How much quartz was left in the pit after mining was finished?<br>(c) What is the quality of the quartz?<br>Cross Section, 3D Mineralised Models, raw assay data selected from various drill holes targeting the quartz mineralisation. |
| ***Geology*** | *Deposit type, geological setting and style of mineralisation.* | Granitic Layered Intrusive Deposits |
| ***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:* | The drill hole information has been inserted and tubulated within the document for the drill holes reported. Further desktop study work is in progress for the quartz and zinc mineralisation and will be released as soon as the data has been captured and |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | ○ *easting and northing of the drill hole collar*<br>○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>○ *dip and azimuth of the hole*<br>○ *down hole length and interception depth*<br>○ *hole length.*<br>*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.* | interpretation completed |
| ***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.*<br>*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.*<br>*The assumptions used for any reporting of metal equivalent values should be clearly stated.* | Modelling cut off grades for higher grade mineralisation:<br>Cryolite 2%<br>Fe 0.5%<br><br>There are three main flat to shallow dipping, mineralised domains beneath and surrounding the lower portions of the pit.<br>Domain D1: Cy-Fl Cryolite and Fluorite co-exist<br>Domain D2: Fe-Zn; iron (siderite) and zinc co-exist<br>Domain D3: Quartz zone<br><br>Cy and Fl grades to be estimated within Domain 1<br>Fe-Zn grades to be estimated within Domain 2<br>D2 is clipped against D1<br><br>No metal equivalent grades have been sourced from historic reports |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Relationship between mineralisation widths and intercept lengths*** | *These relationships are particularly important in the reporting of Exploration Results.*<br>*If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>*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 drill holes intersect the mineralisation at an angle of approx. 90 degrees. Thus, the intersections are close to true width.<br><br>Interval widths have been reported in Table 3 and documented of the ASX release |
| ***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.* | All grades i including the lower grades and significant intersections been reported within the release document.<br><br>Drill cross sections and 3D models have been included within the document. |
| ***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.* | The assay results have been sourced from the historical reports and have been substantially documented |
| ***Other substantive exploration data*** | *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.* | The assay results have been sourced from the historical reports and have been substantially documented |
| ***Further work*** | *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*<br>*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 is currently underway for the incorporation of all quartz zones within the pit area. Work will include data capture, re-logging of historical drill holes, interpretation of cross section and volume calculations. |