AUSTRALASIAN METALS

ASX Announcement | ASX: A8G | 23 July 2024

Exploration Potential defined for Dingo Hole Highly Pure Quartz Project in Northern Territory

Highlights

Maiden Exploration Target estimated for Dingo Hole Highly Pure Quartz project in the Northern Territory

- SRK Consulting have estimated an Exploration Target for Dingo Hole of between 10.4Mt to 42.6Mt at a post-leached SiO_2 grade between 99.37% and 99.85%.
- The Exploration Target covers an area of between 1.16 to 1.7km^2 at Dingo Hole; whereas, potential shallow buried quartz has not been estimated over a larger area within the 35 km^2 tenement.

Dingo Hole Highly Pure Quartz Project Highlights:

- Significant outcropping silica mineralisation across the project area with good road access, being ~280km northeast of Alice Springs.
- Preliminary study shows the purity of the quartz has the potential to reach high pure quartz products.
- The mean values of impurity level in Fe, Al, Ti and Li are 21ppm, 123ppm, 2.8ppm and 254ppb, respectively, which indicates this quartz has a unique impurity profile that may fit to certain high-end applications.
- A8G technical due diligence work is ongoing with sample results pending.

Australasian Metals Limited (**ASX: A8G**, **Australasian** or the **Company**) is pleased to report an initial Exploration Target range for the Dingo Hole Highly Pure Quartz Project (EL31078), in the Northern Territory (**Dingo Hole HPQ Project**). As announced on 27 May 2024, the Company entered into an Option Agreement with Verdant Minerals Limited which granted the Company the ability to acquire 100% of the Dingo Hole HPQ Project (Figure 1).

A8G Managing Director Dr Qingtao Zeng commented:

"We are encouraged by the initial Exploration Target which has been independently assessed for Dingo Hole and which only covers the central part of the project area, highlighting additional potential. Dingo Hole has unique geological characteristics, including extremely low impurities, which positions it well for the global HPQ market at a time when there is significant growth in the market for AI-related semiconductor applications and photovoltaic solar silica growth.

"We look forward to conducting further exploration within the Exploration Target area. The extensive outcrop of quartz means we can deliver high impact and low-cost exploration programs, and potentially shorten the timeframe to a maiden resource estimate."

The Exploration Target, prepared by independent technical consultants, SRK Consulting (Australia) Pty Ltd (**SRK**), is summarised in Table 1 and shown in Figure 2. *Note: The potential quantity and grade of the Exploration Target is conceptual in nature, and there has been insufficient exploration to estimate Mineral Resources. Furthermore, it is uncertain if further exploration will result in defining Mineral Resources at Dingo Hole*.

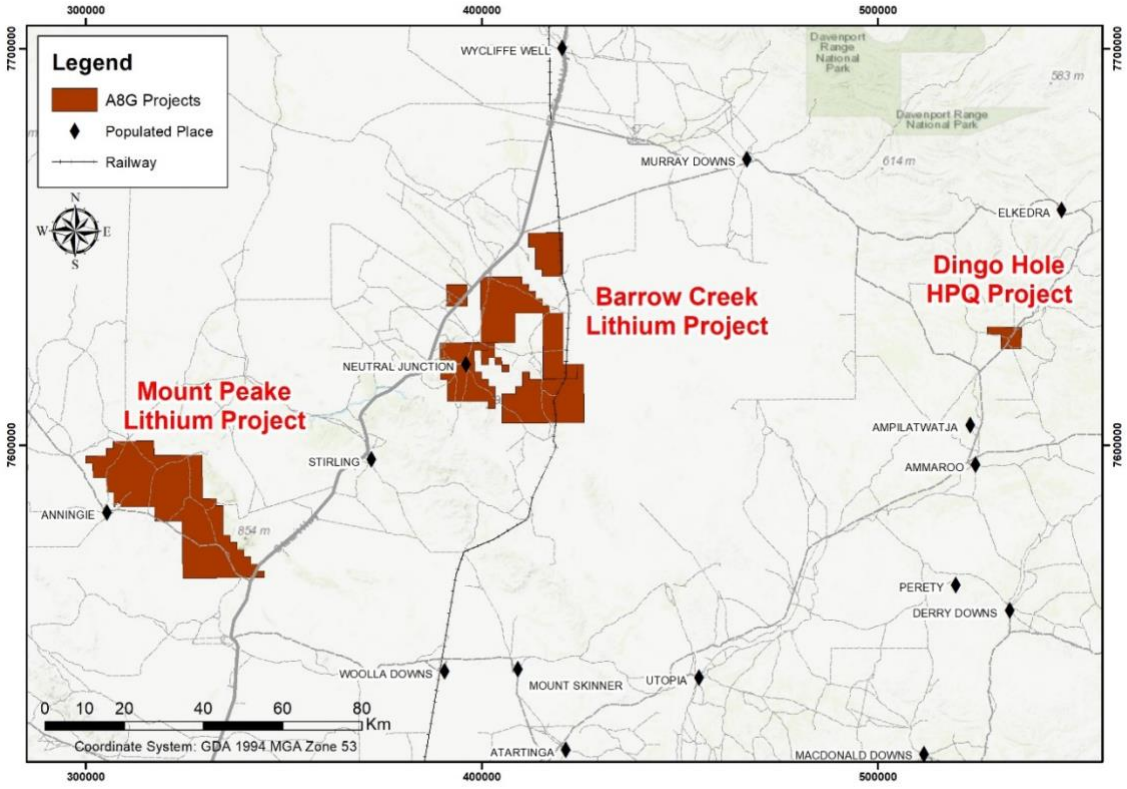

Figure 1: Dingo Hole High Pure Quartz (HPQ) project location in Central Northern Territory

Table 1: Exploration Target for the Dingo Hole High Purity Quartz Project

Exploration Target	Area (km^2)	Height (m)	Density (kg/m^3)	Tonnage (Mt)	SiO_2 (%)
Lower Case	1.16	5	1.8	10.4	99.37
Upper Case	1.7	10	2.5	42.6	99.85

Note: The SiO_2 grade displayed in the table is not the in situ grade; it is the leached grade after hydrofluoric acid treatment.

SRK estimated an Exploration Target at the Project. The lower limit was based on the Lower Case area delineated from Google Maps (Figure 2). SRK considered it appropriate as the most conservative case because the boundary between the silica and non-silica soil is clearly visible

on Google Maps. A thickness of 3m and a lower average density of 1.8 g/cm^3 were used for the Lower Case. The upper limit was calculated based on the Upper Case area which is delineated from the DTM relief. The difference being that it contains additional areas which are not clearly identified in the Google imagery used for the Lower Case. This could be a potential HPQ zone covered by red soil. A thickness of 8m, and a higher average density of 2.5 g/cm^3 were chosen for the Upper Case. The SiO_2 grade range was estimated based on a 95% confidence interval around the sample mean, assuming that the sample mean is normally distributed.

Figure 2: Delineated HPQ areas at Dingo Hole based on Google Maps (SRK Consulting, 2024). The readings are SiO_2 content based on %. It is noted that SRK calculated the SiO_2 content by subtracting the sum of the other elements' converted oxides (with some elements like silver (Ag) and gold (Au) remaining in their elemental form) from 100%, based on the original assay results from Jericho Resources (2015). SRK notes that SiO_2 is not assayed. It is calculated due to the potential inaccuracies when assaying high purity silica

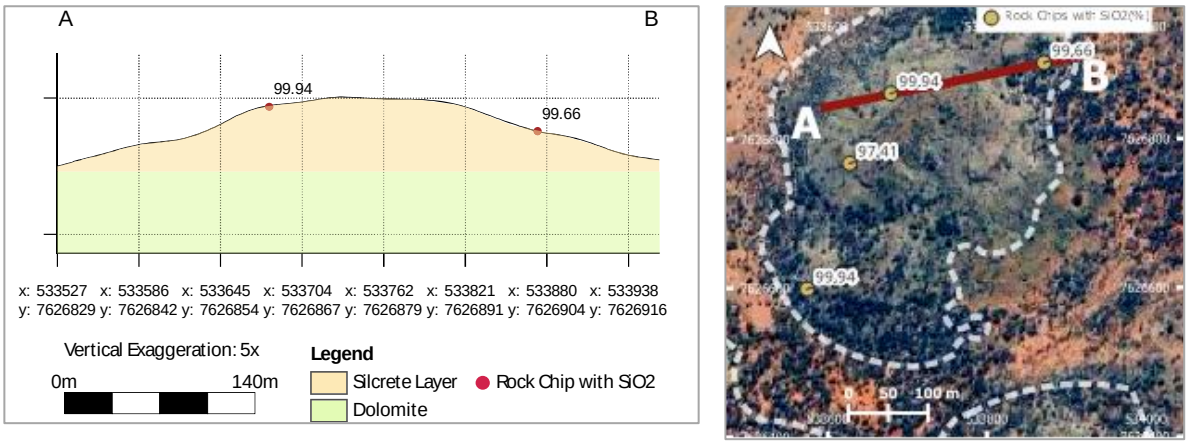

Figure 3:Conceptional cross section at Dingo Hole

Further Exploration

The objectives of the exploration program for the Dingo Hole HPQ Project aim to enhance the Company's understanding of the geological and geochemical characteristics of the silica unit, which is shallow dipping and overlies a dolomite unit. The program is designed to ensure a comprehensive evaluation of the potential HPQ resources and to facilitate subsequent metallurgical testing.

Based on the current mapping work, the Company has designed the following program:

- **Further surface sampling:** Conduct further surface sampling and perform full 57-element assays to better control the surface geochemical composition and identify areas of HPQ, as well as improving knowledge of the quality of HPQ.
- **Aboriginal survey and renewal of AAPA (Aboriginal Areas Protection Authority) certificate**: Conduct an aboriginal survey and renew the AAPA certificate, which will permit the Company to undertake drilling and bulk sampling in areas identified as having HPQ.
- **Drilling program:** Execute a drilling program, likely employing reverse circulation (RC) drilling with several diamond drill holes at a 50m by 50m grid with an average depth of 15m per hole. The plan includes drilling a total of 3,000m across 20 holes. The purpose is to estimate a reliable Mineral Resource for HPQ, and obtain samples for metallurgical testing. Assays will be conducted twice: once for full elemental analysis before acid leaching and once after acid leaching to evaluate the purity of the quartz. This dual-assay approach is crucial for understanding the initial geochemical composition and the

effectiveness of the purification process, ensuring that the HPQ meets the required specifications for potential industrial applications.

High Pure Quartz Industry

High Pure Quartz (HPQ) is defined as silica with a total contamination of not more than 50 ppm (99.995% SiO_2) and whilst modern processing methods can remove much of the contamination, it is the substitutional elements which constrain the ultimate purity and therefore the value of the silica. Ultra-High Pure Quartz is expressed relative to an industry-standard benchmark called IOTA® which contains less than 16.2ppm aluminium and total impurities less than 20ppm, equating to 99.998% SiO_2. Aluminium is a structural element within silica and there is no known method to remove it. As such, the natural levels determine the value of the silica. The IOTA-8® standard for titanium is less than 1.2ppm and lithium less than 200ppb. IOTA® standard ultra-High Pure Quartz material has a current market price in excess of US$5,000 per tonne and the global market for this type of product is currently around 100,000 tonnes per annum. Only a select group of ultra high-quality deposits globally are able to meet IOTA® standards.

High Pure Quartz has become one of today's key strategic raw materials for high-tech manufacturing industries. Silica glass produced from High Pure Quartz offers a wide range of exceptional optical, technical and thermal properties, which are essential for manufacturing many high-tech products in areas such as semiconductor technologies, high temperature lamp tubing, telecommunications and optics.

There is a rapidly growing demand for sources of exceptionally High Pure Quartz, particularly in respect to very low levels of alkali-metal impurities, such as sodium, potassium and lithium ions. Such High Pure Quartz is needed to prepare quartz frequency and timing control devices for electronic applications, as high purity raw materials for optical fibres, to prepare fused quartz optical grade glass such as for halogen vapor lamps, and to prepare crucibles and other quartz apparatus for making high purity silicon crystals for transistors, chips, and other electronic and semi-conducting devices such as photovoltaic cells.

This announcement is approved for release by the Board of Directors.

ENDS

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Competent Person Statement

The information in this report that relates to Exploration Results is based on, and fairly represents, information and supporting documentation prepared by Graeme Fraser, Non-Executive Director of Australasian Metals Limited (**A8G**). Mr Fraser is a member of the Australasian Institute of Mining and Metallurgy and he has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which has been undertaken 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 Fraser consents to the inclusion in this release of the matters based on the information in the form and context in which they appear. Mr Fraser is a shareholder of A8G.

Exploration Target Statement

The Exploration Target classified in accordance with the Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves (JORC, 2012). The Exploration Target was completed by Yuanjian Zhu of SRK Consulting (Australia) Pty Ltd. Mr Zhu has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to 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 Zhu consents to the inclusion in this release of the matters based on the information in the form and context in which they appear. Mr Zhu does not hold any securities or interests in the Company.

Table 2: Original sample assays with SRK calculated SiO_2 post sample preparation

Sample	East	North	Comment	SRK Calculated SiO_2 (%)
6930	538801	7668119	Q1 - quartz vein	98.90
6931	529325	7661353	Quartz hole - quartz vein	99.82
6934	539764	7668504	G1 - quartz vein	99.91
112001	533192	7626695	Silica	99.96
112002	533296	7626341	Silica outcrop	99.93
112003	533285	7626447	Silica in gravel push up	99.96
112004	533435	7626489	Silica outcrop on western edge of gravel pit	99.17
112005	533574	7626598	Silica outcrop	99.94
112006	533628	7626767	Silica outcrop - sample with iron vugs/inclusions	97.41
112007	533680	7626861	Silica outcrop northern outcrop	99.94
112008	533873	7626902	Northern silica outcrop - poor, vuggy silica with iron vugs	99.66
112009	533894	7626377	Grey silica after dolomite?	99.64
112010	533946	7626131	Silica with iron vugs	99.92
112011	533899	7626036	Silica outcrop with iron vugs	99.91
112012	533790	7626038	White/grey cavernous silica	99.84
112013	533558	7626045	Good white silica outcrop	99.97

Sample	East	North	Comment	SRK Calculated SiO_2 (%)
112014	533279	7626045	Good white silica	99.83
112015	533216	7626052	Good white silica	99.88
112016	533138	7626090	Silica ridge	99.89
112017	533074	7626140	White silica	99.88
112018	532788	7625825	White silica outcrop	99.91
112019	532866	7625812	White silica	99.92
112020	533156	7625688	Silica outcrop	99.83
112021	533345	7625633	White silica	99.91
112022	533450	7625640	White silica outcrop	99.93
112023	533491	7625723	Silicified white/grey silica dolomite outcrop	96.73
112024	534567	7625404	White silica outcrop	99.91
112025	534440	7625385	White silica east	99.89
112026	534514	7625372	White silica outcrop	99.81
112027	534648	7625298	White grey silica breccia with iron	98.60
112028	533196	7625505	silica	99.92
112029	533151	7625529	Good silica	99.84
112036	533329	7625940	white silica	98.97
DHS7	533017	7626549		99.97
DHS8	532957	7625490		99.90
Average				**99.61**

Report compliant with the JORC Code (2012).

Section 1: Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	• All samples were rock chips samples taken by Rum Jungle Resources Limited, randomly over outcropping silica ridges to obtain a representative group of samples from across the target area. Sample sites were selected visually from the outcrops and 2–3 kg of material was taken from the in situ rock formation using a geological hammer and placed in a pre-numbered calico bag
Drilling techniques	• Not applicable. No Drilling Reported in this release
Drill sample recovery	• Not applicable. No Drilling Reported in this release
Logging	• Rock Chip sample locations, descriptions and sample photos were recorded in the field. Only qualitative visual field descriptions relating to the colour of the sample were made.
Sub-sampling techniques and sample preparation	• Samples were washed by hose by Rum Jungle Resources/Verdant Minerals personnel prior to shipping to Jericho Resources Limited in Melbourne where samples were crushed in a non-contaminating vinyl mill to nominal 5 mm then sent to ALS laboratories in Sweden. The sample were then leached with 20% hydrofluoric acid at 60° C for 4 hours, followed by washing in Milli-Q® water prior to assay. Samples were analysed by ICP-SMS method. • SRK considered the sample size appropriate for the type of material being sampled as rock chip samples.
Quality of assay data and laboratory tests	• The ICP-SMS method is suitable for analysis of Silica samples at ppb detection limits. The ALS laboratory is ISO 900a certified. The original lab certificates have been signed by the Laboratory manager. • The GDMS method is suitable for analysis of silica samples at ppm detection limits. The EAG laboratory is certified under ISO 17025 standards. The laboratory certificates were signed by the laboratory analyst. • Normal internal laboratory quality assurance was conducted. • These data were not available to SRK.
Verification of sampling and assaying	• No verification was conducted for sampling. SRK checked the sample locations and geology and confirmed the mineralisation. • SiO2 grade was calculated by subtracting the sum of the other elements' converted oxides (with some elements like silver and gold remaining in their elemental form) from 100%, based on the original assay results.
Location of data points	• Rock Chip Samples: Sample location, descriptions and sample photos were recorded in the field using Hand GPS Garwin 65, using GDA 94 grid in Zone 53. Accuracy is assumed to be repeatable to within 10 m.
Data spacing and distribution	• The Project is in the early stage of exploration. The rock chip samples were collected based on field observation and outcrop conditions, with spacing or distribution not considered. • SRK considers the data spacing is suitable for reconnaissance exploration.

Criteria	Commentary
Orientation of data in relation to geological structure	• Assuming that the silica body is almost flat-lying, based on the bedding measurements, the structural orientation is not relevant at this stage of exploration or for this type of sampling.
Sample security	• Samples were reported by Rum Jungle resources/Verdant Minerals in 20th of July 2015. The sample security was reviewed. • Samples were sent by registered courier from Darwin to Melbourne and then Melbourne to New York and Sweden.
Audits or reviews	• No audits or reviews conducted

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
Mineral tenement and land tenure status	• The samples were taken on EL 31078, A8G has an exclusive option to acquire the tenement 100% from Verdant Minerals Pty Ltd. • Australasia have Warrants from Verdant Minerals Pty Ltd that the tenements are in good standing with no known impediments. • The tenement is located on the Ammaroo Pastoral Lease. • The area is located within a granted Native Title Claim. • An aboriginal areas register search has been undertaken. • An authority Certificate clearance had been granted in 2016 by the Aborignial Areas protection Authority (AAPA) to Rum Jungle Resources.
Exploration done by other parties	• Verdant Minerals Pty Ltd had conducted exploration from 2013 to 2016 and has been holding the tenement since then. Prior to this no exploration work was conducted.
Geology	• The Silica rock unit is assumed to be a flat lying silcrete which is replacing an original carbonate rock. This has yet to be confirmed.
Drill hole Information	• Not applicable. No Drilling reported in this release
Data aggregation methods	• Not applicable. No Drilling reported in this release. Surface sampling was completed.
Relationship between mineralisation widths and intercept lengths	• As only surface rock chips were collected and assayed, mineralisation width is assumed to be 5–10 m based on site observation.
Diagrams	• Scaled, located maps annotated with numbered sample locations were provided in the announcement
Balanced reporting	• All results reported are presented. It is believed that it has a certain level of representative significance.
Other substantive exploration data	• All relative data have been provided in the report. • Potential deleterious or contaminating substances vary depending on the final application of the HPQ product.
Further work	• Further sampling and drilling activities are to be undertaken by the Company. • The areas of possible extensions have been provided in the report.

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