AUSTRALIAN SILICA QUARTZ GROUP LIMITED

Quartz Hill Project - Metallurgical Testwork Outcomes



- Australian Silica Quartz Group Limited (ASQ) advises that a metallurgical test work program on material from the Quartz Hill MGSi Project has been completed with positive results.
- The Quartz Hill MGSi Project, located 300km northwest of Townsville in Far North Queensland, contains the 17.3Mt MGSi quartz at 99.04% SiO2 JORC 2012 resource.
- As part of the Quartz Hill MGSi Project Scoping Study, ASQ conducted a program of metallurgical test work to gather more detailed information required to characterise the quality of the quartz lump product.
- Test work included crushing, screening, scrubbing and ore sorting.
- The test work indicates that simple processing can significantly reduce the quartz impurities and produce a quartz lump from Quartz Hill with grades as high as 99.4% SiO₂.
- Test work demonstrated ore sorting is particularly effective at reducing key silicon manufacturing contaminants iron and aluminum
- Subject to further feasibility work, the Quartz Hill resource may be able to support Quinbrook's proposed multibillion dollar state-of-the-art polysilicon manufacturing facility to be located at the Lansdown Eco-Industrial Precinct in Townsville Queensland.
- Quartz Hill Scoping Study is on track for Q1 2025 completion.

Figure 1 – Crushed, screened and scrubbed +19mm – 100mm quartz lump from Quartz Hill prepared for Sensor Based Ore Sorting Trials at TOMRA in Germany



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Australian Silica Quartz Group ('ASQ' ASX:ASQ) is exploring the Quartz Hill Metallurgical Grade Silicon ('MGSi') Project under a Project Development Heads of Agreement with Private Energy Partners Pty Ltd, a wholly owned affiliate of Quinbrook Infrastructure Partners ('Quinbrook').

Quinbrook is a 'value add' investment manager with a specialist focus on the energy transformation, across low carbon and renewable energy supply, storage, grid stability, data centre, industrial and supply chain decarbonisation and related assets and businesses.

Quinbrook proposes to develop and build Project Green Poly, a \$7.8 billion state-of-the-art polysilicon manufacturing facility, powered by a large-scale solar and battery storage project at the Lansdown Eco-Industrial Precinct in Townsville North Queensland (townsville.qld.gov.au). Project Green Poly is slated to establish one of Australia's first integrated mine-to-manufacturing polysilicon supply chains.

ASQ received \$1 million from Quinbrook in return for the exclusive right to purchase 10 million tonnes of MGSi Quartz from the mine gate at Quartz Hill at a 10% discount to the prevailing MGSi Quartz market price or such price that would constitute a fair market return to ASQ (whichever is the greater).

High grade quartz is required by the solar silicon manufacturing industry as a precursor feedstock for the production of MGSi. ASQ continues to work with Quinbrook to assess Quartz Hill as a source of MGSi feedstock.

Quartz Hill is located on EPM 26702 (ASQ 100%) 10km north of the town of Mount Surprise which is accessed by the Gulf Development Road, 200km southwest of Cairns and 290km northwest of Townsville in North Queensland (Figure 2).



Figure 2: Quartz Hill MGSi Quartz Project Locality and Tenement Plan



In December 2023 ASQ reported the Quartz Hill Mineral Resource Estimate of 17.3Mt total MGSi quartz with 99.04% SiO₂ (Table 1) in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Ore Reserves Committee Code – JORC 2012 Edition).

Table 1: 2023 Quartz Hill Mineral Resource Estimate

December 2023 Mineral Resource Estimate (98% SiO2 Cut-off)									
	Total Mineral Resource								
Class	Tonnage	SiO2	AI2O3	CaO	Fe2O3	MgO	Na2O	TiO2	∑Oxides
	Mt	%	%	%	%	%	%	%	%
Indicated	7.6	99.09	0.67	0.005	0.16	0.008	0.02	0.03	0.91
Inferred	9.7	99.00	0.73	0.009	0.17	0.012	0.03	0.03	1.00
Total	17.3	99.04	0.70	0.007	0.17	0.010	0.03	0.03	0.96

Quartz Hill MGSi Deposit

Note:

All Mineral Resources figures reported in the table above represent estimates at December 2023. Mineral Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies. Mineral Resources are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Ore Reserves Committee Code – JORC 2012 Edition).

Metallurgical Testwork Program

Following the completion of the larger diameter (PQ core) diamond drill hole ASQQHDD001 in July 2024 (refer figures 5 & 6) ASQ completed a program of metallurgical testwork aimed to characterise the expected lump silica product from Quartz Hill. The diamond core from 6.8m to 64.5m (end of hole) was cut in half and crushed and screened to +19mm-100mm then scrubbed. The sample was then screened to +19-50mm and +50mm-100mm size fractions. Each size fraction underwent detailed colour sensor ore sorting trails at the TOMRA Mining Test Centre in Wedel, Germany producing four quality cuts from each size fraction (waste plus low, medium and high grades). Each cut was analysed for trace chemistry by Dorfner Anzaplan GmbH in Hirschau Germany.



Figure 3: Quartz Hill MGSi Quartz Resource Outline and Drill Hole Locations





Figure 4: Cross Section of Quartz Hill Wireframes – Section A-A'

The testwork results indicate that a range of quality quartz lump can be produced from Quartz Hill at varying yields. The ore sorting is particularly effective at reducing key silicon manufacturing contaminants iron and aluminium. These results will provide valuable inputs into the Quartz Hil MGSi Project Scoping Study which is scheduled to be completed in Q1 2025.

	Yield*	SiO ₂	Fe ₂ O ₃	Al ₂ O ₃
Mineral Resource:				
Quartz Hill 17.3Mt Resource		99.04	0.17	0.70
Metallurgical Testwork Products:				
19-100mm Scrubbed (no sorting)	80%	99.23	0.08	0.47
19-100mm Low Grade Sorted Cut	67%	99.26	0.07	0.46
19-100mm High Grade Sorted Cut +				
50-100mm Low Grade Sorted Cut	48%	99.32	0.06	0.42
+19-100mm Medium Grade Sorted				
Cut	43%	99.32	0.06	0.42
19-100mm High Grade, +				
50-100mm Medium Grade Sorted Cut	32%	99.38	0.06	0.38
+19-100mm High Grade Sorted Cut	18%	99.40	0.05	0.37

Table 2: Quartz Hill Ore Sorting Testwork Program - Outcomes

*Yield is the calculated deportment of the full sample prior to any processing



This announcement has been approved for release by the Board

Please refer to the following announcements for further details on the Quartz Hill MGSi Quartz Project and related exploration results:

Release Date	Announcement Title
12 Dec 2023	MAIDEN 17MT JORC RESOURCE AT 99.04% SIO2 AT QUARTZ HILL
17 Aug 2023	DRILLING COMMENCES AT QUEENSLAND QUARTZ PROJECT
12 Jul 2023	ASQ RECEIVES \$1 MILLION FOR QUARTZ HILL DEVELOPMENT
07 Jul 2023	ASQ FINALISES EXCLUSIVE RIGHTS TO 10MT QUARTZ OFFTAKE
02 May 2023	HARD ROCK SILICA QUARTZ - QUEENSLAND PROJECTS CLARIFICATION
27 April 2023	HARDROCK SILICA QUARTZ – QUEENSLAND PROJECTS UPDATE

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

Cautionary Statement

This announcement and information, opinions or conclusions expressed in the course of this announcement contains forecasts and forward-looking information. Such forecasts, projections and information are not a guarantee of future performance, involve unknown risks and uncertainties. Actual results and developments will almost certainly differ materially from those expressed or implied. There are a number of risks, both specific to ASQ, and of a general nature which may affect the future operating and financial performance of ASQ, and the value of an investment in ASQ including and not limited to title risk, renewal risk, economic conditions, stock market fluctuations, commodity demand and price movements, timing of access to infrastructure, timing of environmental approvals, regulatory risks, operational risks, reliance on key personnel, reserve estimations, native title risks, cultural heritage risks, foreign currency fluctuations, and mining development, construction and commissioning risk.

Competent persons statement – Exploration Results

The information in this document that relates to exploration results is based on data collected under the supervision of Mr. Nick Algie in his capacity as Exploration Manager for Australian Silica Quartz Group Limited. Mr. Algie is a registered member of the Australian Institute of Mining and Metallurgy (AusIMM) and has sufficient experience that is relevant to the type of deposit and style of mineralisation under consideration to qualify as a competent person under the 2012 edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Algie consents to the inclusion of the data in the form and context in which it appears.

Hole ID	Northing	Easting	RL (m ASL)	Dip	Grid Azimuth	End of Hole (m)	Drilling Type
ASQQHDD001	7997134	207654	455	-60°	340°	64.5	Diamond Core (PQ)

Table 3 - Drill Collar Data (GDA94 MGAz	55)
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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. 	 PQ Diamond Drill core from ASQQHDD001 interval 6.8m to 64.5m was sawn in half, then broken into +19mm -10mm lumps. These half core lumps were then washed and mixed in a plastic drum cement mixer to remove any loose clay or iron oxide material. The resultant lump silica was packed up and dispatched to Tomra Ore Sorting labs in Sydney. All material (fines & lump) was weighed, all weights were recorded. The larger PQ core was used to generate a greater volume of sample and to allow the preparation of lump particles sizes similar to what is expected from a mining operation. TOMRA in Sydney Australia received the entire sample available from the drill core and performed screening of the lump sample splitting it to +19-50mm and +50mm-100mm size fractions. Representative grab samples totalling 108kg were collected under ASQ supervision from the two size fractions and sent to TOMRA in Germany. TOMRA Germany received the prepared lump samples and completed colour sensor based ore sorting using their Pro Secondary COLOR, high-resolution images the feed were taken with the system. The recorded images were then analysed and assigned to different selected classes based on colour and/or brightness. The different selected colour classes (coloured pixels) were then assessed as a percentage of the single rock area. This percentage is used as the parameter to set the sorting cut. Surface detection requires a clean material surface and washing is mandatory. At Anzaplan, samples were received, sorted and checked against submission sheets for missing or additional samples. Samples were dried, weighed, split and crushed using a tungsten carbide faced jaw crusher prior to pulverisation to P85 75µ, in a tungsten carbide bowl and puck set.
techniques	• Drin 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).	 During July 2024, DDH1 completed diamond drill hole ASQQHDD001 for 64.5m at the Quartz Hill quartz occurrence. PQ core was recovered by triple tube.
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 	 Recovery of samples is recorded as a matter of routine. Diamond holes are drilled in shorter lengths when in broken ground to maximise sample recovery. Overall >95% drill core/sample recovery is estimated from the fresh rock.



Criteria	JORC Code explanation	Commentary
	have occurred due to preferential loss/gain of fine/coarse material.	 No relationship has been observed between sample recovery and grade. Sample bias is unlikely due to the good general recovery of sample.
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. 	 ASQQHDD001 was geologically and geotechnically logged by Terrasearch in Townsville. Various qualitative and quantitative geological features were logged. The hole was logged in full in an excel spreadsheet. Logging was qualitative and quantitative in nature.
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 subsampling 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 cize of the material being campled 	 Half core samples were taken Sample sizes are considered appropriate to correctly represent the mineralisation based on the style of mineralisation, the thickness and consistency of the intersections, the sampling methodology and assay value ranges for quartz. No field duplicates or second half core has been used yet for the diamond drill hole. At Anzaplan, samples were received, sorted and checked against submission sheets for missing or additional samples. Samples were dried, weighed, split and crushed using a tungsten carbide faced jaw crusher prior to pulverisation to P85 75µ, in a tungsten carbide bowl and puck set. Samples were completely digested before
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. 	 Analysis results provided by the laboratory are expressed as elemental concentrations. ASQ calculated the expected oxide concentrations using conversion multipliers. The sum of oxides for each sample is subtracted from 100 to give the calculated SiO2 concentration. Laboratory QAQC includes the use of internal standards using certified reference material, laboratory duplicates and pulp repeats. A full analysis of all the quality control data has been undertaken. This analysis validates the drill assay dataset and conforms with the guidelines for reporting under the JORC 2012 code.
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. 	 The diamond drill hole intersections were verified by the ASQ geologist. Verification has been undertaken by Company and contract personnel. ASQQHDD001 is a twin of RC hole ASQQHRC010. Comparisons between the two holes was limited to quantitative factors but there was good correlation in observed geology. Data had been recorded in a drill hole database with QAQC analysis of samples undertaken to validate data prior to it being inserted into the database. No assay adjustment to assay data has taken place. The hole was logged in detail by Terrasearch staff and the logging was validated by the ASQ Geologist.

7



Criteria	JORC Code explanation	Commentary
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. 	 The collar location of the drill hole was surveyed by tape and compass off the collar of RC hole ASQQHRC010. All the RC holes were surveyed using a Spectra Geospatial SP60 DGPS with position dilution of position ("PDOP") values ranging from 0.8 to 1.2. Collar orientation was measured using a handheld sighting compass and mast angle was measured with a clinometer to give collar dip. Down hole survey was completed at 30m intervals using a Reflex Single Shot downhole instrument. Collars have been located in MGA1994, Zone 55 co-ordinates. Measure Australia (Townsville) completed a LiDAR and Photogrammetry survey by drone over 267Ha of the Project area. This generated a DTM surface with 50mm vertical accuracy.
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. 	 Analytical data points downhole are sufficient to characterise the nature of the rock and its mineralisation. The drill hole was designed to sample an extensive zone of quartz mineralisation for the purpose of metallurgical testwork. The data spacing of the sampling and testwork undertaken is considered appropriate for the preliminary nature of the scoping study being undertaken. No Mineral Resource is being calculated in this report.
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. 	 The orientation of the drill hole -60° is approximately perpendicular to the southerly dipping mineralisation and is unlikely to have introduced any significant sampling bias. No orientation based sampling bias has been identified in the data
Sample security	• The measures taken to ensure sample security.	 The entire half core sample was sent to TOMRA with weights sent and received verified by ASQ. ASQ supervised the packaging of the grab samples sent to TOMRA in Germany. No ASQ verification of the samples sent from TOMRA in Germany to Anzaplan was undertaken.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• Audits have not yet been conducted due to the early stage of exploration.



Section 2: Reporting of Exploration Results

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 license to operate in the area. 	 The Project is located on EPM 26702 within Mount Surprise Station, approximately 200km southwest of Cairns in Far North Queensland. The tenement is 100% owned and held by ASQ. The tenements are in good standing with no known impediments to future mining operations.
Exploration done by other parties	 Acknowledgment and appraisal of exploration by other parties. 	 No previous sub-surface exploration has been undertaken, however, during 2010 to 2012, KS Mining Pty Ltd completed surface rockchip quartz sampling and a resource of approximately 14 million tonnes of 99% SiO2, to a depth of 100m was estimated and categorised as Inferred under the JORC Code 2004.
Geology	• Deposit type, geological setting and style of mineralisation.	 The outcropping Quartz Hill occurrence is hosted within the Paleoproterozoic aged Einasleigh Metamorphics. The Einasleigh Metamorphics consists of migmatites grading into gneissic granite and schist. Quartz Hill is a very large, 1,300m long ridge elevated up to 140m in vertical elevation above the surrounding flatter country dominated by continuously outcropping rubbly quartz forming the core of the steep- sided ridge. The quartz lodes are thought to have been formed from the processes of metamorphism, due either to pre-existing siliceous rocks being definitively metamorphosed, or quartzitic material being produced by metamorphic processes.
Drill hole information	 A summary of all information material to the under-standing of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	All information has been included in the report. No drill hole information has been excluded.
Data aggregation methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. 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. 	 Exploration results are not being reported. Weighted averages for the expected yields and grades of various combinations of sorted cuts has been calculated by ASQ using simple arithmetic methods. Weighted average calculation have been verified by additional ASQ personnel. Metal equivalent values have not been used.

9



Criteria	JORC Code explanation	Commentary
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 (e.g. 'down hole length, true width not known'). 	 The orientation of the drilling -60° is approximately perpendicular to the southerly dipping mineralisation.
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. 	 Relevant diagrams have been included within the report main body of text.
Balanced Reporting	 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. 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 drill hole collars were located by DGPS in MGA1994 Zone 55 grid. The collar location of the drill hole was surveyed by tape and compass off the collar of RC hole ASQQHRC010. All the RC holes were surveyed using a Spectra Geospatial SP60 DGPS with position dilution of position ("PDOP") values ranging from 0.8 to 1.2.
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 relevant exploration data is shown on the figures and in the body of the report.
Further work	 The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large- scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	 Further drilling will be conducted to improve the confidence in the geological continuity. Refer to diagrams in the body of text within the report.

