## **AUSTRALIAN SILICA QUARTZ GROUP LIMITED**

## **EXTENSIVE GOLD IN SOIL ANOMALIES DETECTED**



### HIGHLIGHTS

- Koolyanobbing Shear Zone soil sampling results outline several well-defined significant gold anomalies
- The 5-10 times background, 88ppb Au peak soil anomalies are located along 6km of the Golden Wishbone Gold Trend
- > This soil sampling completed by ASQ is the first systematic gold exploration on this ground
- ➤ Historic Golden Wishbone mine shaft, located within the soil sampling area, yielded 204oz at an average grade of 18gpt
- Results reported from 373 samples with a further 1,372 samples collected from the Koolyanobbing Metals Project awaiting analysis
- Follow up soil sampling and regolith/landform mapping planned for early 2023, with drilling to follow

Australian Silica Quartz Group Limited (ASX:ASQ, 'ASQ' or the 'Company') is pleased to announce the first soil sample results from the newly formed Koolyanobbing Metals Project (KMP)

ASQ recently completed the establishment of the KMP by combining existing tenements with those acquired from a private group (Refer full detail in the 11 August 2022 ASX announcement ASQ Acquires Li/Au/Cu/Ni Ground). The KMP forms a strategic tenement package totalling 317km² (1) and covers 54% of the Koolyanobbing Greenstone Belt and 38km in strike of the crustal scale Koolyanobbing Shear Zone that runs along the western edge of the greenstone package.

ASQ have now completed first pass soil sampling on the northern section of the Golden Wishbone Gold Trend with highly encouraging results. The Golden Wishbone Gold Trend comprises a 7km strike length trend of gold anomalism and occurrences that follow an interpreted shear zone on an ultramafic contact (See Figure 1). The abandoned 1930's golden Wishbone mineshaft lies at the northern end of the trend with reported production of 204 ounces from 344 tonnes giving an average grade of 18g/t from quartz veins. At the southern end of the trend lies a 1.5km Au in soils anomaly with results up to 0.4g/t defined by previous explorers. Exploration of this anomaly has been limited to soil sampling and shallow aircore drilling that failed to penetrate significantly into the fresh basement rocks under thin tertiary cover. The majority of the trend between the gold soil anomaly and the historical shaft has only sparse soil and rock chip sampling. This is likely to be due to the ground being held tightly until 2017 as part of the adjacent Koolyanobbing Iron Ore mine tenure. Although the historic sampling is patchy, there have been rock chip samples up to 2.68g/t.

**Note 1**: ASQ applications E77/2941 and E77/3021 have a total area of 100.2km² but area expected after grant is 73.1km² due to overlapping existing leases. Acquisition application E77/2912 (11.8km²) is part of a ballot application with two other applications having equal priority

7 December 2022

**ASX Code: ASQ** 

**AUSTRALIAN SILICA QUARTZ** 

**GROUP LTD** 

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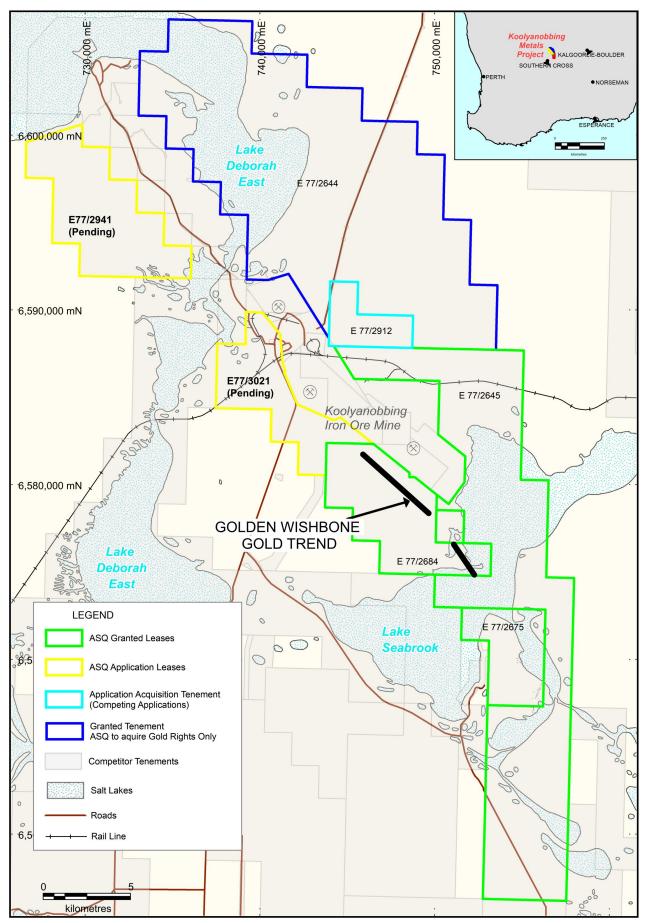


Figure 1: Koolyanobbing Metals Project with the Golden Wishbone Gold Trend

373 soil samples were collected over the Golden Wishbone Gold Trend along the interpreted trace of the crustal-scale Koolyanobbing Shear Zone (see Figure 2).

500m spaced lines were sampled at 50m intervals with samples predominantly collected from residual soils.

The results defined four discrete single line anomalies and a broader elongate anomaly approximately 2.5km in strike length.

ASQ considers background gold in soils to be 1-4ppb with anything over 10ppb Au anomalous. Of the 373 samples assayed, 53 returned results of 10ppb Au or greater and 16 samples had greater than 25ppb Au with a peak result of 88ppb Au.

Planning is underway to complete infill soil sampling and more detailed regolith and landform mapping in the anomalous areas early in 2023 with drilling to follow.

A further 1,372 soil samples have been collected from prospective areas within the Project in recent weeks, with results expected in Q1 2023.

The planned fixed loop ground electromagnetic (FLEM) survey has been delayed by late-season rains flooding Lake Seabrook but is expected to be completed in the coming weeks and aims to test one strong late-time airborne EM conductor located within the lake along with several lower order airborne EM anomalies and an area of outcropping gossan with associated anomalous copper in rock chip results.

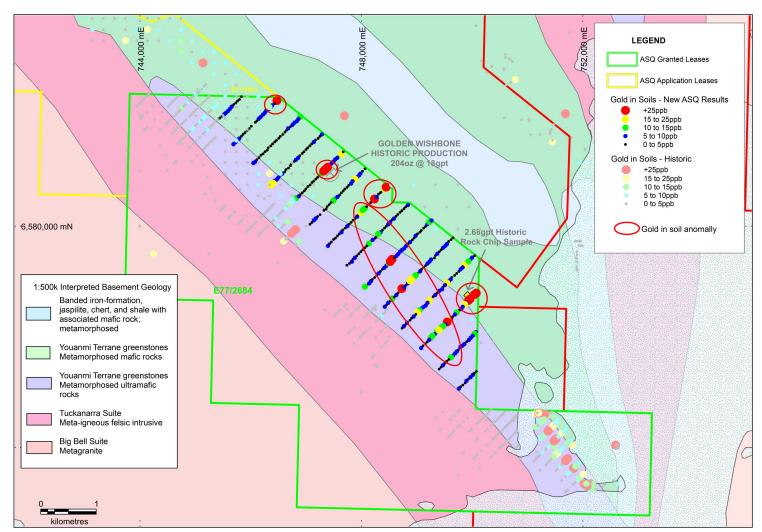


Figure 2: Golden Wishbone Soil Sampling Results





Figure 3: ASQ personnel completing soil sampling at the Koolyanobbing Metals Project

#### **Competent persons statement**

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.

This announcement has been approved for release by the Board

## **About Australian Silica Quartz Group Limited**

#### ASQ DEVEX 50/50 JV (non-dilutable at ASQ's election)

ASQ has entered into a joint venture with DevEx Resources ("DevEx" ASX:DEV) on it's 100% owned E70/3405 tenement located along strike from Chalice Gold Mines ("Chalice" ASX:CHN) nickel copper platinum group elements Julimar discovery in WA. The first \$3M expenditure on the JV area is to be fully funded by DevEx to earn 50%. ASQ has the option to jointly fund future expenditure to maintain 50% share or opt to allow DevEx to fund the next \$3M to earn a further 20% share in non-bauxite minerals. Initial geochemical and geophysical exploration work returned positive results. Recently completed aircore drilling has defined a layered, differentiated mafic-ultramafic intrusion, extending over 12 kilometres in length. Three reconnaissance diamond holes have confirmed the presence of a thick sequence of differentiated mafic-ultramafic intrusive rocks extending over the full length of the Project. As part of this initial diamond programme, several zones of disseminated (low grade) Ni-Cu sulphide mineralisation were intersected which, together with signs of assimilation of the surrounding country rock, provide an indication of the potential for the intrusion to host concentrations of Ni-Cu-PGE mineralisation. Extensive ground electromagnetic (EM) surveys have been completed designed to test for conductors that may be associated with massive Ni-Cu-PGE mineralisation. (Refer full detail in the 1 June 2020 ASX announcement ASQ reaches agreement for funding of exploration on its tenement in Julimar Region, WA, 8 October 2020 ASX announcement Update on Geophysics Targets at ASQ/DevEx JV in Julimar Region, WA, 19 August 2020 ASX announcement Update on ASQ/DevEx 50/50 JV in Julimar Region, WA, 4 December 2020 ASX announcement DevEx Exploration Update, 27 April 2021 ASX announcement Drilling confirms Mafic-Ultramafic Intrusion at Sovereign, 17 August 2021 ASX announcement

12km Long Mafic-Ultramafic Intrusion at Sovereign, Large Scale Ground EM and Diamond Drilling set to Commence, 7 October 2021 ASX announcement Diamond drilling underway at Sovereign Ni-Cu-PGE Project, 10 November 2021 ASX announcement Disseminated Ni-Cu sulphides in drilling - Sovereign Project and 23 December 2021 ASX announcement Drilling results confirm prospective intrusion at Sovereign).

#### **SILICA**

ASQ has established a range of silica sand and hardrock projects held via exploration licence applications 100% owned by ASQ's subsidiary Australian Silica Quartz Pty Ltd. These projects now consist of 10 granted exploration licences and two applications covering approximately 1,130 km² within Western Australia and Queensland.

High grade silica (99.5-99.9% SiO2) and high purity silica (>99.95% SiO2) currently have a wide range of applications. All indications suggest the high grade and high purity silica market is currently growing strongly due to greater demand from the PV Solar, TFT glass, Electronics, Flat Glass and Speciality Glass industries. This is reinforced by the level of enquiries from qualified end user customers the Company has received primarily from China and Southeast Asia.

#### SILICA SAND

ASQ's high grade silica sand projects are located in the regions of Albany and Gingin in the southwest of Western Australia.

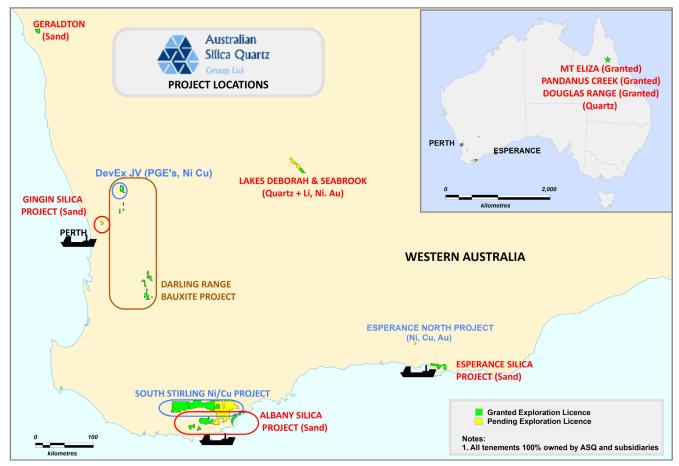
These projects potentially present the opportunity for the Company to produce a washed DSO silica sand product with longer term potential to enter the higher value higher grade silica sand market with a niche processed product.

ASQ is currently working on a Scoping Study for the 11.6Mt Albany White Hill high grade, low iron Silica Sand Project (refer full detail in the 28 January 2021 ASX announcement High Grade, Low Iron Silica Sand Resource). The Albany White Hill Project is located on farmland cleared of native vegetation 70 km east northeast of the port of Albany. In addition to its wholly owned silica exploration projects ASQ has reached an agreement with an existing local sand producer. In 2019 the Company executed a binding terms sheet with Urban Resources Pty Ltd (Urban) to jointly exploit Urban's Silica Sand deposit located in Bullsbrook, Western Australia. Urban has operated the mine for the last six years and produced over 1Mt from the deposit in the last two years. The ASQ/Urban Resources agreement presents the Company with the opportunity to potentially fast track its entry into the DSO silica sand export market. ASQ has completed a JORC 2012 Inferred Mineral Resource on the raw sand at Urban's Maralla Road tenement M70/326 (Refer full detail in the 7 May 2019 ASX announcement Update on Maralla Road Silica Sand Deposit Maiden Resource and 29 January 2020 ASX announcement Spiral and Classifier Testwork Results for the M70/326 Silica Sand Products). ASQ has now reached an agreement to supply Fortune 500 company C&D Logistics with 45kt/month of processed silica sand from the Marella Rd Deposit. At present this business is on hold due pending a port access solution (Refer full detail in the 1 February 2022 ASX announcement MOU Terms Sheet agreed for Bulk Silica Sand Exports, and the 26 April 2022 ASX announcement Update on Kwinana Port access for Silica Sand Export).

#### HARDROCK QUARTZ R&D

The Company is undertaking an R&D program aiming to develop a high purity, high value silica quartz product. To this end the Company has secured a number of hardrock quartz tenements and is progressing with a research and development project in this area. Assays from rock chip sampling of ASQ's hard rock tenements reported grades of up to 99.993% SiO2 with processed hard rock samples demonstrating further grade improvement (refer to full detail in the 15 December 2021 ASX announcement *Exploration and Research Update Hardrock High Purity Quartz and Silica - Revised*).





#### SOUTH STIRLING Ni/Cu PROJECT

ASQ has established the South Stirling Ni/Cu Project by way of four exploration lease applications lodged covering 1,603 km2 over the Albany Fraser Mobile Belt, South-Western WA, where the Company has identified a historical end of hole aircore drilling assay of 1.5m at 0.79% Ni, 934 ppm Cu, 832 ppm Co from 28.5m that was never followed up. ASQ has now twinned and extended the anomalous historical hole to 52m depth, confirming and upgrading the mineralisation intersection. ASQ considers the project area has potential for Nickel-Copper magmatic sulphide mineralisation associated with mafic-ultramafic intrusions emplaced into granulite facies country rocks and planning is underway to complete extensive airborne EM surveys and other associated exploration work (Refer full detail in the 23 September 2020 ASX announcement Exploration Update and the 3 June 2022 announcement South Stirling Ni/Cu Project – Positive Drilling Results).

#### KOOLYANOBBING METALS PROJECT

ASQ has established the Koolyanobbing Metals Project by combining recently acquired ground with the existing ASQ tenure in the area. The KMP is considered prospective for Li, Au, Ni and Cu. (Refer full detail in the 11 August 2022 ASX announcement ASQ Acquires Li/Au/Ni/Cu Ground).

#### **BAUXITE JV**

ASQ has a joint venture with HD Mining & Investments Pty Ltd (HDM). HDM is currently working towards obtaining a 40% interest in the bauxite rights of several tenements under the joint venture which are wholly owned by ASQ. Exploration activities are fully funded by HDM. Should HDM and ASQ make a subsequent decision to mine, then HDM will earn an additional 20% interest in bauxite rights on the tenements. ASQ maintains 100% interest in all other minerals. A seventy-eight million tonne Bauxite JORC resource has been identified under this JV (Refer to Company Annual Financial Report for 2022 - Mineral Resources and Ore Reserves section).



#### **BAUXITE ROYALTY**

Following the sale of the Bauxite Resources Joint Venture Bauxite Project to Yankuang Group a royalty on future bauxite sales from the Project of 0.9% of FOB price payable to ASQ was negotiated. The Yankuang Group bauxite project contains over 300 million tonnes in the world class bauxite region in the Darling Range, Western Australia. ASQ is entitled to a royalty of 0.9% of the FOB price on the first 100 million tonnes mined (under current prices of Bauxite, this royalty would equate to approx. A\$0.50/tonne) (refer full detail in 30 November 2015 ASX announcement Final Agreements signed with Yankuang for sale of Joint Venture Interest and Buy Back of Shares).

#### **APPENDIX 1 - JORC 2012 Table 1 UPDATE!**

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	Commentary
Sampling techniques	<ul> <li>Various sampling techniques and methods have been employed by the previous workers in the historical data presented including, rock chip sampling, soil sampling, laterite sampling and auger sampling.</li> <li>The exact sampling methods cannot be determined, with confidence, from the historical data.</li> <li>ASQ soil samples were collected by removing the top 5cm of soil, and sampling material between 5cm and 25cm below the surface. Field screening was done to 2000um, with a laboratory screen done to 50um before assaying.</li> </ul>
Drilling techniques	No drilling information is reported
Drill sample recovery	No drilling information is reported
Logging	<ul> <li>Not all geological data for historical drillholes is available. Where data is available, it has been compiled and entered into the Company's historical database. The data will be unsuitable for use in a Mineral Resource or more advanced study and is to be used as an exploration aid only.</li> <li>ASQ soils samples were logged using an industry-standard coded logging system suitable for uploading and interrogated in an industry-standard database system.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>For reported historical surface sampling the nature of sub-sampling and sample preparation cannot be determined with confidence, given the historical nature of the data.</li> <li>ASQ samples were screened to 50um and analysed as received.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>Due to the historical nature of the data, the QAQC methods and practices employed by the previous workers cannot be determined with confidence. In some cases, it is unlikely to have been to the same level as current industry standards.</li> <li>ASQ soil samples undertook industry-standard QAQC analysis by the laboratory. No QAQC samples were inserted by ASQ, given the semi-quantitative nature of soil sampling programs.</li> </ul>
Verification of sampling and assaying	<ul> <li>The historical data cannot be verified, and it has been collected from publicly available sources.</li> <li>ASQ sampling was either taken by, or closely monitored by a geologist, and all sample sites were logged in detail by the geologist.</li> <li>ASQ assaying was completed at Intertek Genalysis laboratory in Perth, a highly regarded laboratory for trace-level soil analysis.</li> </ul>

Criteria	Commentary
Location of data points	<ul> <li>Historical data points reported have been recorded in various coordinate systems and projections. Whilst care has been taken to check the correct transformations have been used it is possible there are some positioning errors in the presented data.</li> <li>ASQ soil sampling datasets are collected and logged by handheld GPS, with a maximum spatial error of approximately 6m.</li> </ul>
Data spacing and distribution	<ul> <li>Surface sampling and drilling has been carried out at various spacing.</li> <li>The sample spacing reported is appropriate for this early-stage exploration.</li> <li>The ASQ soils samples reported in this announcement are collected on a 500m by 50m grid with lines orientated to be as perpendicular as possible to the strike of the geology.</li> </ul>
Orientation of data in relation to geological structure	Sample line orientation has been designed to be perpendicular to interpreted geological strike
Sample security	<ul> <li>For the historical data presented, sample security cannot be determined.</li> <li>ASQ samples are in possession of ASQ staff members from the point of collection to delivery at the laboratory.</li> </ul>
Audits or reviews	No external audits or reviews have been conducted apart from internal company reviews.

## 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	<ul> <li>Tenement E77/2684 is owned by ASQ. The lease has been granted and it is in good standing.</li> <li>There are no known impediments to obtaining approvals to operate in the area.</li> </ul>
Exploration done by other parties	<ul> <li>The following is a summary of the work completed on E77/2684 in the vicinity of the soil sampling program referred to in this report:         <ul> <li>From 1967 to 1976 Barrier explored the KGB for gold, base metals and tungsten. Their work involved magnetic and geochemical surveying, induced polarisation studies, auger drilling, mapping and analysis of a quartz vein (on the mafics / KSZ contact) containing scheelite. Geochemical studies of the scheelite mineralisation returned grades of up to 5.55% WO3, with other samples giving values of 2.56% WO3 and 0.18% WO3.</li> <li>Barrier Exploration signed a joint venture with Kennecott Exploration Australia Ltd in November 1980 to explore the property. Under the agreements, Kennecott who managed the project had an option to earn 51%. Exploration work completed by Kennecott included regional and detailed geological mapping, auger soil sampling and diamond drilling. Tungsten mineralisation was found to be discontinuous and of insufficient grade to warrant further work and the option was relinquished.</li> <li>From 1993 to 1998 Enterprise Gold Mines NL explored the area for gold. Their work included soil and sediment sampling. At the expiry of the licence 5th year of term and prior to its anniversary, an application was made for a mining lease (MLA77/942) over the ground considered most prospective and which hosted some significant anomalies.</li> <li>Tungsten Mining NL (TGN) explored the area north of Lake Seabrook in its Koolyanobbing Project for tungsten mineralisation, focusing on the greenstone lithologies adjacent to the Koolyanobbing Shear Zone (KSZ). Exploration activities by TGN between 2011-2017 included desktop studies, field-reconnaissance and geochemical sampling. Field reconnaissance included night-lamping with a UV light and confirmed the presence of</li> </ul> </li> </ul>

## Criteria Commentary narrow high-grade scheelite in the trenches, and a 5 m wide outcrop associated with coarse bladed pyroxene alteration. This zone had limited strike length (10-20 m), but indicated the potential for significant poddy, high-grade scheelite mineralisation. Results from soil sampling defined a subtle tungsten anomaly over 8km of strike extensions of the structure hosting scheelite mineralisation. Emu Nickel NL explored the area from 2006 to 2010 collecting 1045 soil samples and defining the gold in soil anomaly on what is now E77/2684 referred to in this report. 141 AC holes were drilled for 930 m total depth and 292 samples were analysed to test the anomaly with grades up to 0.5ppm Au reported. Airborne EM surveying (VTEM) of the interpreted ultramafic contact was conducted to follow-up the encouraging results and search the 5 km contact zone for evidence of sulphide conductors. 19 soil and rock chip samples were assayed in order to determine the reason for the VTEM anomalies. Six RAB/RC holes totalling 462 m were drilled to test for the sources of the VTEM conductive anomalies. RC drilling targeting the VTEM conductors did not intersect significant nickel values Lithium Australia NL under the Seabrook Rare Metals Venture (SRMV) carried soil geochemical sampling programs over the KSZ and adjacent felsic lithologies and greenstones. The samples were analysed using pXRF. Mapping and rock chip sampling of exposed pegmatites was carried out. Geology The Lake Seabrook Project covers a portion of the Archaean Koolyanobbing Greenstone Belt (KGB) located on the Jackson 1:250,000 map sheet. The KGB is approximately 48km long, 8km wide and strongly elongate in a north-west direction. The belt is bounded to the north-east by granitoid and to the south-west by the Ghooli Dome. A mylonite zone follows the south-western boundary of the greenstones defining part of the Koolyanobbing Shear Zone (KSZ). The KSZ is a crustal-scale feature that extends from Koolyanobbing to the south-east, forming the north-eastern margin of the Lake Johnston greenstone belt and then joins onto the Jerdacuttup Fault. It extends northwest past the Marda greenstone belt where it is interpreted to continue as the Youanmi Fault near Sandstone giving it a total length of nearly 650km. • The KGB consists of amphibolite, variably altered ultramafic rocks, chert, banded iron formation and minor politic and psammitic assemblages. Mineralogy indicates that the rocks were metamorphosed to amphibolite facies grade with subordinate greenschist facies assemblages. Lateratised BIF dominates the outcrop occurring along two ridges extending through the belt. Known gold mineralisation within the belt is minimal and documentation is sparse. There are a number of small pits and shafts located along BIF ridges generally associated with quartz veins. The total production from the Koolyanobbing Mining Centre is 1,734.4t for 27.50kg Au from 1905-1938. The banded iron formations within the greenstone belt are host to several iron ore deposits that are currently being mined by Yilgarn Iron Ore Pty Ltd (Mineral Resources Limited).

- Drill hole Information
- Drill hole results are not reported
- Data aggregation methods
- No weighted averages, cutoff grades or metal equivalents are used
- Relationship between mineralisation
- The extent of mineralisation is unknown at this stage

Nickel sulphide mineralisation has been identified at several localities in the northern part of the Koolyanobbing Greenstone Belt, associated with komatiitic volcanics in the footwall to the western banded iron formation, as well as at the base of the underlying komatiitic flow.

Criteria	Commentary
widths and intercept lengths	
Diagrams	See figures in the body of the text
Balanced reporting	This announcement is considered to be a balanced report
Other substantive exploration data	<ul> <li>ASQ commissioned a detailed review and interpretation of the "Koolyw" block of the VTEM A449 Airborne Electromagnetic (AEM) survey completed by Geotech Airborne at Koolyanobbing for Emu Nickel Pty Ltd in December 2008 Newexco completed the review of this AEM data using the proprietary EMInterp software plugin in conjunction with QGIS visualisation software and a suite of EM, magnetic and geological maps of the survey area provided by ASQ. Anomaly picking was completed on a line-by-line basis with a numbering system used to rank anomalies by strength. These anomaly picks were then reviewed as a whole to put the anomalies in context with other available geoscientific information.</li> </ul>
Further work	<ul> <li>Infill Soil sampling within the anomalous areas of the Golden Wishbone Gold Trend</li> <li>Detailed regolith and soil mapping to assist with interpretation of soil sampling results</li> <li>Drilling of gold in soil anomalies should it be warranted following the above work programs</li> </ul>