QUANTUM GRAPHITE

MARKET RELEASE
For Immediate Release
18 November 2021

Uley 3 Drill Program Results in a Maiden Mineral Resource Estimate

Quantum Graphite Limited (**QGL**) is pleased to announce the maiden Mineral Resource estimate (MRE) for Uley 3 following completion of the recent drilling program.

The program targeted the Uley 3 geophysical anomaly[1], previously referred to as the Eastern Conductor. The MRE is reported under the JORC 2012 guidelines.

The maiden MRE confirms the continuation of graphitic mineralisation to the east of Uley 2 along strike to the north of drill holes previously targeting the Eastern Conductor/Uley 3 geophysical anomaly.

Importantly mineralisation remains open along strike to the south and north and at depth, well within the company's Mining and Retention leases.

The Technical Report summarising the work undertaken in respect of the MRE is attached as *Appendix 1 – November 2021 Uley Mineral Resource Estimate.*

Mineral Resource Estimate – Uley 3 and Uley 2 Project

The MRE comprises 0.9Mt @6.6 % TGC, for 59kt of TGC at a 3.5% TGC cut-off and reported exclusively of the Uley 2 MRE[2].

Significant drill intercepts that have not previously been reported and included in the MRE are listed at the end of Appendix 1.

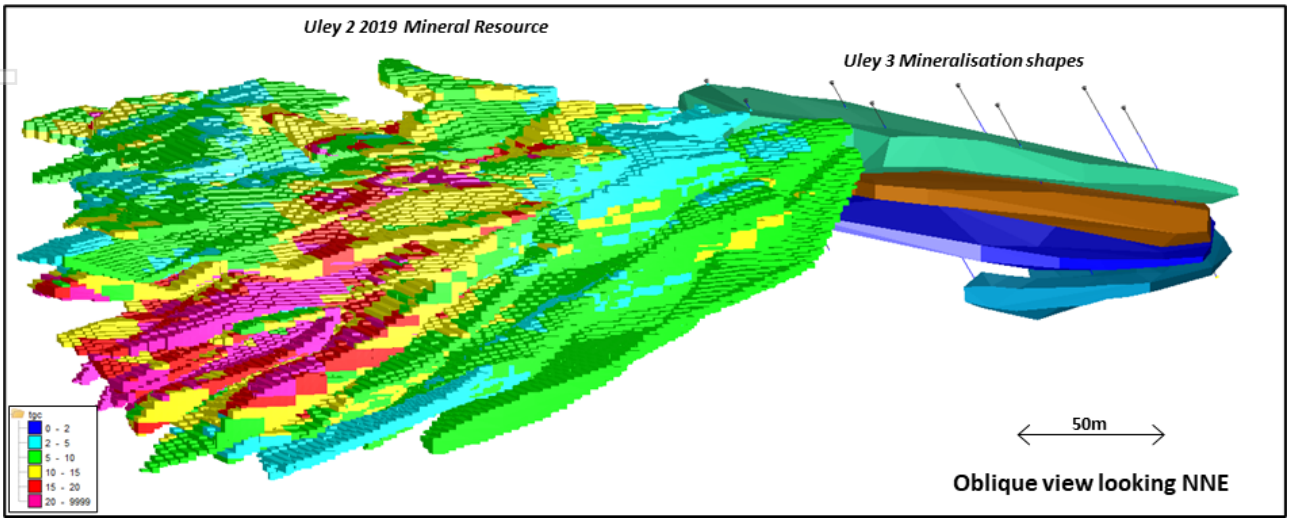
The respective classification and Resource tonnes for both Uley 3 and the Uley 2 Project are set out in the table below:

Resource	Classification	Tonnes (kt)	TGC (%)	Density (t/m^3)	TGC (kt)
Uley 3	Inferred	900	6.6	2.1	59
	Uley 3 Total	**900**	**6.6**	**2.1**	**59**
Uley 2	Measured	800	15.6	2.1	125
	Indicated	4,200	10.4	2.1	435
	Inferred	1,300	10.5	2.2	137
	Uley 2 Total	**6,300**	**11.1**	**2.1**	**697**
Uley Project Total	TOTAL	**7,200**	**10.5**	**2.1**	**757**

Note: Small discrepancies may occur due to rounding. Refer to attached JORC 2012 Code Table 1 attached as Appendix 2.

Relationship between Uley 2 and Uley 3

The Uley 3 interpreted graphite mineralisation envelopes in relation to the Uley 2 mineralisation are shown below.



[1]QGL ASX release dated 01/11/2021, "Uley 2 Extensional Drilling Assay Results, Eastern Conductor is now Uley 3"
[2]QGL ASX release dated 15/07/2019, "Substantial Increase In Uley 2 JORC 2012 Mineral Resources"

ABOUT QUANTUM GRAPHITE LIMITED

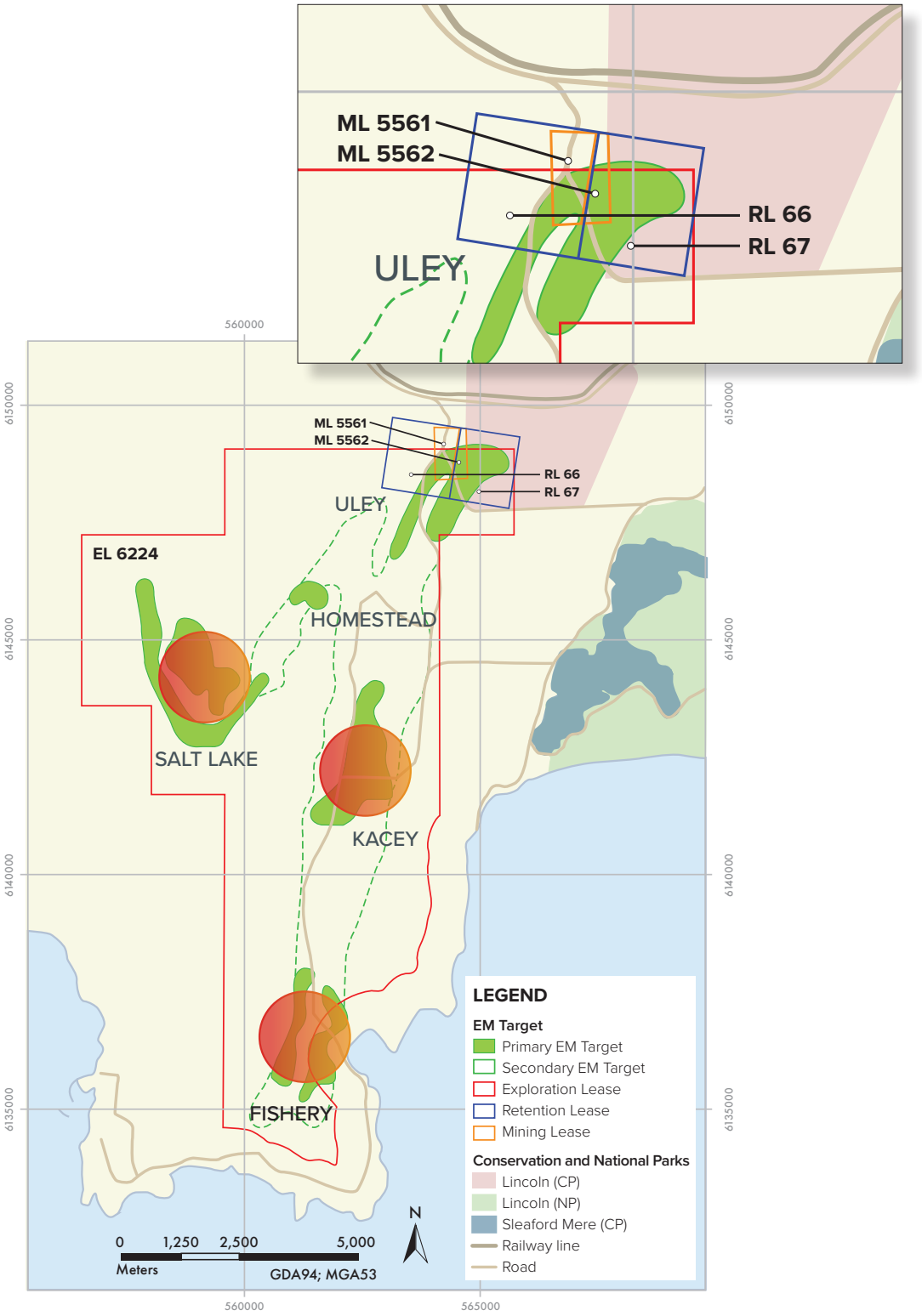
QGL is the owner of the Uley flake graphite mineral deposits located south-west of Port Lincoln, South Australia. The company's Uley 2 project represents the next stage of development of the century old Uley mine, one of the largest high-grade natural flake deposits in the world. For further information, qgraphite.com.

QGL mineral titles and location of Uley and other Mineralised Lenses

Uley 3 sits at the northern end of the company's mineral leases directly (east) adjacent to the Uley 2 pit and within the Uley "horseshoe" structure.

Uley is one of several mineralised lenses indicated by the known regional and local geology and key data including interpretation of surface SIROTEM (electromagnetic conductivity) and TMI (total magnetic intensity) data (see figure below).

As indicated in previous releases, stronger geophysical responses continue to be key indicators for higher-grade mineralised areas and a valid tool for designing drill programs aimed at confirming the presence of conductive graphitic layers.



Competent Person Statement

The information in this report that relates to the Uley 3 Exploration Results and Mineral Resource estimate is based on information compiled by Mrs Vanessa O'Toole who is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM) and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity to which she is undertaking 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". Mrs O'Toole is an external consultant to QGL and consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

Competent Person Statement – Industrial Minerals statement (Clause 49 JORC Code (2012))

In accordance with Clause 49 of the JORC Code (2012), the likely product specifications and possible product marketability and overall potential for economic extraction are considered by the competent person to support the Mineral Resource estimate at Uley 2.

JORC Code (2012) Table 1 Compliance

Appendix 2 of the Technical Report includes sections 1, 2 and 3 of Table 1 of the JORC Code 2012.

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Appendix 1 - November 2021 Uley Mineral Resource Estimate

Informing Data

Uley 3 has been drilled based on a nominal 50m spacing along and across strike, with the drill sections orientated E-W. All holes are HQ diamond drillholes, sampling moderately dipping strata bound graphite mineralised zones. As such, drilling was orientated at -60 degrees towards local grid E (bearing 090). Prior to 2014 all drill holes were drilled vertically.

A total of 12 diamond core (DD) drill holes totalling approximately 890m have been completed at Uley 3 as at November 2021. Drilling incorporates two E-W drill lines completed in September and October 2021 by QGL and a single line of vertical DD holes to the south completed in 2011. A total of 151 DD holes have been completed at the Uley 2 and Uley 3 combined resource areas totalling approximately 14. Drill collar locations are illustrated in Figure 2.

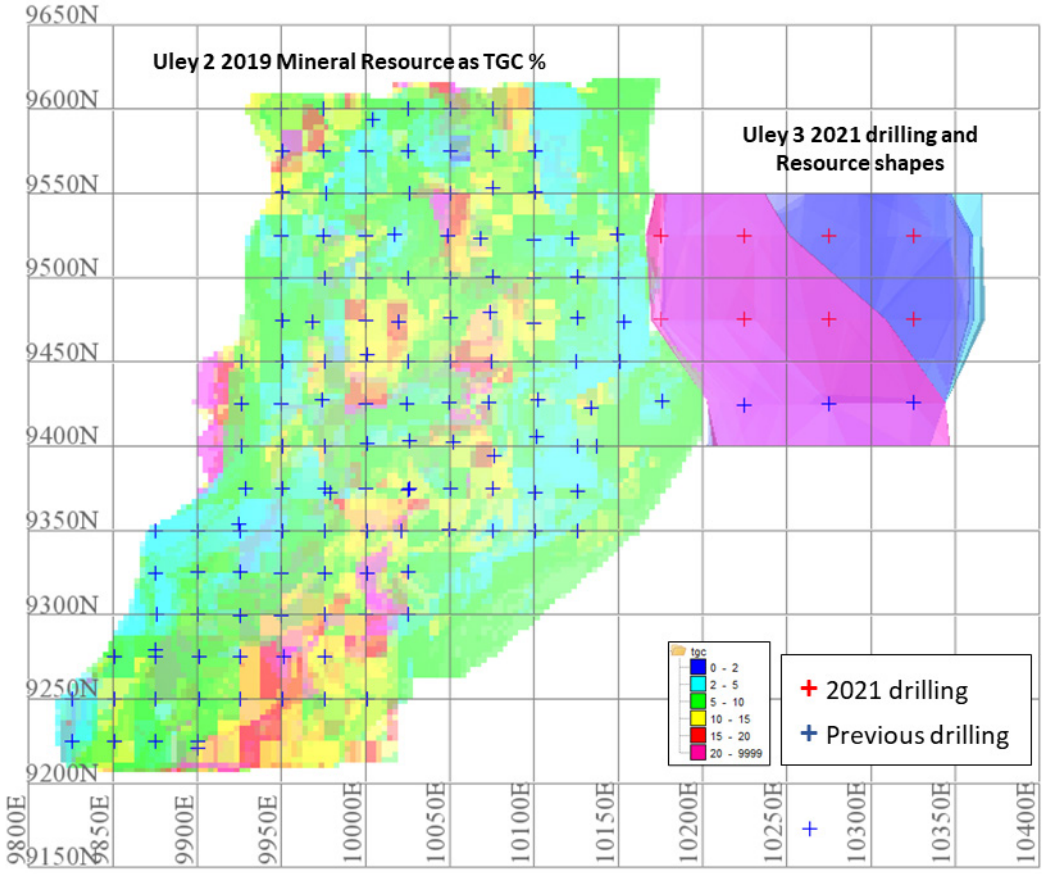

Figure 2 Uley 3 and Uley 2 diamond drilling programs

For the 2021 QGL drilling campaign, half core was sampled on a standard 1m interval unless lithological or visual grade estimates required longer or shorter sample lengths. Minimum and maximum lengths of 0.3m and 1.4m respectively were permitted. Samples were forwarded to ALS in Adelaide for sample preparation and ALS in Brisbane for analysis.

For drilling completed in 2011, whole core was selected on geological intervals of obviously highly graphitic material that were dispatched to ALS-Chemex in Adelaide. Sample lengths range from 0.2m to 4.0m, with an average length of 1m sampled. As for the 2021 drilling campaign, sample preparation was undertaken by ALS Adelaide. Samples were crushed and split to >70% passing -6mm and pulverized to >85% passing 75µm prior to assaying by ALS Brisbane.

All samples underwent assay process C-IR18, graphitic carbon by LECO analyser, and C-IR07 Total carbon by LECO analyser.

QGL has established a comprehensive Quality Assurance/Quality Control (QAQC) scheme which is used for all drilling programs. This includes certified standards and blanks inserted at every 20th sample to assess the accuracy and methodology of the external laboratories and potential sources of contamination. Field duplicates (RC) were inserted every 20th sample to assess the repeatability and variability of the graphite mineralisation. Laboratory duplicates were also completed to assess the precision of the laboratory as well as the repeatability and variability of the graphite mineralisation as a prepared sample. QAQC results are routinely analysed by Quantum and are considered acceptable by the competent person for use as informing sources to Uley 3 MRE.

Bulk density test work was implemented by QGL in February 2019. Analysis of 58 samples from varying weathering profiles was completed externally to Australian Standards by ALS Adelaide and designed to support on-site bulk density measurements completed as part of previous campaigns. Statistical analysis of the bulk density data determined a likely correlation between TGC and bulk density, dependant on weathering profile. For the Uley 2 2019 MRE, bulk density values were calculated based on regression equations generated from statistical analysis between the TGC, total Carbon and bulk density.

Given there is significantly less informing data at Uley 3, bulk density was assigned to the model as an average from the testwork at Uley 2 based on weathering profile (1.9t/m3 for oxide, 2.1t/m3 for transitional and 2.2t/m3 fresh).

Geology and Mineralisation Interpretation

The regional graphite mineralisation appears as conformable metamorphic segregations in Palaeoproterozoic schist and gneiss within the Gawler Craton. Mineralisation is hosted within the Hutchison Group metasediments that overlay the granitoid gneiss of the Sleaford Complex. The Hutchison Group is overlain by marine shelf sediments of the Wallaroo Group.

The project area is overlain by calc-arenites of the Tertiary age Bridgewater Formation. The calc-arenites are underlain by the Pliocene age Uley Formation or the Eocene age Wanilla Formation. Local laterally extensive ferricrete is developed over the Wanilla sediments.

Uley is a disseminated crystalline flake graphite deposit hosted within metasediments of the Hutchison Group, specifically confined within the Cook Gap Schist. Crystallisation of 0.1mm to 2 mm graphite flakes occurred during high-grade metamorphism of carbonaceous sediments. Strong deformation is displayed in the development of strained quartz veins and mylonite within the tightly folded graphitic gneiss and schist units.

The distribution of graphite at Uley was determined by airborne and ground electrical surveys, demonstrating elongate graphitic anomalies. The conductive graphite layers show broad north-north-easterly plunging anticline, consistent with known regional structures.

Mineralisation wireframes were constructed using cross-sectional interpretations based on mineralised envelopes with an approximate 2% TGC cut-off, a minimum downhole intercept of 2m and a maximum of 4m internal dilution applied for continuity. A total of 4 sub-parallel mineralisation lodes were set as solids after being validated using Gemcom's Surpac software. Weathering surfaces were interpreted on cross section from weathering data logged by QGL geologists. Weathering codes for base of complete oxidation and top of fresh rock were included in the geology database and used to define the weathering surfaces.

A typical cross-section displaying the graphite mineralisation at Uley 3 is presented in Figure 4.

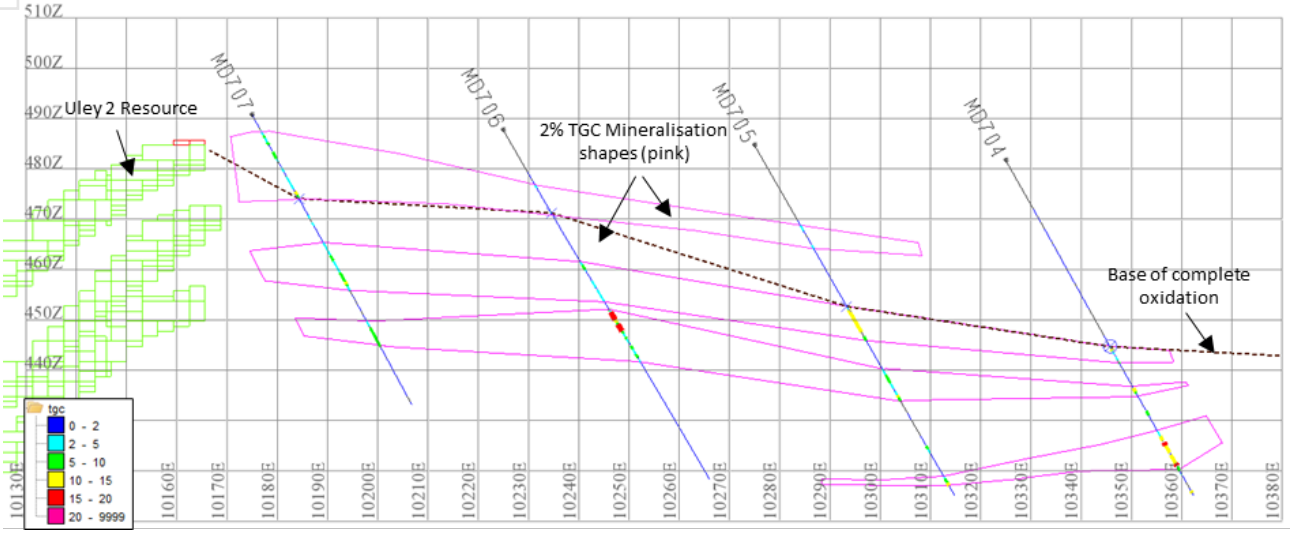

Figure 4 Cross section 9,475mN Uley 3 drilling displaying graphite assays

Grade Estimation

Surpac™ software was used to code the sample data and flag estimation domains within the 4 mineralisation wireframes and the oxidation surfaces. Compositing was completed within the domains based on a 1m downhole compositing interval. An assessment of the Coefficient of Variation (CoV – ratio of the standard deviation to the mean) showed a low CoV (<1.00) for TGC within each mineralisation domain and therefore a top-cut was not required to reduce grade outliers.

Given the limited number of informing composites for the mineralisation domains, variogram parameters were borrowed from the Uley 2 MRE where variograms were generated to assess the spatial continuity of TGC and derive inputs to the kriging algorithm used to interpolate grades. Snowden Supervisor™ software was used to generate and model the variograms within each estimation domain. The major direction (direction of maximum continuity) was oriented along strike with the intermediate (semi-major) direction oriented horizontally and the minor direction oriented orthogonal to the dip plane. All variograms standardised to a sill of one and applied spherical variograms with a nugget effect and two structures. The variograms were evaluated using normal scores variograms and the nugget and sill values back transformed to traditional variograms using the discrete Gaussian polynomials technique. Variogram parameters applied for the estimation of the graphite at Uley 3 are listed in Table 1.

Table 1 Variogram parameters applied for grade estimation

Major Direction	Co	Structure 1				Structure 2			
		C1	X1	Y2	Z3	C2	X2	Y2	X2
-05-->350	0.28	0.56	60	20	5	0.34	105	75	15

The Uley 2 MRE was extended to to encompass the full extent of the deposit including Uley 3. Block sizes were retained as a block size of 12.5m NS by 12.5m EW by 4m vertical with sub-blocks of 3.125m by 3.125m by 1m. The parent block size was selected on the basis of 50% of the average drill hole spacing across Uley 2 and the results of kriging neighbourhood analysis (KNA). The model cell dimensions in other directions were selected to provide sufficient resolution to the block model in the across-strike and down-dip direction.

For all domains in the Uley 3 deposit, the wireframe interpretations were used as hard boundaries in the interpolation. That is, only grades inside each domain were used to interpolate the blocks inside. The ordinary kriging (OK) algorithm was selected for grade interpolation.

Orientated 'ellipsoid' search ellipses were used to select data for interpolation. The ellipse was oriented to the average strike, dip and plunge of the mineralised zones, and varied accordingly for each domain. The search ellipse axis lengths were derived based on drill hole spacing.

The maximum first-pass search radius was set at 75m and increased for each estimation pass as required to ensure all blocks were estimated in the final kriging pass. The major to semi-major, and the major to minor ratios were determined from the geometry and orientation of the mineralisation domains. A minimum number of 8 and maximum number of 16 samples were used for the first and second estimation pass, with the minimum reduced to 4 for the third pass. A maximum of 3 samples were used from each drill hole.

A three-step process was used to validate the grade estimate, including visually slicing sections through the block model in positions coincident with drilling. Quantitative assessment was then completed by comparing the average grades of the sample file input against the block model output for each lode. For each lode, variations between the average grade for the input files and the block model estimated averages were between 3 to 8%, which is a good result. Comparisons were also made between the interpolated blocks to the sample composite data for northing and elevation as trend plots. The validation plots show good correlation between the sample grades and the block model grades for the comparison by northing and elevation.

Mineral Resource Classification and Reporting

The November 2021 Uley 3 Mineral Resource estimate has been classified and reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012) guidelines. The Mineral Resource has been classified as an Inferred Resource due to the relatively wide drill spacing along and across strike. Based on optimisation studies at Uley 2, the Mineral Resource has been limited to 80m below surface which contains all the currently modelled graphite mineralisation at Uley 3 and considered an appropriate methodology by the competent person for an Inferred resource. These optimisation studies also support a cut-off grade for resource reporting of 3.5% TGC.

Extrapolation beyond the drilling along strike is limited to approximately 25m (i.e. half the drill section spacing). The Inferred Resource is extrapolated approximately 25m below the drilling in some sections.

Metallurgical considerations

The JORC Code Clause 49 requires that industrial minerals must be reported *"in terms of the mineral or minerals on which the project is to be based and must include the specification of those minerals". Clause 49 also states that it "may be necessary prior to the reporting of a Mineral Resource or Ore Reserve to take particular account of key characteristics or qualities such as likely product specifications, proximity to markets and general product marketability."*

Petrographic studies by Pontifex Pty Ltd demonstrated a range of graphite flake sizes within a gneissic quartz-feldspar matrix at Uley. Minor amounts of mafic gangue minerals such as biotite, amphiboles and pyroxenes are also present. Biotite is shown to be intergrown with the graphite in some samples. Graphite liberation test work completed during 2014 and 2015 by QGL delivered promising results. The subsequent 2019 metallurgical campaign was designed to ensure necessary sample representivity across all geodomains. The 2019 program exceeded the previous test work and was achieved utilising limited crushing and grinding to 0.6 mm followed by conventional froth flotation concentration with multiple stages of polishing. The resultant flake size distribution is presented in Table 2.

Table 2 Uley metallurgical testwork – flake size distribution and purity

Size fraction µm	Size fraction (Mesh)	Approx. weight Distribution %	Graphitic C Purity %	LOI %
+300	+50	10.5	97.8	0.26
-300+150	-50+100	35.4	97.2	0.34
-150+75	-100+200	27.1	96.6	0.36
-75	-200	27.0	90.7	0.73

In accordance with Clause 49 of the JORC Code (2012) guidelines, the likely product specifications and possible product marketability and overall potential for economic extraction are considered by the competent person to support the Inferred Mineral Resource at Uley 3.

Significant Intercepts

Significant drill intercepts that have not previously been reported and are included in the November 2021 MRE are listed in Table 3 below.

Table 3 Uley 3 additional significant intercepts

Hole	Hole Depth	Significant Intercepts			
		From (m)	To (m)	Length (m)	Grade (TGC %)
MD707	66.0	3.6	19.1	14.9	4.3
MD707	66.0	29.1	40.1	11.0	5.1
MD707	66.0	47.0	52.8	5.5	6.1
MD708	62.7	39.6	49.7	7.5	10.0
	including	39.6	41.7	2.1	11.3
MD708	62.7	56.1	59.1	2.6	6.7
MD709	76.8	48.9	74.1	24.8	8.0
	including	50.2	60.9	10.7	12.8
MD710	68.2	31.5	36.3	4.4	4.6
MD710	68.2	44.7	51.7	7.0	9.2
	including	44.7	49.2	4.5	12.4
MD711	72.6	1.2	24.6	22.2	4.4
MD711	72.6	31.6	39.0	7.4	4.1

Appendix 2 - Table 1 Of The Jorc Code 2012 – Section 1, 2 And 3

JORC Code, 2012 – Table 1 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.	• All drill holes were HQ triple-core diamond drillholes completed by Hagstrom drilling, targeting moderately dipping graphitic mineralised zones within metamorphosed schists. • The 8 drillholes were drilled at -60° towards 090 local grid. • Half cores samples were obtained based on geological observations, are typically 1m in length but range from 0.3m to 2.0m. • Elevated graphitic mineralisation is typically visible during geological logging and sampling. • Visibly mineralised intervals were crushed and pulverised to at least 85% passing 75µm at ALS in Adelaide, then sent to ALS Brisbane for analysis by LECO method. • The sample preparation and assaying techniques are industry standard and appropriate for this type of mineralisation.
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).	• Diamond drillholes are drilled using HQ triple tube with rod lengths dependent on drilling conditions. In general drill runs were less than 3 metres to assist maximum recovery. • Downhole surveys were obtained using a Single Shot Reflex Sprint downhole tool. • Drillholes were orientated using the Reflex ACT II RD core orientation tool and marked using a chinagraph pencil on the bottom of the core showing downhole direction.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• Core recoveries are recorded for each drill run, which range in length from 1.5m to 3m runs. • Core recoveries are measured by the driller using a tape measure and recorded on wooden core blocks inserted in the core trays at the end of each core run. • Core recoveries are also measured by the QGL field staff. • Industry standard procedures/techniques including the use of shorter runs and adjusting water flow were employed by the drilling team to ensure maximum downhole recovery. • There has been no identified relationship between sample recovery and grade so far.

Criteria	JORC Code Explanation	Commentary
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.	• Drill core was transported from the drill location to the Uley core processing facility on site. • Qualitative descriptions of mineralogy, mineralisation, weathering, lithology, colour and other features are recorded and photographed for each sample. • All drill holes are logged in their entirety and approximately 85% of the core sampled.
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/ second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	• Drill core was cut lengthways for half samples using a diamond saw or manually sampled using a spatula in clay/soft horizons. • Sample intervals range in size from 0.3 to 2m and are mostly 1m in length. Intervals were chosen based on changes in lithological type, graphitic characteristics and weathering intensity. • QGL QAQC procedures include the insertion of 1 CRM standard, 1 blank and 1 field duplicate within every 20 samples (17 interval samples) • Duplicate samples are chosen within graphitic mineralisation and sampled as quarter core. • Intralab QAQC procedures are reported to QGL and include the insertion of standards, blanks and duplicates and repeat analyses. • The remaining half of the core is retained as a reference and for check sampling. • Sample preparation was undertaken by ALS Adelaide. Samples were crushed and split to >70% passing -6mm and pulverized to >85% passing 75µm prior to assaying by ALS Brisbane. • Sample sizes (half core samples) are deemed appropriate for the material that is being 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. • 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.	Techniques used for assaying are: • C-IR18 (Graphitic carbon by LECO analyser). • C-IR07 Total Carbon by LECO analyser). • Quarter core duplicate samples were taken at a frequency of 1 in 20 samples (5% rate of insertion). Certified reference standards and blanks were also inserted at a rate of 1 in 20 samples (5% rate of insertion). • Internal laboratory QAQC for all sampling has been reviewed with no identified issues with respect to sampling bias or precision.
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.	• Quantum Graphite geologists and consultants have reviewed and validated the core, logging and available assay results. • Logging data was entered digitally and incorporated in to the Uley Project Access database. • There have been no adjustments to the assay data.

Criteria	JORC Code Explanation	Commentary
Location of data points	• Accuracy and quality of surveys used to locate drillholes (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.	• Drill location co-ordinates are reported in Uley Mine Grid (transformed to truncated AMG). The reported truncation was: Easting = -554,216.866m Northing = -6,139,092.867m ADH = RL + 404.252m • Drillhole collars are recorded using handheld GPS. Elevation values are in AHD RL and values recorded within the database.
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.	• Drilling for this program was completed on 50m by 50m spacing, which has been shown at Uley 2 (as part of the same stratigraphy) to be sufficient for geological modelling and understanding of the mineralisation style and distribution, also the potential for an Inferred Mineral Resource. • Diamond drill core samples are not composited.
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.	• Drilling orientation is considered appropriate considering the deposit type and orientation of moderately East dipping mineralisation. • Sampling bias related to the orientation of sampling is considered to be minimal.
Sample security	• The measures taken to ensure sample security.	• All reasonable measures are and will be taken to ensure sample security along the value chain. These measures included the recording of sample dispatch and receipt reports, secure storage of samples, and a locked and gated core shed.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• The sampling methods being used are industry standard practice. • QAQC standard samples used are supplied by OREAS for TGC. • Samples are submitted to ISO accredited laboratories (ALS Adelaide and ALS Brisbane) • The lab is subject to routine and random inspections.

Section 2 Reporting of Exploration Results

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• The Uley Graphite Project consists of five contiguous tenements on the Eyre Peninsula of South Australia, of which two are retention leases, two are mining leases and one is an exploration licence. Tenement identification numbers are: RL66, RL67, ML5561, ML5562 and EL4778. • Mining development is subject to the approved Program for Environmental Protection and Rehabilitation (PEPR) and an Environmental Licence which is mandated under South Australian State legislation. • QGL has a 100% interest in these tenements and no royalty, joint venture or other material agreements are in place other than a royalty of 1.5% with its former parent company, SER. • Tenement ownership is secure, there are no known impediments to obtaining a license to operate in the area.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• Historically a number of parties have undertaken exploration on the leases.
Geology	• Deposit type, geological setting and style of mineralisation.	• Graphite is developed as a constituent mineral in coarse prograde metamorphic assemblages as well as in the fabric and foliation of micaceous schists. These are interpreted to be the folded, thrusted and metamorphosed equivalents of the Cook Gap Schist. Folding of stratigraphy on various local scales is obvious from the core logging.
Drillhole Information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: - easting and northing of the drillhole collar - elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole 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.	

Hole	East	North	RL	Depth	Dip	Azimuth	Licence
MD704	10325	9475	480	76.3	-60	90	ML5562
MD705	10275	9475	485	80.1	-60	90	ML5562
MD706	10225	9475	490	80.8	-60	90	ML5562
MD707	10175	9475	495	66	-60	90	ML5562
MD708	10325	9525	485	62.7	-60	90	ML5562
MD709	10275	9525	490	76.8	-60	90	ML5562
MD710	10225	9525	495	68.2	-60	90	ML5562
MD711	10175	9525	500	72.6	-60	90	ML5562

Criteria	JORC Code Explanation	Commentary
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• Reported assay intersections are length and density weighted • For graphitic intersections the mean grade was calculated using a nominal lower cut-off of 2% for TGC for a minimum intercept of 2m and maximum internal dilution (<2%) of less than 2m. • No metal equivalent values are used for reporting exploration results.
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 drillhole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	• The orientation of the mineralisation is well known given the presence of a complete section to the south of the current drilling and the local geology known from previous drilling at the Uley Project. • Drill holes have been designed to intercept mineralisation at optimum angles, bedding contacts displayed in the current drilling are confirming the appropriate orientation of the drill holes. • The reported downhole length is therefore close if not equal to the true width of 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 drillhole collar locations and appropriate sectional views.	• Refer to Figures in the body of the text.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• All available exploration results related to this program have been reported.
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.	• Outstanding assays for the 5 drill holes will provide further information relating to the mineralisation to the north of Uley 3. • All available and material exploration information has been considered in the planning and modelling of this drill program. This comprised a drilling database, previous estimates and reports, academic literature, petrological reports, metallurgical test work reports, dry rock density determinations, and site visit photography and communication.
Further work	• The nature and scale of planned further work (eg 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.	• Exploration work to quantify the extent and continuity of mineralisation within the QGL-held tenure is ongoing. This work includes further diamond drilling, further geophysical surveys and geological mapping. Details of this exploration effort are deemed commercially sensitive.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in the preceding sections where relevant, also apply to this section)

Criteria	JORC Code Explanation	Commentary
Database integrity	• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. • Data validation procedures used.	• Data has been provided by QGL in the form of an Access database. • A total of 18 1993 era diamond drill holes drilled by Graphite Mines of Australia, 12 SER diamond drillholes drilled in 2011, and 112 Valence angled diamond drillholes in the Uley area. QGL completed an 8 hole drill program, the informant to this MRE along with 4 drill holes from the 2011 drill campaign. The database used for resource estimation consists solely of diamond drilling and has been reviewed and re-validated for obvious errors prior to commencing the resource estimation study. The assay data has been cross-checked against assay certificates provided by ALS Chemex. • The following checks were completed prior to uploading the drilling data into a Surpac database: - Check and correct overlapping intervals. - Ensure downhole surveys existed at a 0m depth. - Ensure consistency of depths between different data tables, for example survey, collar and assays. - Check gaps in the assay data were replaced by -1 as a code for missing data. Non-sampled intervals were assigned a value of 0.01% Graphitic C.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• Numerous site visits have been completed by the Competent Person, including drilling supervision during September and October 2021.
Geological interpretation	• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. • Nature of the data used and of any assumptions made. • The effect, if any, of alternative interpretations on Mineral Resource estimation. • The use of geology in guiding and controlling Mineral Resource estimation. • The factors affecting continuity both of grade and geology.	• The current geological interpretation is based on a review of previous estimates and reports and has been augmented by the geological and structural information provided by the additional drillholes drilled at the Uley 3 deposit. • Information from site visits and geological reports suggests the graphite lenses occurs within an anticlinorium i.e. a fold with parasitic folds on its limbs, as occurred in the now depleted Uley mine to the north. The current model of the Uley 2 deposit is of a recumbent antiform plunging very shallowly to the ENE, with HW lodes dipping shallowly to the WNW and FW lodes dipping moderately (~33°) to the WNW. The Uley 3 deposit is considered to be a related limb of the antiform, moderately dipping to the east.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• The drilling relevant to the Mineral Resource estimate at Uley 3 extends over a distance of 150 m (from 9,425 m grid N to 9,575 m grid N) and includes a 80 m vertical interval from approximately 410 m to 490 m. The graphitic mineralisation is interpreted to extend along the full strike distance

Criteria	JORC Code Explanation	Commentary
Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. • The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. • The assumptions made regarding recovery of by-products. • Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation). • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • Any assumptions behind modelling of selective mining units. • Any assumptions about correlation between variables. • Description of how the geological interpretation was used to control the resource estimates. • Discussion of basis for using or not using grade cutting or capping. • The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	• Based on the dominant sample length, 1 m composites for TGC were extracted within the coded mineralisation by mineralisatjon domain. Variable length compositing was used to ensure that no residuals were created. • An assessment of the Coefficient of Variation (CV – ratio of the standard deviation to the mean) parameter showed the CV was low for TGC within each mineralisation domain and therefore a top-cut was not required. • TGC (%) was estimated into the block model using Ordinary Kriging (OK) utilising the cut 1m composites in Surpac mining software. Grade estimation was constrained to blocks inside individual mineralisation wireframes and geodomains with hard boundaries applied. Results below the detection limit were assigned a value of 0.01 % for TGC. • Variograms were borrowed from the densely drilled Uley 2 MRE, where variograms were generated to assess the spatial continuity of TGC and as inputs to the kriging algorithm used to interpolate grades. Snowden Supervisor software was used to generate and model the variograms. The major direction (direction of maximum continuity) was oriented along strike with the intermediate (semi-major) direction oriented horizontally and the minor direction oriented orthogonal to the dip plane. • A Surpac block model was used for the estimate with a block size of 12.5 m NS by 12.5 m EW by 4m vertical with sub-cells of 6.275 m by 6.275 m by 1 m. The chosen parent block size is to maintain consistency with the Uley 2 MRE. • OK grade interpolation used an oriented 'ellipsoid' search to select data for interpolation. Estimation parameters were developed specifically within each mineralised geodomain. • A three-step qualitative and quantitative process was applied to validate the grade estimate. This included visual comparison of block grades and the input drill hole composites and global comparisons of these grades. The grade trends shown by the composite data are honoured by the block model within each domain. Trend plots comparing the model and composite grades along and across strike and with depth were generated. The plots displayed good correlation between the sample grades and the block model grades in each direction. • No other elements, deleterious or not, were estimated to date. No assumptions were made concerning mining selectivity beyond small to medium scale open pit mining.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnes are estimated based on an average dry insitu bulk density values.

Criteria	JORC Code Explanation	Commentary
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• Numerous optimisation studies completed by QGL on the Uley 2 MRE support the use of a 3.5% cut-off grade for Resource reporting, this is considered appropriate for an Inferred Resource given the relatability of the mineralisation.
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	• The Uley graphite deposit has been historically mined by open cut mining methods and it is assumed that this will still be the case for any future mining operation in the area. • No assumptions have been made about mining selectivity for specific material types or quality. • No external mining dilution or other factors have been applied to the resource estimate.
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	• Petrographic studies by Pontifex Pty Ltd demonstrated a range of graphite flake sizes within a gneissic quartz-feldspar matrix. Minor amounts of mafic gangue minerals such as biotite, amphiboles and pyroxenes are also present. Biotite is shown to be intergrown with the graphite in some samples. Graphite liberation test work completed during 2014 and 2015 by QGL delivered promising results. The subsequent 2019 metallurgical campaign was designed to ensure the necessary sample representivity across all geodomains. The 2019 program exceeded the previous test work and was achieved utilising limited crushing and grinding to 0.6 mm followed by conventional froth flotation concentration with multiple stages of polishing.
Environmental factors or assumptions	• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• Mining development is subject to the approved Program for Environmental Protection and Rehabilitation (PEPR).
Bulk density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. • The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. • Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• Bulk density test work was implemented by QGL in February 2019. The analysis was completed externally to Australian Standards by ALS Adelaide and designed to support on-site bulk density measurements completed as part of previous campaigns. Average bulk densities were assigned to the Uley 3 model as an average of calculated values at Uley 3 for each weathering type.

Criteria	JORC Code Explanation	Commentary
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories. • Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). • Whether the result appropriately reflects the Competent Person's view of the deposit.	• The Mineral Resource classification criteria were developed based on an assessment of the following items: - Nature and quality of the drilling and sampling including QAQC review. - Drilling density. - Confidence in the understanding of the underlying geological and grade continuity and the structural characteristics. - Confidence in the estimate of the mineralised volume. - Bulk density data. - Model validation results. - The criteria listed in Table 1 Section 1 and Section 3 of the JORC Code. • The Mineral Resource has been classified as an Inferred Resource due to the relatively wide drill spacing along and across strike. Based on optimisation studies at Uley 2, the Mineral Resource has been limited to 80m below surface which contains all the currently modelled graphite mineralisation at Uley 3 and considered an appropriate methodology by the competent person for an Inferred resource. than half of the drill density (approximately 12.5 m), the Resource was classified as Inferred Resource. There is no extrapolation outside of an appropriate range for Inferred classification. Material outside of the mineralisation envelopes was not classified. • The classification scheme as applied is considered to adequately reflect the sample density and geological interpretation based on all available drillhole data.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	• No third party reviews have been undertaken on the Mineral Resource estimation process to date.
Discussion of relative accuracy/confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• The grade estimate is based on the assumption that open cut mining methods will be applied and that a form of high confidence grade control sampling, for example based on RC grade control drilling or ditch-witch bench top sampling, will be available for final ore/waste demarcation. As such the resource estimate should be considered to represent a global resource estimate.