

# Quantum Graphite

## Quarterly Activity Report and Appendix 5B

Period Ending 30 September 2019

For Immediate Release

31 October 2019

### Highlights

- Uley Project Expansion **Definitive Feasibility Study (DFS) expected to be completed prior to the company's 2019 Annual General Meeting (AGM) on 27 November.**
- Finalisation of the update of the JORC 2012 Uley 2 Mining study and Ore Reserve estimate (DFS Mining Study) has been delayed due to additional work committed by the Board, as part of the DFS, to conduct **further optimisation of the Uley 2 Pit design. The optimisation works underpin certain efficiencies and potential extensions of the Uley 2 life of mine.**
- The DFS Mining Update will now be released within the first half of November 2019.
- **Marketing efforts have commenced with a focus on re-engaging with customers that had previously prequalified Uley flake product in 2014.**
- **Collaboration with The Sunlands Co. Pty Ltd (Sunlands) in respect of Sunlands' thermal energy storage technology.** The parties expect to finalise the scope of their collaboration in the next 2 weeks.
- **Negotiations have commenced to sell the existing pilot process plant.** A sale of the plant will have the added benefit of reducing the company's environmental liabilities.

### Definitive Feasibility Study Progress

Drafts of certain parts of the DFS have been delivered by Lycopodium Minerals, the company's DFS project manager, for the company's review. The Board expects that it will complete its review and release the DFS results prior to the company's 2019 AGM.

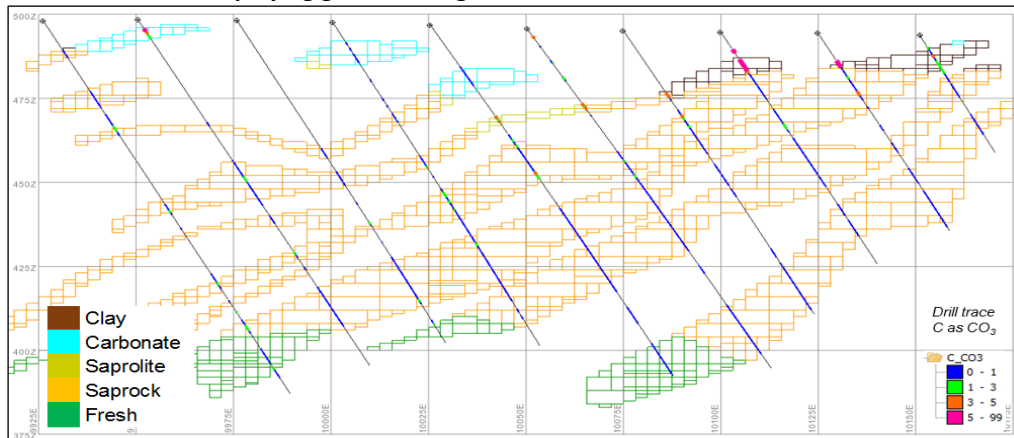
Within the first half of November 2019, the results of the DFS Mining Study will also be released.

The Board's decision to undertake further work on the Uley 2 Pit design to be included within the DFS Mining Study, followed the extensive work by the company's geologists and the release of the company's JORC 2012 Mineral Resource estimate on 15 July 2019.

This work confirmed the location of high-grade signatures to the west (Western Conductor) and the east (Eastern Conductor) as well as the continuation of Uley 2's high grade mineralisation to the south (Central Conductor) immediately outside the Uley 2 ore reserve envelope respectively and as originally reflected in the geophysical survey results.

Further, the company completed further metallurgical test work on variable samples within the Uley 2 geometallurgical domains (see diagram below and July 2019 Mineral Resource Estimate released on 15 July 2019).

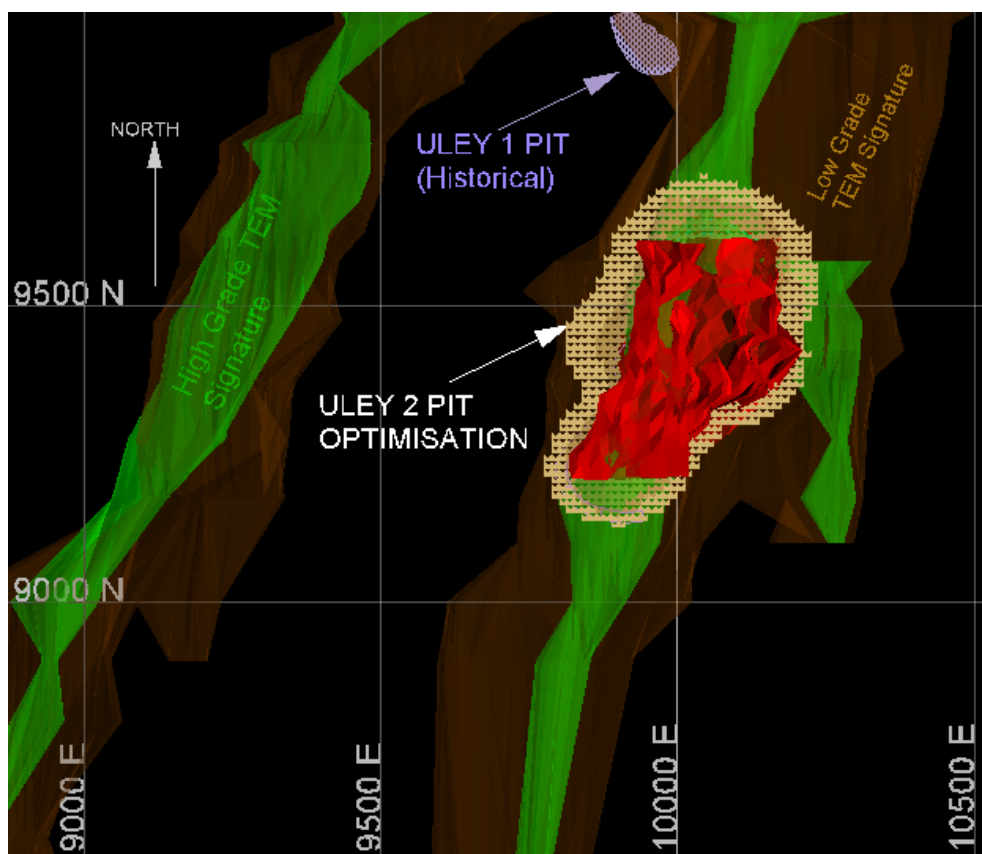
**Section 9,450mN displaying geometallurgical domains**



As a result, additional Uley 2 Pit optimisation was undertaken to ensure that the pit design delivered maximum efficiencies whilst preserving various options for extensions to the Uley 2 life of mine.

The diagram below clearly illustrates the Western Conductor, the Central Conductor within which the Uley 2 ore reserve is located and the Eastern Conductor which extends for approximately 500 metres in a southerly direction from the north eastern tip of the Uley 2 ore reserve envelope.

The focus of the Uley 2 Pit optimisation works is indicated as yellow cross hatching in the diagram below.



This optimisation work represents a further enhancement to the mine plan to be included within the DFS Mining Study (and the DFS) over and above the critical design feature outlined in the company's previous Quarterly Activity Report, ie. the added capability to accommodate a significant increase in mine throughput to ensure timely responses to changing market conditions. As described in the previous Quarterly Activity Report, this capability enables an increase in production by up to 20% without a material increase in operational costs aside from the usual costs associated with product handling and logistics.

### Commencement of Marketing Efforts

The company has commenced re-engaging with prospective customers principally in the European refractories market segment. To date, the focus has been directed at those that had prequalified the company in 2013-2014. These prospective customers are key targets for the company's large flake products which, based on the extensive metallurgical work undertaken as part of the DFS, constitute more than 70% of the company's flake production (see table below and Results of Metallurgical Testwork released on 11 June 2019).

Size Fraction (µm)	Size Fraction (Mesh)	Approx. Weight Dist.	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

There has been significant consolidation in the global, ex China refractories market since 2014. Two of the companies that prequalified Uley product, the first and third largest European manufacturers, merged in 2017 creating the largest Western refractory manufacturer by revenues.

However, industry consolidation has not resulted in reduced prices for high purity large flake prices. Any downward pressure on price that may have arisen from the increased concentration in Western refractory buying power has been offset by the continuing reduction of exports from China. Prices have remained relatively stable this year for such products in contrast to lower grade flake graphite concentrate, especially fines, which face significant and continuing price pressures.

### Sunlands Co. Thermal Storage Collaboration

The company expects to finalise the details of a collaboration arrangement with Sunlands, the owner of certain thermal energy storage technologies utilising the company's Uley 2 flake graphite. The collaboration arrangement is intended to provide a framework within which the company will support various Sunlands initiatives to test and deploy its thermal energy storage cells globally. The parties intend to include within this framework a mechanism for the exclusive negotiation of a formal commercial relationship and offtake commitments.

### Negotiations to sell existing Pilot Plant

The company has commenced negotiations to sell the existing pilot process plant including the crushing, flotation and screening circuits. Interested parties have completed their inspection of the pilot plant and the company expects to receive responses to its proposed terms of sale before the 2019 AGM. In addition to any consideration received for the pilot plant, a sale will also have the result of reducing the company's environmental liabilities associated with the removal and rehabilitation of the site of the process plant and related assets.

### Schedule of Tenements (ASX Listing Rule 5.3.3)

Tenement	Tenement Type	Interest <sup>1</sup>	Changes during the Quarter
ML5561	Mining Licence	100%	Nil
ML5562	Mining Licence	100%	Nil
RL66	Retention Licence	100%	Nil
RL67	Retention Licence	100%	Nil
EL6224	Exploration Licence	100%	Nil

1. All interests are registered in the name of the company's subsidiary, Quantum Graphite Operations Pty Ltd and held as at the end of the quarter.

### Corporate Information and Announcements

As at 30 September 2019 the company had 7,660,580,941 ordinary shares and 1,000,000,000 unlisted options on issue and 1,035 shareholders. The top 20 shareholders held 67.2% of the issued ordinary shares in the company.

As at 30 September 2019 the company held cash at bank of \$319,785. As at 31 October 2019 the company held cash at bank of \$184,870.

This report should be read in conjunction with all prior announcements made by the company to the ASX including all announcements released under the company's previous code, VXL (on and from 18 November 2013 until 30 November 2016) available at <http://quantumgraphite.com/investors>.

The pro forma Appendix 5B (Mining exploration entity and oil and gas exploration entity quarterly report) is attached to this report.

### For further Information

For further information contact:  
Company Secretary  
Quantum Graphite Limited  
T: +61 3 8614 8414  
e: [info@qgraphite.com](mailto:info@qgraphite.com)

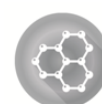
## Competent Persons Statement

QGL confirms that it is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters relating to Mineral Resources is based on, and fairly represent, the Mineral Resources and information and supporting documentation extracted from the reports prepared by a competent person in compliance with the JORC Code (2012 edition) and released to the ASX (including under the company's previous code, VXL on 17 December 2014, 5 May 2015 and 15 May 2015 respectively).

## Forward Looking Statements

All statements other than statements of historical fact included in this announcement including, without limitation, statements regarding future plans and objectives of are forward-looking statements. When used in this announcement, forward-looking statements can be identified by words such as 'may', 'could', 'believes', 'estimates', 'targets', 'expects' or 'intends' and other similar words that involve risks and uncertainties. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions regarding future events and actions that, as at the date of this announcement, are expected to take place. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the company, its directors and management of QGL, that could cause QGL's actual results to differ materially from the results expressed or anticipated in these statements.

QGL cannot and does not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur and investors are cautioned not to place undue reliance on these forward-looking statements. QGL does not undertake to update or revise forward-looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this announcement, except where required by applicable law.



+Rule 5.5

## Appendix 5B

# Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

### Name of entity

Quantum Graphite Limited

### ABN

41 008 101 979

### Quarter ended ("current quarter")

30 September 2019

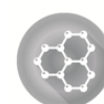
Consolidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	(139)	(139)
(b) development	-	-
(c) production	-	-
(d) staff costs	(45)	(45)
(e) administration and corporate costs	(180)	(180)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	-	-
1.5 Interest and other costs of finance paid	(1)	(1)
1.6 Income taxes paid	-	-

+ See chapter 19 for defined terms  
1 September 2016

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (3 months) \$A'000</b>
1.7	Research and development refunds	-	-
1.8	Other (provide details if material)	291	291
<b>1.9</b>	<b>Net cash from / (used in) operating activities</b>	<b>(74)</b>	<b>(74)</b>

<b>2.</b>	<b>Cash flows from investing activities</b>		
2.1	Payments to acquire:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	-	-
	(d) other non-current assets	-	-
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	-	-
	(d) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>-</b>	<b>-</b>

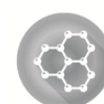
<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares	-	-
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	(6)	(6)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-



<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (3 months) \$A'000</b>
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>(6)</b>	<b>(6)</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	401	401
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(74)	(74)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	-
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(6)	(6)
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>321</b>	<b>321</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b>	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
	at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts		
5.1	Bank balances	-	-
5.2	Call deposits	321	401
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>321</b>	<b>401</b>





<b>6. Payments to directors of the entity and their associates</b>	<b>Current quarter \$A'000</b>
6.1 Aggregate amount of payments to these parties included in item 1.2	(217)
6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	-
6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2	

Administrative, corporate and compliance services provided to the company.

<b>7. Payments to related entities of the entity and their associates</b>	<b>Current quarter \$A'000</b>
7.1 Aggregate amount of payments to these parties included in item 1.2	-
7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	-
7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2	

<b>8. Financing facilities available</b> <i>Add notes as necessary for an understanding of the position</i>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
8.1 Loan facilities	-	-
8.2 Credit standby arrangements	-	-
8.3 Other (please specify)	-	-

8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.

<b>9.</b>	<b>Estimated cash outflows for next quarter</b>	<b>\$A'000</b>
9.1	Exploration and evaluation	(100)
9.2	Development	-
9.3	Production	-
9.4	Staff costs	(23)
9.5	Administration and corporate costs	(138)
9.6	Other (provide details if material)	-
<b>9.7</b>	<b>Total estimated cash outflows</b>	<b>(261)</b>

<b>10.</b>	<b>Changes in tenements (items 2.1(b) and 2.2(b) above)</b>	<b>Tenement reference and location</b>	<b>Nature of interest</b>	<b>Interest at beginning of quarter</b>	<b>Interest at end of quarter</b>
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced	-	-	-	-
10.2	Interests in mining tenements and petroleum tenements acquired or increased	-	-	-	-

### Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

*Signed by the Company Secretary, Mr. Sal Catalano on 31 October 2019.*

#### Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report has been prepared in

accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.

3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.

