

21 October 2019

## QUARTERLY ACTIVITIES REPORT

Quarter ended 30 September 2019

Graphex Mining Limited (ASX: GPX) ('Graphex' or the 'Company') is pleased to provide its Quarterly Activities report for the September Quarter.

### HIGHLIGHTS

- **Definitive Feasibility Study ('DFS') nearing completion, results expected during November**
- **Continued refinement of sales and marketing plan, with increasing focus on western graphite markets**
- **Continued positive engagement with the Tanzanian Government delivering legal and regulatory certainty for project financiers**

### DEFINITIVE FEASIBILITY STUDY

The Company continues to advance the DFS on its Chilalo Graphite Project, with results expected to be available during November.

#### Updated Mineral Resource Estimate

During the Quarter, the Company reported a substantial increase in the Mineral Resource estimate at its Chilalo Graphite Project, with the high-grade Indicated Mineral Resource increased to 10.3Mt grading 10.5% Total Graphitic Carbon (TGC) for 1.1Mt of contained graphite, representing a 73% increase in contained graphite. The updated Mineral Resource estimate incorporated the results from an infill drilling program of 2,083 metres in 22 holes and geotechnical and sterilisation drilling.

Chilalo's total high-grade Mineral Resource now stands at 20.1Mt grading 9.9% TGC, comprised of:

- Indicated Resource of 10.3Mt grading 10.5% TGC for 1.1Mt of contained graphite; and
- Inferred Resource of 9.8Mt grading 9.3% TGC for 0.9Mt of contained graphite.

The high-grade resource is part of the total Indicated and Inferred Mineral Resource estimate of 67.3Mt grading 5.4% TGC for 3.7Mt of contained graphite, which includes a low-grade Inferred Resource of 47.3 Mt grading 3.5% TGC for 1.68Mt of contained graphite (see Table 1).

**Table 1. Updated Chilalo Mineral Resource**

Domain	Classification	Zone	Million Tonnes (Mt)	TGC (%)	Contained Graphite (Kt)
High-Grade	Indicated	Main	9.2	10.6	982
		North East	1.0	9.5	100
		<b>All</b>	<b>10.3</b>	<b>10.5</b>	<b>1,082</b>
	Inferred	Main	7.4	9.5	704
		North East	2.3	8.8	205
		<b>All</b>	<b>9.8</b>	<b>9.3</b>	<b>908</b>
Indicated + Inferred	<b>All</b>	<b>20.1</b>	<b>9.9</b>	<b>1,991</b>	
Low-Grade	Inferred	Main	37.8	3.4	1,282
		North East	9.5	4.1	394
		<b>All</b>	<b>47.3</b>	<b>3.5</b>	<b>1,677</b>
High-Grade + Low-Grade	Indicated + Inferred	All	67.3	5.4	3,667

The Mineral Resource was estimated within constraining wireframe solids using a core high-grade domain defined above a nominal 5% TGC cut-off within a surrounding low-grade zone defined above a nominal 2% TGC cut-off. The resource is quoted from all classified blocks above a lower cut-off of 2% TGC within these wireframe solids. Differences may occur due to rounding.

### Mine planning and pit design

Using the updated Mineral Resource estimate, initial pit optimisation work has been completed, using Indicated Resources only. The Company anticipates that the DFS will include an extension of mine life and based on the expected pit design, a more favourable strip ratio from that reported in the Updated Pre-Feasibility Study.

### Metallurgical testwork and the process flow sheet

Metallurgical testing of Global Composites and Variability samples have been completed and an appropriate flow sheet developed. The chosen flow sheet is being tested at pilot scale at SGS Lakefield to investigate any possible scale-up issues. Pilot testing is expected to be completed towards the end of October.

The financiers have appointed independent metallurgical experts to commence updated due diligence which will be done in parallel to completion of the DFS testing.

### Process plant and infrastructure

GR Engineering Services has been engaged to complete the process plant and infrastructure, design, engineering, cost estimation and final DFS report compilation. Progress during the Quarter included:

- Flow sheets, mass balance and Process Design Criteria and Mechanical Equipment List have been developed;
- Plant layout has been finalised using the selected equipment;
- A detailed capital expenditure estimate has been developed and is currently under review by Graphex; and
- Compilation of the DFS document has commenced.

## Tailings storage facility

Following a site visit by the tailings storage facility ('TSF') design consultants in June 2019, testing of geotechnical samples is complete. The deposition modelling, embankment modelling and water balance are well developed and the quantities for the starter dam have been included in the capital expenditure estimate. Minor aspects of the design are being finalised and the drawings and final report is expected to be finalised by the end of October.

## Water

Hydrology and hydrogeology assessments have been completed and a draft water report has been provided to the Company that is currently under review. Work carried out addresses the following:

- Open pit dewatering (groundwater and surface water inflow);
- Mine site / process plant surface water management;
- Project site water balance;
- Water supply; and
- Impacts of mining on the groundwater / surface water system.

## STATUS OF TANZANIA'S LEGAL AND REGULATORY ENVIRONMENT FOR MINING COMPANIES

During the Quarter, the Company and the Tanzanian Government have been in constant contact regarding the creation of a legal and regulatory environment that is acceptable to its financiers.

Substantial progress has been made during 2019 including confirmation that the Tanzanian Government's free carried interest is set at 16% for all Mining Licences, that the export of graphite concentrate from Chilalo is permitted, more accommodating requirements regarding local content, and greater clarity on the operation of the integrity pledge.

Engagement with the Tanzanian Government to ensure that there is sufficient legal and regulatory certainty is an ongoing process that continues both in the lead up to financing and thereafter. The Company continues to work with the Government to seek any additional clarifications that provide greater certainty. The Company's financiers (see ASX announcement 29 October 2018) are unlikely to communicate the satisfaction of the condition relating to Tanzania's legal and regulatory framework in isolation with work likely to continue until a final investment decision is made.

The continued improvement in the legal and regulatory environment for mining companies in Tanzania was further reiterated during the Quarter with the completion of the merger between Barrick Gold ('Barrick') and Acacia Mining plc. In its announcement dated 19 July 2019 titled "*Recommended Final Offer For Acacia Mining Plc By Barrick Gold Corporation*", Barrick set out the material terms of the draft documentation under discussion at that time with the Tanzanian Government. On 10 October 2019, the Minister for Foreign Affairs, Prof. Palamagamba Kabudi, who headed the Government Negotiating Team, announced in a presentation to the University of Dar es Salaam congregation attended also by foreign diplomats, in commemoration of 20 years since the death of Julius Nyerere that "*the negotiations between Barrick and the Government are complete*".

News reports post Quarter end have quoted Tanzania's Foreign Affairs and East African Cooperation Minister, Professor Palamagamba Kabudi, as confirming that talks between the Government and Barrick have

concluded and that a joint venture company, in which Barrick and the Government are the shareholders, has been established for the purpose of operating the Buzwagi, Bulyanhulu and North Mara mines that were previously controlled by Acacia.

Graphex looks forward to reviewing the details of the negotiated outcome between Barrick and the Government as they come to light.

## **GRAPHITE MARKET AND SALES AGREEMENTS**

During the Quarter, Graphex's Managing Director, Phil Hoskins, visited China and held discussions with a range of graphite market participants. During this most recent visit to China, Mr Hoskins met with China's largest expandable graphite manufacturer and the owners of what will be China's second largest expandable graphite plant, which is currently under construction. Mr Hoskins received strong and consistent feedback that there is strong demand for Chilalo product, with potential customers anxious to take as much product from Chilalo as possible.

Whilst Graphex continues to engage with a priority list of potential Chinese customers, the Company has also made a significant commitment to engaging with key participants in North American and European markets over the past 12 months<sup>1</sup>. The Company has always believed that success in the graphite industry will be achieved through a detailed understanding of the graphite market and continued engagement with multiple market participants. This is not a static exercise and an enormous amount of effort has been, and will continue to be, committed to developing the Company's graphite market IP.

The Company's enhanced understanding of the graphite market has resulted in a diversified sales and marketing strategy that covers multiple geographical regions and end users, which will underpin the DFS.

## **CORPORATE**

### **Cash**

As at 30 September 2019, the Company had cash of \$1.5 million. Under the Interim Loan Note Facility in place (see ASX announcement 29 October 2018), US\$1 million remained available to be drawn at Quarter end.

### **Share capital**

As at 30 September 2019, the Company had 100,645,208 shares on issue and 4,503,753 unexercised unquoted options.

### **Resignation of non-executive director**

During the Quarter, Mr Grant Davey resigned as a non-executive director.

### **Annual general meeting**

The Company's annual general meeting will be held at 11:00 am (WST) on Thursday 14 November 2019 at Emerald House, 1202 Hay Street, West Perth.

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<sup>1</sup> See ASX announcement 26 June 2019, "Graphex well positioned to secure sales agreements"

## TENEMENT INTERESTS

Table 2 shows the Company's tenement interests as at 30 September 2019.

**Table 2. Tenement interests**

Tenement	Ownership	Project	Location
ML 569/2017 - Chilalo	100%	Chilalo	Tanzania
PL 11050/2017 - Chilalo	100%	Chilalo	Tanzania
PL 11034/2017 - Chilalo	100%	Chilalo	Tanzania
PL 8628/2012 - Kipendengwa	100%	Chilalo	Tanzania
PL 9929/2014 - Chikwale	100%	Chilalo	Tanzania
PL 9946/2014 - Machangaja	100%	Chilalo	Tanzania

During the Quarter, there was no change to the Company's tenement interests.



### **PHIL HOSKINS**

**Managing Director**

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### **ABOUT GRAPHEX MINING**

Graphex Mining Limited (ASX:GPX) is an Australian resources company listed on the Australian Securities Exchange. Graphex owns the world-class Chilalo Graphite Project, located in south-east Tanzania (Figure 1).

Since the initial discovery of Chilalo in 2014, Graphex has adopted a clear and differentiated strategy of understanding end markets and seeking to partner with strategic investors to enable delivery of the Chilalo Project. Underpinned by a high proportion of large flake material with exceptional expansion characteristics, the Company has targeted the expandable graphite market, which among many applications, is ideally suited to the manufacture of high-value graphite foils and flame-retardant materials.

Graphex has strategically targeted these expandable graphite applications based on their attractive growth and value characteristics. The size and growth expectations of the expandable graphite market applications, the premium prices for large flake graphite in general and the suitability of Chilalo graphite for the production of expandable graphite applications has meant that the Company has prioritised supplying the expandable graphite market as the primary focus.

For more information, visit [www.graphexmining.com.au](http://www.graphexmining.com.au).

**Chilalo Large Flake Graphite Project, Located in Tanzania**

