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**QUARTERLY ACTIVITIES REPORT**  
**For the period ended 30 September 2019**

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**About Crater Gold Mining Limited**

**(ASX CODE: CGN)**

Crater Gold Mining Limited ("Crater Gold" or the "Company") is focussed on the exploration of its highly prospective Crater Mountain Gold Project in Papua New Guinea (PNG), which includes two gold resources and evidence of potential copper-gold porphyry mineralisation. The Company is also exploring at the A2 Polymetallic and Golden Gate Graphite projects at Croydon in Queensland, Australia

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**Russ Parker**  
**Managing Director**

**ACHIEVEMENTS DURING THE QUARTER**

**GOLDEN GATE GRAPHITE PROJECT, NTH QLD**

- **High Recovery & Purity from Metallurgical test results**

**CORPORATE**

- **\$2m Loan Facility**

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**DEVELOPMENTS DURING THE QUARTER**

**CRATER MOUNTAIN GOLD PROJECT, PAPUA NEW GUINEA**

**High Grade Zone (HGZ) Gold Mine**

During the quarter the Company produced approximately 55 oz of gold from mining operations at the HGZ at Crater Mountain.

Progression in the development of High Grade Zone continues to target the high grade structures at the different mining levels, notably the 1930RL, 1950RL & 1960RL levels.

Mining development at 1950 level is continuing and is anticipated to soon close in on the mineralised zone towards the north. JL2, JL1 & NV1 development to date has shown promising mineralisation and geological assemblages exhibiting proximity to the interpreted mineralised zones.

At the 1930 level development has been concentrated on the lateral linear stoping base panels. This development will provide a base for selective mining by stoping on high grade structures vertically to the 1950 level. This should increase the high grade tonnage available for processing and deliver increased gold production. Apart from the stoping on the 1930 level, a tight exploration drive to the northern extreme is being gradually developed to evaluate and check the mineralisation continuity to the northern zones where there is presently no drilling data available. The 8m development so far has recorded coarse & fine gold hosted within an intensely oxidised zone. Further work will be conducted over the current quarter.

The company has completed its renewal application process for ML510, and the date has been gazetted for a warden's hearing to be convened by the Mineral Resource Authority (MRA) on December 3<sup>rd</sup>, 2019. In addition to that, two exploration licences that were not renewed by the MRA have been reapplied for and dates have also been gazetted for the warden hearings to take place. These will take place in late January, 2020, for ELA 2643 and ELA 2644.

## **GOLDEN GATE GRAPHITE PROJECT, CROYDON, NTH QLD**

### **High graphite recovery and purity obtained from metallurgical test work**

- **Flotation test work by Brisbane Met Labs P/L on a nominal 56 micron composite drill core sample has achieved a 96% recovery of graphite into a flotation concentrate**
- **A 2-stage caustic bake on the concentrate successfully removed gangue minerals to achieve a very encouraging total carbon grade of 98.9%**
- **Further test work is to be focused on maximisation of graphite grain size and purity**

The Company announced on 24 July 2019 the results of preliminary metallurgical test work undertaken by Brisbane Met Labs P/L (BML) on graphite recovery from graphite mineralised drill core from the Golden Gate Graphite Project.

As previously announced (ASX: 7 February 2018 "Thick Intervals Graphite Mineralisation Intersected at Golden Gate Project, Qld") two diamond drill holes returned the following results;

- **GGDDH 1701: 62.7m (29.3 to 92.0m) @ 6.79% GC\* at a cut-off of 3.4% GC\***
- **GGDDH 1702: 53.9m (69.1 to 123.0m) @ 6.79% GC\* at a cut-off of 3.1% GC\***

GC\* = graphitic carbon

Petrological examination on samples of the graphite mineralisation from both holes (as announced ASX: 12 April 2018: "Jumbo and Large Flake Graphite Identified at Golden Gate") identified the presence of significant graphite flake sizes of 0.05 to 0.50mm, with an average of around 0.25mm. While this was encouraging, it is noted that the petrological work was undertaken on small core samples mainly selected to investigate specific textural features and minerals present and as such these are not necessarily representative of the overall graphite mineralisation.

In view of this, it was decided to undertake metallurgical test work on the graphite mineralisation to determine if high recovery of graphite into a flotation concentrate could be achieved which could then be economically upgraded to a graphite product of >95% GC\*.

For the test work, a composite sample (minus 3.35mm grain size), grading 8.2% total carbon from 29.3 to 45.0m depth in hole GGDDH 1701, was prepared. This represents the top 15.7m of the graphite intersection in that hole, which would perhaps approximate the first two to three benches of an open cut mining operation.

The test work was contracted out to **Brisbane Met Labs P/L (BML)**. As total carbon assays in this style of mineralisation closely approximate graphitic carbon assays (essentially within normally expected assay error levels), only total carbon assays have been determined in the test work to minimise laboratory costs that are significantly higher for determining graphitic carbon values. Bench scale graphite concentration flotation test work was undertaken using standard flotation reagents (kerosene and MIBC) on pulverised splits of the composite sample at various grain sizes.

The following table summarises the work conducted, and the results obtained. The ensuing discussion is a summary extracted from BML's report.

FLOAT TEST ID	GRIND SIZE	PURPOSE
Float 1	As received minus 3.35mm	Assess coarse graphite float
Float 2	80% passing 300 microns	Assess a less coarse grind
Float 3	80% passing 106 microns	Assess medium grind size
Float 4	80% passing <20 microns	Assess ultra fine grind size
Float 5	80% passing 56 microns	Assess intermediate size
Float 6	80% passing 56 microns	Provide feed to cleaner test
Float 7	80% passing 56 microns	Provide feed for caustic bake

Encouragement was generated from flotation of a 58 micron sample (Float 6) from which a graphite recovery of 94% was reported into a rougher concentrate. Another nominal 56 micron grain size (P80/56) sample was prepared from the composite sample and subjected to flotation testing. This resulted in recovery of 96% of the graphite to a rougher concentrate at a total carbon grade of 16.9%, with 56% of the sample mass rejected as gangue. When the rougher concentrate was subjected to a two-stage caustic bake, a very encouraging total carbon product grade of 98.9% was achieved. This indicates that the caustic bake has been successful in removing the gangue contaminants (mainly phyllosilicates and other silicates).

Based on the objectives of the Company and the results as outlined in the BML report, recommendations for follow-up test work are as follows;

- Optimisation of the flotation work – trying varying concentrations of the flotation reagents used (kerosene and MIBC) or introducing sodium silicate or some other dispersant to improve the rejection of gangue.
- Optimisation of grind size for achieving maximum graphite flake size.
- Optimisation of the caustic bake purification step

## **CORPORATE**

### **\$A250,000 loan facility with Freefire**

On the 1 July 2019 the Company announced that it executed a new loan agreement for \$250,000. The funding provided by way of a loan facility from Company's major shareholder, Freefire Technology Ltd ("Freefire").

The Company plans to use the funds to further develop the High Grade Zone ("HGZ") at the Crater Mountain Project in Papua New Guinea. The loan will also provide working capital to continue mining operations.

Key terms of the loan facility include an interest rate of 8% p.a. with the repayment of the facility on demand from the lender.

### **\$A2,000,000 loan facility with Freefire**

On the 17 July 2019 the Company announced a \$2,000,000 loan facility to provide funding to allow the ongoing development of the High Grade Zone at the Crater Mountain Project in PNG and general working capital. The funding will be provided by way of an unsecured loan facility from Company's major shareholder, Freefire Technology Ltd ("Freefire").

Key terms of the loan facility include: - \$300,000 draw-down available at the option of Crater Gold. The balance is available upon agreement of Freefire with the request from the Company. - Repayable one year from date of first draw-down unless agreed otherwise in advance, and an applicable interest rate of 8% p.a.

## **COMPETENT PERSONS STATEMENT**

The information contained in this report relating to exploration activities at the Crater Mountain Gold Project is based on and fairly represents information and supporting documentation prepared by appropriately qualified company personnel and reviewed by Ken Chapple, who is an Associate Member of The Australasian Institute of Mining and Metallurgy and a Fellow of the Australian Institute of Geoscientists. Mr Chapple has sufficient experience relevant to the style of mineralisation and type of deposit involved to qualify as a Competent Person as defined in the 2012 JORC Code. Mr Chapple is an independent principal geological consultant with KCICD Pty Ltd and consents to the inclusion in the report of matters based on his information in the form and context in which it appears.

Mr Chapple has also relied on independent consultants, Brisbane Met Labs Pty Ltd (BML), who specialise in metallurgical test work and who have submitted to the company a report on results obtained to date. Chris Bucknell, laboratory manager of BML, has consented to the inclusion of this information in the form and in the context in which it appears in this announcement.

The information contained in this report that relates to Exploration Results at the Golden Gate Graphite and the A2 Polymetallic Projects near Croydon, Queensland, is based on information compiled by Ken Chapple, or prepared by appropriately qualified external technical experts and reviewed by him. Mr Chapple is an Associate Member of The Australasian Institute of Mining and Metallurgy and a Fellow of the Australian Institute of Geoscientists. Mr Chapple has been assisting the Company as a technical consultant relating to his areas of expertise. Mr Chapple has sufficient experience relevant to the style of mineralisation and type of deposit involved to qualify as a Competent Person as defined in the 2012 JORC Code. Mr Chapple is an independent principal geological consultant with KCICD Pty Ltd and consents to the inclusion in the report of matters based on his information in the form and context in which it appears.

### **Forward Looking Statements**

This Announcement may contain forward looking statements. The words 'anticipate', 'believe', 'expect', 'project', 'forecast', 'estimate', 'likely', 'intend', 'should', 'could', 'may', 'target', 'plan' and other similar expressions are intended to identify forward-looking statements. Forward-looking statements are subject to risk factors associated with the Company's business, many of which are beyond the control of the Company. It is believed that the expectations reflected in these statements are reasonable at the time made but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially from those expressed or implied in such statements. You should therefore not place undue reliance on forward-looking statements

## **Schedule of Crater Gold Mining Limited tenements:**

<b>Particulars</b>	<b>Project Name</b>	<b>Registered Holder</b>	<b>% Owned</b>	<b>Status</b>	<b>Expiry</b>	<b>Area (Km<sup>2</sup>)</b>
EPM 8795	Croydon	CGN	100	Granted	6/09/2020	9.6
EPM 13775	Wallabadah	CGN	100	Granted	5/03/2020	16
EPM 16002	Foote Creek	CGN	100	Granted	30/01/2021	28.8
EPM 18616	Black Mountain	CGN	100	Granted	18/06/2020	57.6
EL 1115	Crater Mountain	Anomaly Ltd <sup>1</sup>	100	Renewal lodged	25/09/2018	41
ELA 2643	Crater Mountain	Anomaly Ltd <sup>1</sup>	100	Application lodged	Oct 2019	68
ELA 2644	Crater Mountain	Anomaly Ltd <sup>1</sup>	100	Application lodged	Oct 2019	78
ML 510	Crater Mountain	Anomaly Ltd 1	100	Granted	4/11/2019	1.58

<sup>1</sup> Anomaly Limited is CGN's 100% owned PNG subsidiary