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## **QUARTERLY ACTIVITIES REPORT**

**For the period ended 31<sup>th</sup> March 2018**

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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**

### **Key Points**

#### **HGZ GOLD PROJECT, PNG**

- Operations underway on 1930 Adit development
- Drilling to resume as part of renewed exploration program

#### **A2 POLYMETALLIC PROJECT, QLD**

- High priority polymetallic, silver & copper targets identified for drill testing

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

- Thick intervals of graphite mineralisation intersected

#### **POST END OF QUARTER**

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

- Jumbo and large flake graphite identified from petrology

## **DEVELOPMENTS DURING THE QUARTER**

### **CRATER MOUNTAIN GOLD PROJECT, PNG**

#### **HGZ Gold Mine:**

Crater Gold Mining Limited announced on March 8<sup>th</sup>, 2018 that it had received approval from the Mineral Resources Authority (MRA) of Papua New Guinea to recommence operations on its HGZ gold mine at the Crater Mountain project.

Following many months of work by the new in-country management team, headed up by Country Manager Curtis Church, a new mine plan was approved by the Chief Inspector of Mines and a new Registered Mine Manager was appointed. Two inspections of the site, the associated facilities and the mining plant were carried out by the Mines Safety Branch inspection team. A schedule of on-going improvements were agreed with the Inspectorate and operations have now resumed. Development mining of the 1930 level has commenced and currently 26 meters progress has been achieved. Based on site forecasts we expect to reach the ore face in approximately 1.5 months.”

Brett Collins joined the company in February as General manager, PNG. Mr Collins has considerable expertise in ore processing, safety and security. Mr Collins has been working to improve the processing plant functionality and the overall recovery of gold. Selective mining of the 1960 level is being carried out to provide material to test the plant.

Mr. Jessy Robin was appointed as the Registered Mine Manager by the MRA and brings with him a wealth of underground engineering and operational experience, much of this experience having been gained operating mines in PNG.

During the quarter, the Company's most important PNG Exploration License, EL 1115 was renewed. EL 1115 contains the Company's Mixing Zone & High Grade Zone projects.

Following the approval to recommence operations received on March 8<sup>th</sup>, 2018, the company has continued preparation work for the resumption of exploration drilling, it is intended to start drilling from a cavity on 1930 level once development has progressed far enough. At present refurbishment of the Company's drill is continuing while options to bring an additional larger drill to site are being investigated.

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

#### **THICK INTERVALS OF GRAPHITE MINERALISATION INTERSECTED IN DRILLING PROGRAMME**

- GGDDH 1701: 62.7m @ 6.79% GC\* from 29.3m (cut-off 3.4% GC\*)  
Including: 7.0m @ 10.05% GC\* from 66.0m (cut-off 9.4% GC\*)
- GGDDH 1702: 53.9m @ 6.79%GC\* from 69.1m (cut-off 3.1% GC\*)  
Including: 14.0m @ 8.41% GC\* from 101.0m (cut-off 5.9% GC\*)

During the quarter the Company announced that it intersected thick graphite mineralisation in two diamond core holes (GGDDH 1701 and GGDDH 1702) drilled at the Golden Gate Project at Croydon, North Queensland. Hole GGDDH 1701 confirmed the intersection (in terms of both intersected interval and grade) reported from near-by historical holes GGRC 2005 and GGDH2 (25m to the NE) drilled by previous exploration company Central Coast Exploration (CCE). Hole GGDDH 1702 confirmed the down-dip extrapolated extension of GGRC 2003 (95m to the SW) drilled by CCE.

The graphite intersections and grades for three historical drill holes drilled in 1989-90 and 1990 by CCE have been effectively confirmed. The Company is optimistic that if further drilling results match the historical drilling results, then it may be possible to have much of the remainder of the historical data accepted for use in a compliant resource estimation. However, it must be noted that it is uncertain if further drilling will demonstrate similar correlation with previously reported historical graphite drill

intersections and grades and even if such correlation is achieved, it may not provide sufficient information to allow estimation of a resource estimate in accordance with the 2012 JORC Code.

The thick graphite mineralisation intersected in both of the holes is of similar grade and is hosted in intensely hydrothermally altered (sericitic) granite. Graphite occurs in narrow veins, “clots” and commonly forms rims around xenolithic fragments. While some previous interpretations have considered the graphite to have formed from the assimilation of carbonaceous sediments within the granite during its emplacement, little evidence for this was noted in the core and a hydrothermal origin is favoured.

Testing is currently being undertaken for petrological and mineralogical examination, QEMSCANS (Quantitative Evaluation of Minerals via Scanning Electron Microscope by SGS) and MLA (Mineral Liberation Analysis scans by ALS Laboratory Services), designed to determine if deleterious minerals are associated with the graphite and to determine the graphite grain size characteristics. One or more composite samples will be selected for detailed metallurgical test work to determine graphite quality and potential recoveries.

## **A2 POLYMETALLIC PROJECT, QLD**

- High priority polymetallic, silver & copper targets identified for drill testing
- The A2 project area is contained within a large polymetallic anomalous area
- Based on the encouraging results, the Company has applied for EPM 26749, that will cover possible extensions outside of the current EPM 13775 tenement area.

The Company announced that it had received Actlab’s interpretation report on the analytical results of the Spatiotemporal Geochemical Hydrocarbon (SGH) soil sampling program undertaken at the A2 Polymetallic Project. The SGH sampling technique is a cost effective, deep penetrating geochemical technique which has been successful at other prospects world-wide in being able to detect geochemical anomalism for metals to depths of up to 900 metres.

The SGH analysis and interpretation has led to the identification of the following high priority targets;

### **Polymetallic Anomalies**

Three (3) identified polymetallic anomalies (P1, P2 and P3 – Figure 1) associated with Redox-cell R1 (Figure 4), are high priority drill targets to which Actlabs has allocated a high confidence rating of 5.5. Actlabs use a maximum rating score of 6.0, with a rating in excess of 4.0 considered to be significant.

Anomaly P1: This anomaly provides important credibility for the SGH technique in that it has detected the broad polymetallic stock-work vein mineralisation previously intersected in drilling by the Company. Eight of the previous nine drill holes tested the 500m western half of this anomaly, with only one hole drilled in the 500m eastern half. Further drill testing in the eastern half is warranted.

Anomaly P2: This much larger polymetallic anomaly is located along the margin of the R1 Redox-cell to the north of the A2 project drilled area and persists for at least 500m N-S and 2,800m E-W. High priority targets have been identified for drill testing.

Anomaly P3: This small anomaly is located along the southern boundary of the R1 Redox-cell, just inside the southern tenement boundary. A high priority target has been identified for drill testing.

### **Copper and Silver Anomalies**

These large high priority anomalies are located in the NW corner of the EPM (Figures 2 & 3). While they have actually been identified as separate silver (500m wide E-W and 1,600m N-S) and copper (250m wide E-W and 1,800m N-S) anomalies, they may also indicate the presence of combined copper-silver anomalism. Actlabs interpret that mineralisation is likely to be located vertically beneath the anomalies and these offer high priority drill targets. Actlabs has allocated a high confidence rating of 5.0 out of a maximum 6.0 for these anomalies.

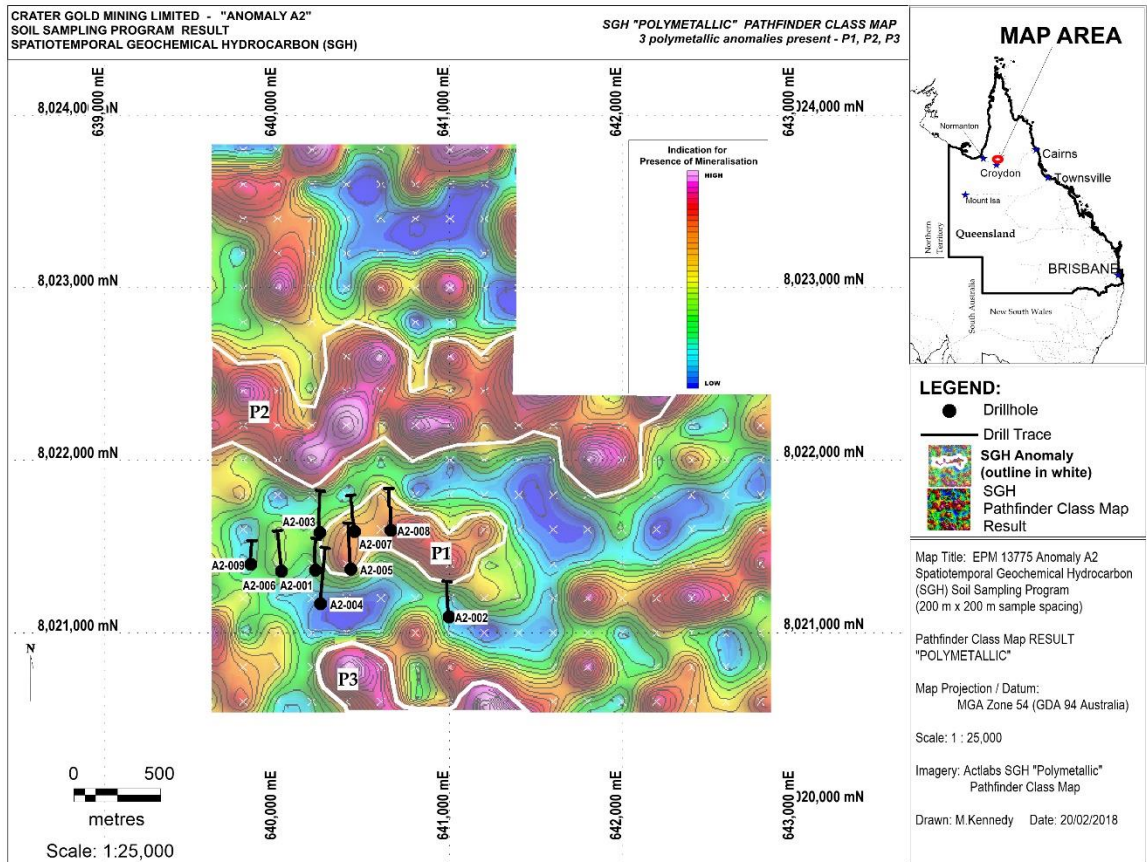


Figure 1 – Polymetallic targets P1, P2, P3

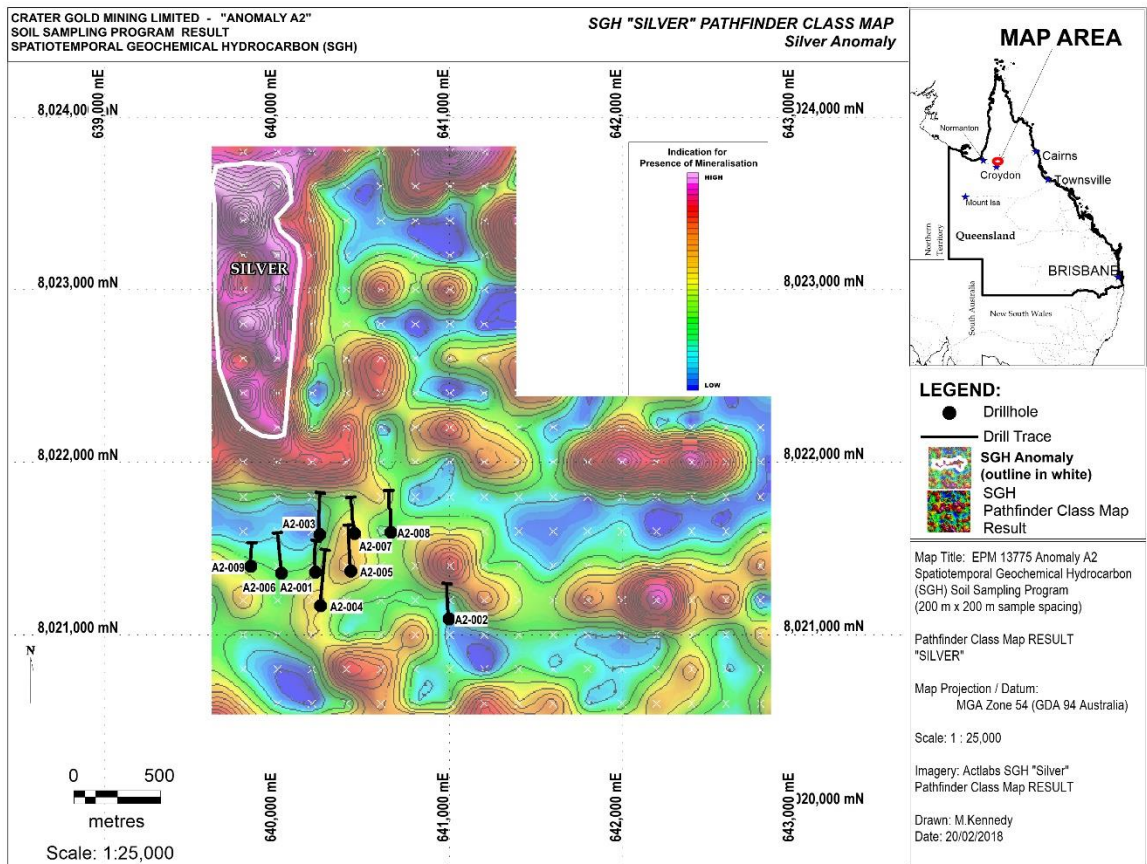




Figure 2- Silver target

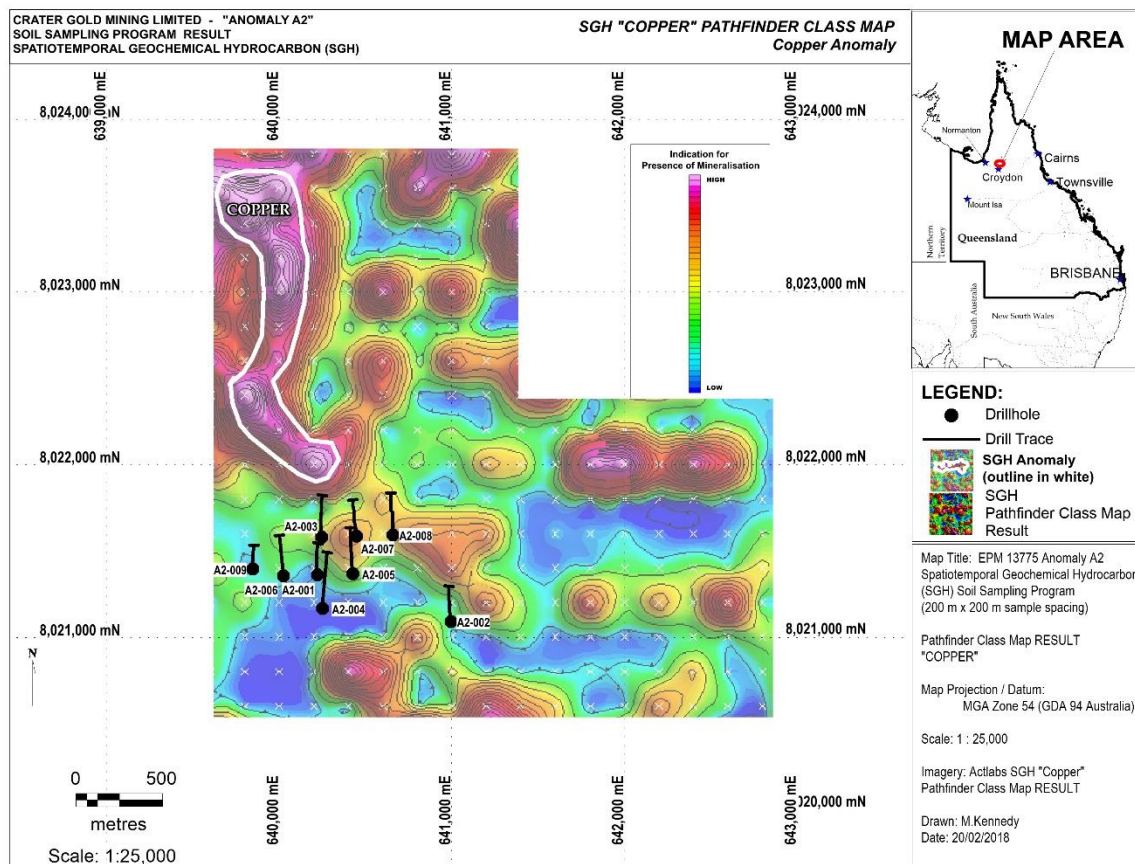


Figure 3- Copper target

Actlab’s interpretation of Redox-cells is that the centre of the cell halo is expected to be the original location of the upwelling of mineralising fluids from depth and that the outer segments along the rims of the cells may represent the lateral extent of mineralisation. Their interpretation of the A2 SGH soil sample results has identified a number of nested-segmented Redox-cells in the survey area, shown as R1, R2, R3 and R4 on Figure 4.

**New License Extension Applied for**

Based on the encouraging results, the company has applied for EPM 26749, that will cover possible extensions outside of the current tenement area. The extension area is shown in Figure 5 below.

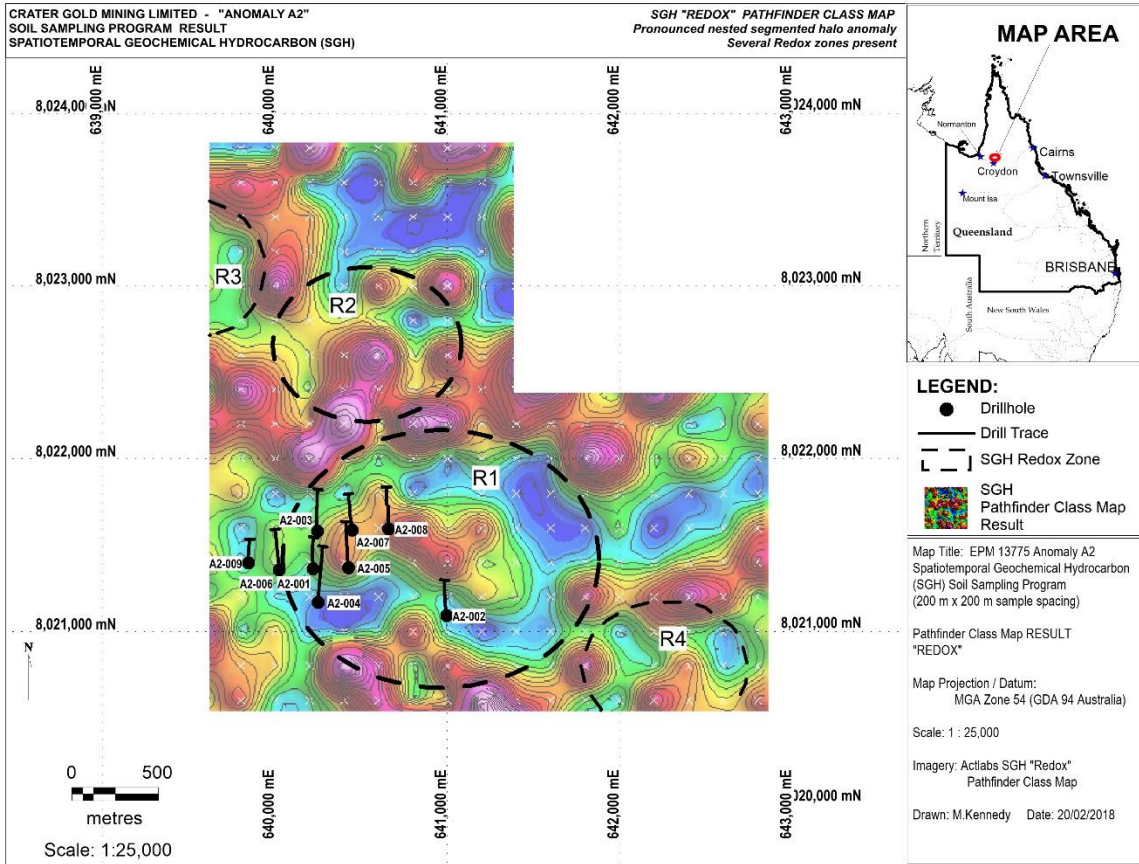


Figure 4- Redox cells

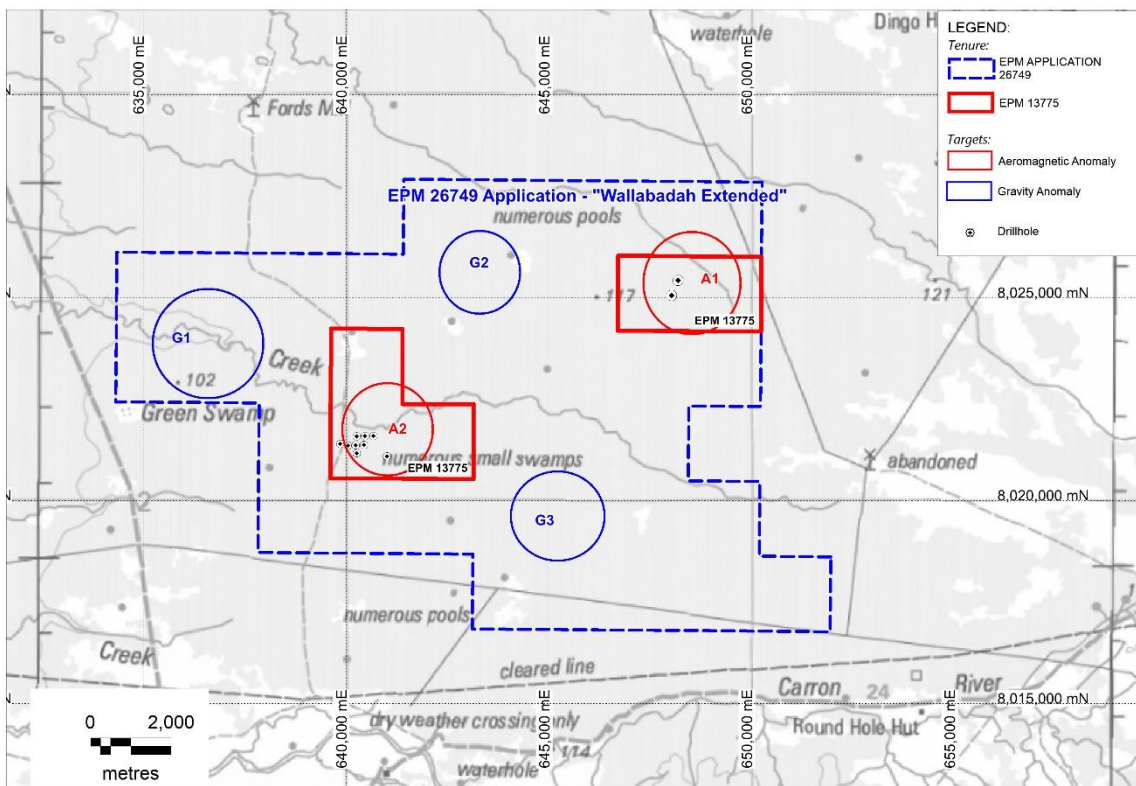


Figure 5- EPMA 26749 application area



## ACTIVITIES POST THE END OF THE QUARTER

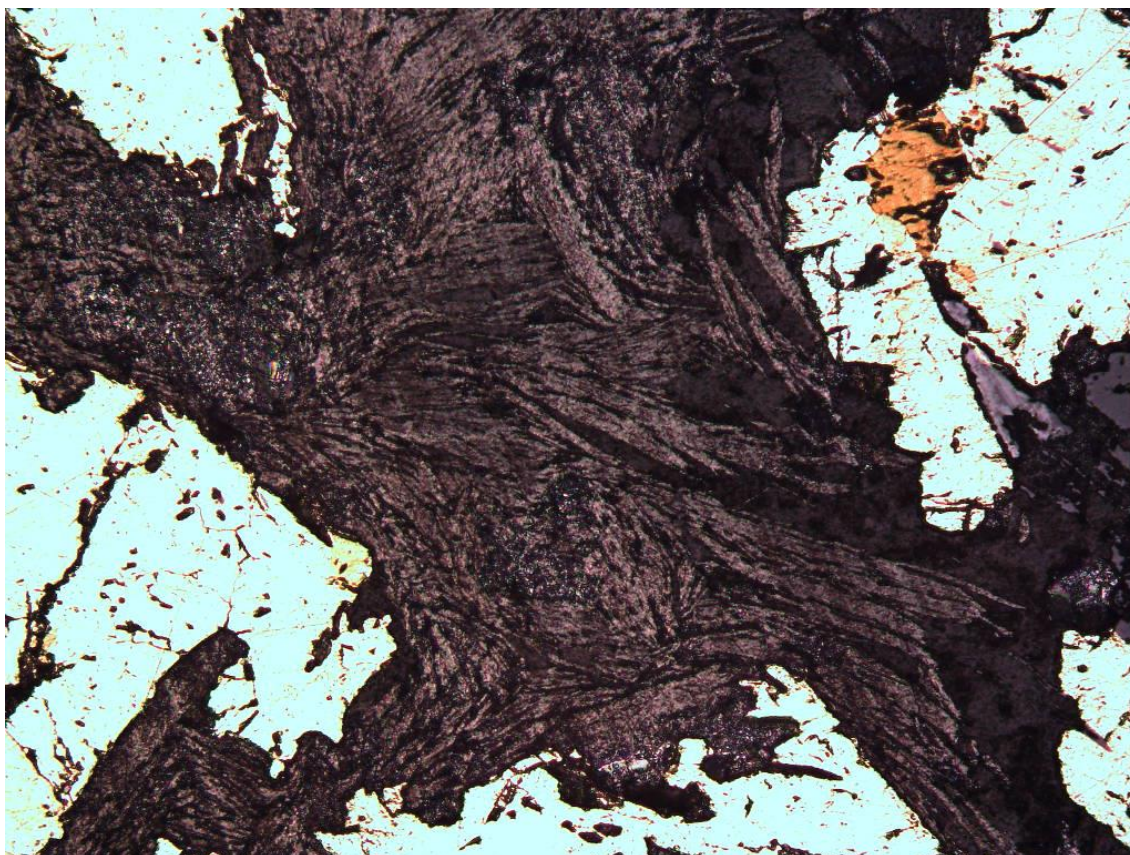
### GOLDEN GATE GRAPHITE PROJECT, QLD

#### JUMBO AND LARGE FLAKE GRAPHITE IDENTIFIED

- Petrological examination of graphite mineralisation from the Golden Gate Project identified jumbo graphite flake (0.30-0.50 mm), large graphite flake (0.18-0.30 mm) and fine graphite flake (<0.18 mm).
- Average size of graphite flakes is large at around 0.25 mm  
Most of the large and jumbo graphite flakes are discrete and do not appear to be bound up with other minerals with the expectation that they may be easily liberated.

The Company announced that it received the final report for the petrological examination undertaken on eight (8) polished sections of graphite mineralised core samples from the Golden Gate Graphite Project undertaken by Pterosaur Petrology, Townsville, Queensland. These core samples were from the two diamond core holes drilled by the Company late last year.

This work identified the presence of significant graphite flake sizes of 0.05 to 0.50mm, with an average of around 0.25mm. Most of the large graphite flakes (0.18 to 0.30mm) and jumbo graphite flakes (0.30 to 0.50mm) appear to be largely independent from other mineral grains, which may render them relatively easy to liberate during processing (see polished section photographs 1 and 2). It should be noted, however, that the relative percentages of the flake sizes present cannot be determined at this stage as the petrological work has been undertaken on small samples which have been selected to investigate specific textural features and minerals present and as such are unlikely to be representative of the graphite mineralisation overall. More detailed investigation will be undertaken by the metallurgical scoping testwork that is currently in progress on a representative composited sample.



Polished Section 1. Reflected light [200x Mag. F.O.V. 0.6 mm].  
**Compact body of discrete graphite flakes - (Brown in colour)**





Polished Section 2: Reflected light [25x Mag. F.O.V. 4.8 mm]  
**Coarse graphite flake - (Brown in colour)**

## **COMPETENT PERSONS STATEMENT**

### *Presentation of technical data and Competent Persons review*

Resource estimates contained in this report were previously announced in the Company's ASX news releases of:

- 24-11-11 Initial Resource Estimate (This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012). The Company confirms that it is not aware of any new information or data that materially affects the information included in that announcement, and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.
- 14-11-16 titled 'Maiden JORC Gold Resource at HGZ Project, Crater Mountain, PNG'.

Such resource estimates are subject to the relevant assumptions, qualifications and procedures described in the relevant ASX news releases.

To date, the Company has only announced estimates of Inferred Mineral Resources. Nothing in this report or prior announcements by the Company constitutes presentation of Mineral Reserves. As such, economic analysis cannot be applied based on the data contained.

The information contained in this report relating to exploration results and mineral resource estimates is based on and fairly represents information and supporting documentation prepared by Mr. Anthony Williamson or prepared by appropriately qualified external technical experts and reviewed by him. Mr Williamson is a Member of the Australian Institute of Geoscientists and has the relevant experience in relation to the mineralisation being reported upon 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. Mr. Williamson consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.



The Company has an 'exploration target' of 'multi-million ounces' for the epithermal gold resources at the Nevera Prospect at Crater Mountain Project. A targeting exercise was carried out by Mining Associates ("MA") for the Nevera prospect using a simple 10x10x10m block model informed by 5m bench channel samples (not including rock chips) and a Nearest Neighbour ("NN") estimation technique with a limited search range. The NN method was chosen so that no averaging of the grades occurred although there is a risk that estimates can be over selective. As the initial target is highly selective narrow underground mining, this is an acceptable approach. An initial examination of the composited data shows two natural breaks in Au grade distribution. one at about 0.4g/tAu and a second at about 10g/tAu. MA suggests that these represent low grade and high mineralisation events respectively. The block model was informed using a 100m spherical search so that no assumption was made of the direction and trend of mineralisation. Informing samples consisted of 2,766 5m downhole composites and 1,479 5m bench samples. No domain selection was used, but no blocks above the topography were estimated. Volume covered is about 700m long, 700m wide and 100m to 350m deep (variable with topography). This is certainly suitable for both selective mining and a bulk open pit. A bulk density of 2.5 t/m<sup>3</sup> was used for reporting, the grade tonnage plot using cut-off grades from 1 to 20g/t Au was reported. The target for Nevera prospect bulk open pit mining using a cut-off grade 1g/t Au is 24Mt @ 2.7g/t Au for 2Moz of contained Au. The target for the HGZ only for selective underground mining using a cut-off grade 10g/t is 60-100koz @ 13-30g/t. The exploration targets are conceptual in nature as there has been insufficient exploration to define them as Mineral Resources. It is uncertain if further exploration will result in the determination of a Mineral Resource under the JORC Code 2012. The exploration targets are not being reported as part of any Mineral Resource.

#### No new information or data

This report contains references to exploration results and Mineral Resource estimates, all of which have been cross-referenced to previous announcements made by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant announcements and in the case of estimates of Mineral Resources that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

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. Indications of, and guidance on, future earnings and financial position and performance are also 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 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. Except as required by law, neither Crater Gold Mining Limited nor any of its directors, employees, servants, advisers or agents assume any obligation to update such information.

**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	6/09/2018	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	18/06/2018	57.6
EL 1115	Crater Mountain	Anomaly Ltd <sup>1</sup>	100	Granted	25/09/2018	41
EL 2203	Ubaigubi	Anomaly Ltd <sup>1</sup>	100	Renewal lodged	10/09/2017	88
EL 2249	Crater Mountain	Anomaly Ltd <sup>1</sup>	100	Renewal lodged	10/11/2017	10
EL 2318	South Crater	Anomaly Ltd <sup>1</sup>	100	Renewal lodged	10/09/2017	20
EL 2334	Crater Mountain	Anomaly Ltd <sup>1</sup>	100	Renewal lodged	21/05/2017	68
EL 2335	Crater Mountain	Anomaly Ltd <sup>1</sup>	100	Renewal lodged	22/05/2017	78
ML 510	Crater Mountain	Anomaly Ltd <sup>1</sup>	100	Granted	4/11/2019	1.58

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