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Crater Gold Mining Limited ABN 75 067 519 779

28 July 2022

QUARTERLY ACTIVITIES REPORT For the period ended 30 June 2022

About Crater Gold Mining Ltd 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 and Gold projects at Croydon in Queensland, Australia.

Capital Structure

 Share Price:
 \$0.017

 Market Cap:
 \$21.06m

 Shares on Issue:
 1,239,027,862

Board of Directors

Sam Chan Non-Executive Chairman

Russ Parker Managing Director

Thomas Fermanis Deputy Chairman

Lawrence Lee Non-Executive Director

Desmond Sun Non-Executive Director

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<u>CORPORATE</u>

On 9 July 2021, the Company requested a voluntary suspension of its securities pending the finalisation of the details of a material acquisition. The Company deemed a voluntary suspension necessary to enable the Company to manage its continuous disclosure obligations and to avoid trading in its securities happening on a basis that is not reasonably informed. On 16 March 2022, the Company requested an extension to the suspension in trading of its securities until the earlier of the date that an announcement is made and 16 September 2022.

DEVELOPMENTS DURING THE QUARTER

CRATER MOUNTAIN GOLD PROJECT

PAPUA NEW GUINEA

The Company continues to take appropriate precautions and actions to protect our staff and business operations, including precautions as advised and suggested by the World Health Organization, the Australian Government and the Government of Papua New Guinea (PNG).

First and foremost, our priority is the health, safety and wellbeing of our staff and the people of the communities in which we operate and as such, the Company is actively monitoring the COVID-19 situation and its potential impacts on these groups.

Due to continual spread of the COVID-19 virus, the PNG Government put in place travel restrictions, both domestic and international, which remains in place to this day. This combined with reduction in flight connections into PNG has hampered the Company's ability to move expatriate personnel in and out of PNG. Whilst recent changes have re-opened domestic travel in PNG, the impact of the COVID-19 pandemic is still being felt in the area where the Company operates, with many of the logistics providers remaining closed, or offering limited services.

Due to the ongoing nature of these factors and their impact on our ability to access our operations reliably on an ongoing basis, all production and exploration activities continue to remain suspended at present.

In the meantime, the Company remains focused on the renewal process of ML510 and is working closely with the Mineral Resources Authority (MRA) to secure a new ten (10) year mining license, in addition to working in parallel for the renewal and grant of exploration licenses at the Company's Crater Mountain Gold Project.

GOLDEN GATE GRAPHITE PROJECT, CROYDON, NORTH QUEENSLAND

METALLURGICAL TEST WORK

Summary

- Flotation recovery of 89.4% graphite obtained from an 850 micron sample at a concentrate grade of 76.9% carbon.
- Testing of varying grain size samples ongoing to determine the optimum on which to base on-going metallurgical testing.
- On-going test work to focus on determining what range of graphite end products such as flake size, micronising and spheronisation might be possible.

During the Quarter the Company announced results from the outbreak of ongoing metallurgical test work on graphite mineralisation from the Golden Gate Graphite Project at Croydon in North Queensland (*Graphite Metallurgical Test Work, Golden Gate Graphite Project, Croydon, QLD.*, 20 June 2022).

ALS Metallurgy Perth, undertook a flotation test on an 850 micron sample (composite 2) with encouraging results obtained. A total of 89.4% of the graphite feed reported to a rougher concentrate, with the concentrate being found to have a graphite grade of 76.9%. No attempt was made to purify the graphite as previous caustic baking of a lower grade graphite rougher concentrate had provided an excellent graphite purity of 98.9%.

Testing of additional grain sizes is being undertaken to determine the optimum grain size for on-going test work. An optimised flotation rougher concentrate of that selected grain size will then be prepared and screened to determine the graphite flake size distribution which will indicate its potential market value. Based on previous petrographic examination, it is anticipated that the mix of graphite sizes possibly present may include fine-flake, through to large, jumbo and perhaps super jumbo flake sizes. If favourable results are obtained, test work would then be undertaken to establish if high value-added micronisation and/or spheronisation graphite production might be economically achievable.

As previously announced to the ASX (*High Graphite Recovery and Purity Obtained from Metallurgical Test Work, Golden Gate Graphite Project,* 24 July 2019), the Company drilled two diamond core holes in the thick graphite mineralisation in the previously identified Golden Gate Graphite Project area in EPM 18616. The purpose of this was to obtain fresh graphite mineralisation for metallurgical testing and to verify the previously reported drill intersections at the sites selected. The results obtained were as follows;

- Hole GGDDH 1701 62.7m @ 6.79% GC from 29.3m (cut off 3.4% GC incl 7.0m @10.07 % graphitic carbon (cut off 9.4% GC)
- Hole GGDDH 1702 53.9m @ 6.79% GC from 69.1m (cut off 3.1% GC) incl 14.0m @ 8.79% graphitic carbon (cut off 6.1% GC)

As also announced to the ASX (*Jumbo and Large Flake Graphite identified at Golden Gate*, 12 April 2018), petrological examination of drill core samples from both drill holes identified the presence of significant graphite flake sizes of 0.05 to 0.50mm and some >0.5mm (fine, large, jumbo and some super jumbo flake size), with an average of around 0.25mm.

As composite sample (composite 1) of the graphite mineralisation from hole GGDDH 1701, had been consumed in previous test work, a new composite sample (composite 2) was prepared from hole GGDDH 1702 for the recent test work. This sample was taken from the top 18m of the graphite intersection which would perhaps approximate the first three benches of an open-cut mining operation.

AERIAL ELECTROMAGNETIC SURVEY (HEM) OVER NORTH QUEENSLAND CROYDON TENEMENTS

Summary

- HEM survey over all 5 EPM's in QLD
- Targeting Gold, Graphite & Polymetallics
- Results due in August 2022

The Company announced that it signed an agreement to undertake a helicopter borne Electro-Magnetic Survey (HEM), combined with aeromagnetic surveying, over all 5 of its Queensland based tenements at Croydon (*Aerial Electromagnetic Survey (HEM)* to be undertaken over North Queensland Croydon Tenements, 18 May 2022). The contractor engaged for the survey is New Generation Geophysics (NRG) Xcite utilising their Airborne Electromagnetic (AEM) system. The survey was originally scheduled for commencement early to mid-June this year. The contractor advised the Company that due to unforeseen factors that the survey start would be delayed until late July this year. It was completed in July 2022. Results are anticipated by late August this year allowing follow-up to begin soon after.

The Company holds five Exploration Permits Mining (EPM) in the Croydon region of North Queensland for a combined area of 227.2 km2. The EPMs cover 5 priority aeromagnetic anomalies (A1, A2, A3, A5 and A6) interpreted from Government aerial surveys and 3 residual gravity anomalies (G1, G2 and G3) identified from a combination of Government regional ground surveys and detailed ground surveying by the Company (*Figure 1,6*).

Currently, there is strong renewed interest in the Croydon area, particularly for gold, as evidenced by the many small to medium sized exploration companies who have taken up, or applied for, tenements covering most of the Croydon Goldfield and some of its surroundings. Recorded gold production from the Croydon Goldfield has been almost one million ounces. This is considered to offer considerable encouragement as modern day examination of similar worldwide occurrences of this size has often resulted in the discovery of previously unrecognised significant world class +one million ounce hard rock gold deposits.

HEM SURVEYING

HEM surveying is considered to be the optimum technical choice for evaluating the potential of the Croydon tenements as the technique has achieved outstanding success both in Australia and world-wide. The survey will target graphite mineralisation, gold bearing quartz reef mineralisation and polymetallic mineralisation, and is capable of penetrating up to several hundred metres below ground surface. Survey flight lines will be orientated E-W with a N-S line spacing of 400m with 200m infill line spacing where better anomaly definition is required. Excluding 200m infill lines, the survey overall will involve a total of 602 line kilometres of data acquisition.

Detection of gold bearing quartz reefs by the EM technique is dependent on there being a reasonable presence of sulphides associated with the gold mineralisation. However, detection of auriferous quartz reefs, even if they are low in sulphide content, will be enhanced by the fact that the Croydon Goldfield Au occurrences are usually closely associated with graphite mineralisation which provides an excellent EM response. Polymetallic mineralisation, where identified to date at Anomaly A2, is accompanied by pyrrhotite which also provides an excellent EM response.

To the Company's knowledge, detailed aerial EM surveying has not previously been conducted over the Company's EPM's or surrounding regions. However, some ground EM surveying was undertaken in the 1930's to late 1980's and this identified numerous strong EM anomalies within EPM 8795 and along the western margin of EPM 18616 (*Figure 4*).

It is anticipated that the HEM survey may identify extensions to some of the Company's known gold and graphite prospects and it is hoped that new prospects will also be identified.



Figure 1: EPMs 8795, 18616, 13775, 16002, Wallabadah Extended EPM 26749 and Aeromagnetic Anomalies A1, A2, A3, A5 and A6.

1. HEM SURVEY OF EPMs 8795 AND 18616

Survey flight lines in EPMs 8795 and 18616 will be orientated E-W with a N-S line spacing of 400m. Infill lines at 200m spacing will be undertaken where better anomaly definition is required (*Figure 2*). Excluding any 200m spaced infill lines, the 400m spaced lines will involve a total of 177 line kilometres of data acquisition within the two tenements.



Figure 2: 400m spaced E-W flight lines, EPMs 8795 & 18616

GOLD TARGETS

There are around 60 old gold workings shown on *Figure 3*, within the Company's EPMs 8795 and 18616, but there are many more that exist that are not included. The gold deposits are contained within two main trends, one trending NW-SE along the eastern margin of EPM 18616 with the other trending through EPM 8795 and the western margin of EPM18616. The latter trend has been the more productive, accounting for more than 50% of the gold produced to date from the Croydon Goldfield.

Of particular interest is the identification of possible extensions of the Golden Gate quartz reef system (western side trend). The old-time miners mainly worked the gold occurrences that were evident from quartz scree at ground surface and did very little sub-surface exploration. As many of the gold occurrences in the Croydon Goldfield did not crop out, they were often only discovered by persistent "blind" sinking of shafts.

It is considered likely that further review of the historical exploration and drilling data, combined with the EM results from the upcoming HEM survey from other areas within EPMs 8795 and 18616, will identify more small to medium scale gold prospects that warrant drilling and evaluation in addition to the Sunset North Prospect identified to date within EPM 8795. The Company is fortunate in that it has access to old archived reports and maps covering previous company exploration and Au mining activities in the Croydon area.



Figure 3: Location of some 60 old gold workings within EPMs 8795 and 18616. Many more exist but are not shown here.

GRAPHITE TARGETS

Graphite is an excellent conductor and generates strong EM anomalies. Significant EM anomalies within the area now covered by EPMs 8795 & 18616, have been identified in a NW-SE trending zone by previous old EM ground based surveys conducted in the 1930's to late 1980's (Figure 4). This zone has a strike extent of at least 12km, only around 2km of which is partly located within the restricted activities area of the Golden Gate Mining and Town Complex Heritage Area (*Figure 4*).

Previous exploration for graphite was undertaken by Central Coast Exploration NL and Pancontinental at Golden Gate within EPM 18616 which resulted in the discovery of extensive graphite mineralisation. Drill intercepts indicate the mineralisation has a north-westerly strike and a shallow easterly dip. Approximately two thirds of the graphite meneralisation at Golden Gate is now located within the Heritage and Buffer Zone which restricts exploration activities that would impact on the protected area. Specific permission is required to undertake exploration or mining activities within the Zones and comply with the conditions set.

The source of many of the previous EM anomalies is not known but it is expected that they will encompass a mixture of sources.



Figure 4: Location of previous (1930's - late 1980's) EM anomalies, EPMs 8795 and 18616

Petrological examination and metallurgical test work undertaken on the graphite mineralisation obtained from two diamond drill holes drilled at Golden Gate outside of the Heritage area has provided encouragement. In particular, the graphite has been identified as being present in flake form, ranging in size from 0.05 to 0.50mm (< 0.18mm is fine graphite, 0.18 to 0.30mm is large flake size and 0.30 to 0.50mm is jumbo flake size), with an average size of around 0.25mm and with strong evidence for it being of hydrothermal origin^{1,2}. When a flotation concentrate was subjected to a two-stage caustic bake, an impressive graphite product at a purity of 98.9% was obtained, indicating that the caustic bake stage was effective in removing most, if not all, of the gangue contaminants from the sample^{1,2}. For both the petrological examination and the metallurgical testwork previous announcements, the Company is not aware of any new information that materially affects the information provided at that time.

2. HEM SURVEY OF EPMs 13775 AND 26749

Survey flight lines will be orientated E-W with a N-S line spacing of 400m. Infill lines at a spacing of 200m spacing will be undertake where better anomaly definition is required. The 400m spaced E-W flight survey lines for EPMs 13775 and 26749 are shown on *Figure 5*. Excluding any infill lines, the 400m spaced lines will involve a total of 346 line kilometres of data acquisition.

¹ Jumbo and Large Flake Graphite identified at Golden Gate Project, Qld, ASX Announcement dated 12 April 2018

² High Graphite Recovery and Purity Obtained from Metallurgical Test Work – Golden Gate Graphite Project, ASX Announcement dated 24 July 2019

The targets in these 2 EPMs are polymetallics which would be expected to generate strong EM anomalism due to their expected high sulphide content, especially pyrrhotite. Widespread sulphide mineralisation was previously discovered in drilling by the Company at Anomaly A2 in EPM 13775 (refer to ASX Announcement entitled "*Polymetallic-tin massive sulphide drill intercepts show potential for discovery of significant mineral deposits at Croydon, Qld*", 28 February 2012). It is hoped that the upcoming early to mid-June HEM survey will define extensions of the known mineralisation at Anomaly A2 and generate new priority drill targets. It is also hoped that priority targets will also be identified in the Anomaly A1 area. In addition, if as interpreted, the prominent NW-SE and WNW-ESE trending faults within both tenements are hosting polymetallic mineralisation of new priority targets will be identified. It is interesting to note that an EPM has recently been granted that adjoins the SE end of EPM 26749 and which appears to be targeting the Wallabadah Fault further along strike to the ESE (*Figure 6*).



Figure 5: 400m spaced E-W flight lines, Aeromagnetic Anomalies A1, A2 and Residual Gravity Anomalies G1, G2 and G3, EPMs 13775 & 26749



Figure 6: Wallabadah NW-SE and WNW-ESE faults, Anomalies A1 and A2 and Residual Gravity Anomalies G1, G2 and G3 overlain on an aeromagnetic scene, EPMs 13775 and 26749.

3. HEM SURVEY OF EPM 16002

There are three aeromagnetic anomalies, A5, A6 and A3 located within EPM 16002 (*Figure 1*). All three of these will be included in the upcoming HEM survey.

Survey flight lines will be orientated E-W with a N-S line spacing of 400m. Infill lines at a spacing of 200m spacing will be undertake where better anomaly definition is required. The 400m spaced E-W flight survey lines for the three separate blocks of EPM 16002 are shown on *Figures 7, 8 and 9*. Excluding any 200m infill lines, the 400m spaced lines for the three anomalies will cover a total of 79 line kilometres of data acquisition.

Anomaly A5

Aeromagnetic Anomaly A5, was ranked by geophysical consultant, Roger Deakin, as the most prospective aeromagnetic anomaly after Anomaly A2 and is located about 17km NW of Anomaly A2 (*Figure 1*). This aeromagnetic anomaly is a small discrete, almost circular low, approximately 30 nT in amplitude, 800m in diameter and located in the central western side of the encompassing EPM block (*Figures 1, 7*). It occurs immediately SW of a larger anomaly complex that is elongated NW-SE, is about 20km in length and about 10km in width. It was initially investigated by Spatiotemporal Geochemical Hydrocarbon (SGH) soil sampling. This

indicated co-incident polymetallic-silver-copper anomalism which was partly overlapped by gold anomalism all of which directly overlies the central part of the main (western) aeromagnetic low which is a reversed magnetic high feature (refer to ASX Announcement entitled "Gold and Silver-Copper-Polymetallic Anomalies Identified from SGH Soil Sampling at the A5 Anomaly Prospect, North Qld", 12 June 2018). This has provided encouragement as the intersected A2 polymetallic mineralisation is also associated with a magnetic low which is a reversed magnetic high.

Figure 7 shows the 4 sub-block tenement area of EPM 16002 that covers Anomaly A5 and the 400m spaced E-W flight survey lines. Excluding any 200m spaced infill lines, this will involve a total of 36 line kilometres of data acquisition.



Figure 7: 400m spaced E-W flight lines, Aeromagnetic Anomaly A5, EPM 16002

Anomaly A6

Aeromagnetic Anomaly A6, was ranked as the most prospective aeromagnetic anomaly after Anomaly A2 and Anomaly A5 and is located about 18km NE of Anomaly A2 (*Figure 1*). It consists of a N-S elongated low and a sub-circular, but spatially complex, high (*Figure 8*). The anomalous high is immediately east of the low and the overall anomaly complex has affinities to Anomaly 2.

Figure 8 shows the 1 sub-block tenement area of EPM 16002 that covers Anomaly A6 and the 400m spaced E-W flight survey lines. Excluding any 200m spaced infill lines, this will involve a total of 11 line kilometres of data acquisition.



Figure 8: Anomaly A6 with 400m flight lines shown, EPM 16002 (*the irregular shaped outlines are asociated with magnetic data modelling*)

Anomaly A3

This aeromagnetic anomaly is a small discrete, almost circular low, of approximately 20nT in amplitude and around 1500m in diameter and is located 20 km west of Anomaly A2 (*Figure 1*). It is possibly part of, or at least associated with, relatively subtle, WNW and NW trending positive linear anomalies that are more apparent further to the SE. It appears from the data that the anomaly is caused by a body with reversed remanent magnetisation. The depths below ground surface to the main possible sources range from 170 to 245m.

Figure 9 shows the 4 sub-block tenement area of EPM 16002 that covers Anomaly A3 and the 400m spaced E-W flight survey lines. Excluding any 200m spaced infill lines, this will involve a total of 32 line kilometres of data acquisition.



Figure 9: Aeromagnetic Anomaly A3 with 400m spaced E-W Survey lines shown in red, EPM 16002 (*the rectangular shapes are associated with magnetic data modelling*).

STATUTORY COMPLIANCE AND REPORTING

For the status on all tenements, please refer to the tenement schedule on the following page.

POST QUARTER EVENTS

Summary

- HEM survey over all 5 EPM's in North QLD completed
- Targeting Gold, Graphite & Polymetallics

As mentioned above, the helicopter borne Electro-Magnetic Survey (HEM), combined with aeromagnetic surveying, over all 5 of the Company's Queensland based tenements at Croydon commenced on 22 July and has now been completed. Results are anticipated by late August allowing follow-up to begin soon after.

FINANCE AND ACTIVITIES

During the quarter, the Company spent \$111,000 on exploration and development activities.

There were no production activities or costs in the quarter, with the mine on care and maintenance from COVID-19 shutdown.

As outlined in the attached Appendix 5B (section 6) during the quarter approximately \$33,000 payments was made to related parties and their associates for director salaries and superannuation.

This Quarterly Activities Report has been authorised for release by the Board of Crater Gold Mining Ltd.

For further information contact: Russ Parker Managing Director 08 6188 8181 Email: info@cratergold.com.au

COMPETENT PERSON STATEMENT

The information contained in this report relating to exploration activities at Croydon is based on and fairly represents information and supporting documentation prepared by Mr Ken Chapple or by appropriately qualified company and consultant personnel and reviewed by Mr 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 this 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.

Particulars	Project Name	Registered Holder	% Owned	Status	Expiry	Area (Km²)
EPM 8795	Croydon	CGN	100	Granted	6/09/2022	9.6
EPM 13775	Wallabadah	CGN	100	Granted	5/03/2023	16
EPM 16002	Foote Creek	CGN	100	Granted	30/01/2023	28.8
EPM 18616	Black Mountain	CGN	100	Granted	18/06/2023	57.6
EPM 26749	Wallabadah Extended	CGN	100	Granted	11/04/2024	115.2
EL 1115	Crater Mountain	Anomaly Ltd ¹	100	Renewal lodged	25/09/2018	41
ELA 2643	Crater Mountain	Anomaly Ltd ¹	100	Application lodged	Oct 2019	68
ELA 2644	Crater Mountain	Anomaly Ltd ¹	100	Application lodged	Oct 2019	78
ML 510	Crater Mountain	Anomaly Ltd ¹	100	Renewal lodged	4/11/2019	1.58

Schedule of Crater Gold Mining Limited tenements:

¹ Anomaly Limited is CGN's 100% owned PNG subsidiary

There were no tenements acquired or disposed of during the quarter.

The Company has no Farm-in or Farm-out arrangements.