

Crater Gold Mining Limited ABN 75 067 519 779

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# **QUARTERLY ACTIVITIES REPORT**

# For the period ended 30th September 2017

About Crater Gold Mining Limited

(ASX CODE: CGN)

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

# **Key Points**

# **CRATER MOUNTAIN GOLD PROJECT, PNG (100%)**

- Due diligence review of Nevera Gold Mine led by Mr Robert Usher, mining engineer and former Executive General Manager of PanAust Asia
- Corporate Review included high-level review of Nevera Prospect geological data by experienced career geologist, Mr Dorian L. (Dusty) Nicol

#### **CORPORATE**

Rights Issue terminated

## Crater Gold Mining Limited

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Russ Parker Managing Director

#### SUBSEQUENT TO END OF QUARTER

- Drill rig purchased for Crater Mountain project
- Independent geologist report on Crater Mountain
- Confirmatory Graphite drilling at Golden Gate, Croydon
- Company Secretary appointment

### **DEVELOPMENTS DURING THE QUARTER**

#### Crater Mountain Gold Project, PNG (100% CGN):

#### **Nevera Gold Mine**

During the quarter, the Company resumed technical work on the development of the Nevera Gold Mine at Crater Mountain. Technical consultants were retained to confirm mine plans.

Mining Associates Limited ("MA") was retained to assist CGN confirm various mine planning parameters and develop a revised mine plan. In particular, the Company worked with MA to identify stoping blocks with gold grades in excess of 10g/t, both above the 1960 level and between the 1930 and 1960 levels. MA assisted with confirmation of the Company's recommended mining method and design of horizontal and vertical development between 1930 and 1960 levels, to most efficiently extract the targeted gold-bearing ore.

Minmet Services Pty Ltd ("Minmet") was also retained to assist with metallurgy for re-start of the Nevera Gold Mine processing operation. Minmet's scope of work included metallurgical test work and analysis to confirm operating plans, direct participation in work towards the re-start of operations and identification of opportunities for optimisation of the plant.

The team was led by Mr Robert Usher. Mr Usher is a mining engineer with more than 25-years' experience. He was Executive General Manager of PanAust Asia and has significant gold production experience including in PNG with Placer Dome at its Porgera operation from 1993 to 1999. Mr Usher is acting as a consultant to the Company to provide senior guidance with respect to development activities at Nevera Gold Mine.

Mr Dorian L. (Dusty) Nicol undertook a high-level review of the Nevera Prospect exploration data during the Quarter. Mr Nicol is a career geologist with over 40-years' experience in discovery and resource development. He has worked extensively in Papua New Guinea for Esso Minerals and Rennison Gold Fields, including on Crater Mountain and Kainantu gold projects. Mr Nicol is acting as a consultant to the Company and will to provide senior guidance for a re-invigorated physical exploration program.

#### Corporate:

### **Rights Issue terminated**

On 24<sup>th</sup> July 2017, the Company announced an 11:2 renounceable rights issue (Rights issue) to raise approximately \$15million as part of a broader corporate transformation that would see the Company recapitalised, cleared of debt and funded for an active programme to develop its operations in PNG. The transformation also included a significant re-structure of the Company's management and a proposed renaming to Paradise Gold Mining Ltd.

The Rights Issue, which was partially and conditionally underwritten by Patersons Securities Limited (Patersons) launched on 26<sup>th</sup> July 2017 and was twice extended. At the close of the issue there had been insufficient take-up of rights by existing shareholders to trigger Patersons' underwriting obligations and, as a result, the Rights Issue was terminated. All application funds received were refunded to applicants.

Subsequent to the terminated rights issue the Company announced that a fresh rights Issue (the 'Fresh Rights Issue') would be launched. Since that announcement it has been determined that it is not possible to launch the Fresh Rights issue in the time frame expected given the structure that was proposed.

The Company at this time is reviewing a range of funding alternatives to determine which best meets the requirements of the business. It is expected an announcement will be made on this shortly. In the

interim, the Company continues to have the ongoing support of its major shareholder and Chairman, Mr Sam Chan, via his company Freefire.

#### Interim Loan

In order to meet the Company's creditor obligations whilst a longer term financing solution is put in place, Freefire agreed to advance an unsecured, arms-length-terms loan to the Company in the amount of \$A2.0 million (the 'Freefire Interim Loan'). To date two separate loan agreements totalling \$1.6 million have been executed. One was fully drawn at quarter end with the second undrawn. A further loan of \$A400K is expected to be executed of the quarter, the total of all 3 agreements being the \$A2.0 million.

#### Sale of Croydon Projects to Freefire abandoned

On the 24<sup>th</sup> July 2017 the Company as part of its transformation stated its intention to proceed with the sale of its Croydon projects to Freefire. The Company and Freefire subsequently agreed to abandon the sale of the Croydon Projects to Freefire.

### Convertible Notes (ASX: CGNG) Expiry

During the quarter the Company's 138,190 listed convertible notes trading under the ASX code CGNG expired and were fully redeemed to note holders.

#### **License Updates:**

On the 3<sup>rd</sup> July 2017 the Company was advised that the renewal of EL1972 had been denied by the Minister of Mining of PNG effective 29<sup>th</sup> of June 2017. The Company subsequently decided to surrender license EL2180, which was effected by the Government of PNG on 15<sup>th</sup> of August 2017.

On 25<sup>th</sup> September 2017 the Company was notified by the Queensland Department of Natural Resources and Mines the EPM13775 had been renewed until 6<sup>th</sup> March 2020.

#### Subsequent to end of Quarter:

# Purchase of first drill rig for Crater Mountain Gold project

Subsequent to the end of the quarter the Company announced that, in line with its strategy to restart exploration at its flagship Crater Mountain Gold Project, it entered into an agreement to acquire a drill rig to facilitate recommencement of drilling in the near term.

The company purchased a 2002 Atlas Copco Diamec 252 drill rig ("**Diamec 252 Drill Rig**") together with additional ancillary equipment, including: (a) a 415 volt 45 kilowatt electric over hydraulic power pack; (b) a 1,000 volt 45 kilowatt electric over hydraulic power pack; (c) an air over 22 kilowatt hydraulic power pack; (d) Bob Cat mounting accessories; (e) and feed frames and positioners, skid mounted and (f) hydraulic motors and pumps. Purchase consideration will be made up of \$110,000 in cash and \$50,000 to be paid via the issue of 3,846,154 fully paid ordinary shares in CGN at a deemed issue price of \$0.013 per share.

The Diamec 252 Drill Rig and additional equipment will be made available to the Company at its Crater Mountain Gold Project in Papua New Guinea. Further spare parts and other accessories are available to the Company from the seller's premises in Queensland. The purchase was completed on October 6<sup>th</sup> 2017.

The Diamec 252 Drill Rig is a very compact drill rig. It's estimated to be able to drill diamond core holes of up to approximately 300 metres in length. Due to its compact size it will fit in the two adits the company has developed at the Nevera Gold Mine and will initially be used to drill from within these adits laterally and at depth extensions of the High Grade Zone ("**HGZ**") mineralisation, including in the approximately 300 metres between the HGZ and Mixing Zone mineralisation areas that has not yet been drill-tested.

#### **Independent expert report - Crater Mountain**

Independent expert concludes that Crater Mountain has significant exploration potential related to several target concepts and agrees short term exploration drilling targets:

- High grade gold ore shoots in HGZ (High Grade Zone) near term drilling plan agreed
- Additional gold mineralisation targets proximate to HGZ potentially larger tonnage and more continuous high grade gold mineralisation
- Potential bulk-mineable lower grade mineralisation within HGZ
- Porphyry-style gold-copper mineralisation

Exploration consultant Dorian L. (Dusty) Nicol (Fellow AusIMM, Fellow SEG, RG, CPG) completed a five day site visit to Crater Mountain in September 2017. Mr. Nicol has extensive PNG experience, having worked there in the early 1980's including at Crater Mountain and other projects. He also has extensive experience on similar gold-copper deposits throughout the world.

Mr. Nicol noted that "Crater Mountain is geologically a very fertile area with the potential to host one or more large gold orebodies. As a Geologist these types of projects really get you excited". His conclusion was that Crater Mountain has significant exploration potential related to several target concepts: High grade ore shoots in HGZ (High Grade Zone), additional gold mineralisation proximate to the HGZ but potentially larger tonnage and more continuous high grade gold mineralisation, potential bulk-mineable lower grade mineralisation within HGZ or elsewhere on the license ("Mixing Zone" type mineralisation) and Porphyry-style gold-copper mineralisation.

His recommendations fall into two basic categories: mine and near-mine (or short-term) exploration and district-scale exploration. The former is key in order to provide further ore for the expansion of the HGZ underground mining operation. For the latter, he outlined recommendations that can be started at relatively low cost with the objective of identifying drill targets for testing.

#### **High Grade Ore Shoots at HGZ**

Mr. Nicol recommended that this exploration should be the highest priority in the short-term, with the objective of identifying additional high grade ore for the existing underground mining operation at the HGZ. High grade gold ore occurs in the HGZ as steeply dipping ore shoots at the intersection of N-S to NE-SW and E-W to NNE-SSW structures Where these fractures intersect, steeply dipping shoots can form mineable pockets of high-grade (>20 g/t) gold ore.

Resource delineation to date has been based on diamond drilling and underground channel sampling. This has defined several shoots of ore which have been plotted on mine level plans and sections. There are clear targets for near-mine exploration which should be drilled from underground as soon as possible. While on site at Crater Mountain, Mr Nicol reviewed proposed underground drill plans with project staff. It was agreed that an optimal short-term program should comprise two fans of drill holes to target near-term high grade resource addition: one set to be drilled from 1960 level back toward the portal and one set to be drilled from 1930 level away from the portal. Future work will lead to generation of additional further drill targets in the context of the new information gathered, once it has been appropriately studied.

Mr. Nicol emphasized that the adage of "drill for structure, drift for grade" is appropriate at HGZ. Underground drilling should focus on defining gold-bearing structures. Drifting along these structures can be expected to expose structural intersections where bonanza grade ore shoots can occur.

#### Additional gold mineralisation similar in geologic setting to HGZ

The geologic setting at Crater Mountain and the extent of gold anomalies in rock samples and stream sediments, as well as the presence of other zones of artisanal gold mining, suggest that there are likely additional zones of gold mineralisation similar to HGZ. According to Mr. Nicol, these would likely occur in a similar geologic setting exhibiting advanced argillic alteration, conceptually near the top of a porphyry copper system. Mr Nicol recommended that a methodical effort should be made to evaluate these additional zones and possibly identify new ones. He noted that at several of the world-class PNG

gold deposits (including Porgera, Kainantu and Lihir), the eventual major deposit was not the first one drilled or worked on. His opinion is that Crater Mountain is a large, geologically fertile area with the potential to host one or more large gold orebodies.

Additional gold targets at Crater Mountain in and around the HGZ would be expected to be in similar in geologic setting to HGZ, but potentially with larger tonnage and more continuous high grade gold mineralisation. The improvements in tonnage and continuity with respect to the HGZ would be caused by larger mineralized structures and/or intersections of zones of greater fracture densities than occur at the HGZ. The amount of gold carried in relatively narrow structures at the HGZ is indicative of a potentially large and fertile gold mineralised system. It is not unreasonable to believe, therefore, that the mineralisation at the HGZ may be peripheral to one or more larger gold deposits.

One such prospect review by Mr. Nicol and the team during his visit is the SAW (South Artisanal Working), about 400 meters SW of the HGZ portal. Artisanal miners extracted gold there along EW trending structures from which the Company took rock grab samples containing >20g/t gold. When resources allow, a crew will be sent to open hand contour trenches for several 10's of meters on either side of the workings along at least three benches at ten-meter elevation intervals

### Potential bulk-mineable lower grade mineralisation within HGZ (and elsewhere)

Mr Nicol stated in his review that despite the current focus on high grade shoots at HGZ, the possibility of a large tonnage, bulk-mineable, lower-grade gold deposit should not be discounted. He recommended that all altered / mineralised rocks observed, whether on surface or underground, should be channel-sampled and results should be interpreted with an eye for the possibility of a larger, albeit lower-grade but bulk-mineable, target. Something analogous to the Mixing Zone project (24MT @ 1g/t Au; 775,000 ounces as currently defined1) would be the target type, though the target would be somewhat larger and higher grade.

### Porphyry-style gold-copper mineralization

Mr Nicol noted all targets discussed above represent, geologically, deposits that could be expected to form at or near the tops of porphyry copper deposits. Therefore, the occurrence of a porphyry coppergold deposit (Ok Tedi or Panguna type) underneath currently recognised mineralisation remains an intriguing possibility. This target concept is supported by the presence of porphyry-style alteration in drill core, for example the propylitic and phyllic alteration best developed in Drill Hole NEV020.

The porphyry target should be pursued using the same methodology of data compilation, drill core review, and field follow up as for the gold targets discussed above. As the porphyry target concept is refined and leads to the identification of specific targets, precisely targeted deep holes (+/- 1,000m) can be drilled to test the concept.

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<sup>&</sup>lt;sup>1</sup> See ASX announcements dated 24 November 2011 – Crater Mountain – Initial Resource Estimate; 28 November 2011 – Crater Mountain Resource Announcement - Attachment; and 21 December 2011 - Initial Resource Estimate-Full Independent Expert's

Disclaimer: This above information was prepared and first disclosed under JORC Code 2004 and it has not been updated since to comply with the JORC Code 2012. The Company confirms the that it is not aware of any new information or data that would materially affect the resources and all material assumptions and technical parameters underpinning the Resource estimates continue to apply and have not materially changed in the meantime. Such resource estimates are subject to the relevant assumptions, qualifications and procedures described in the relevant ASX announcements.

Golden Gate Graphite Project, Croydon, QLD- confirmatory drilling, sampling/assaying and metallurgical testing

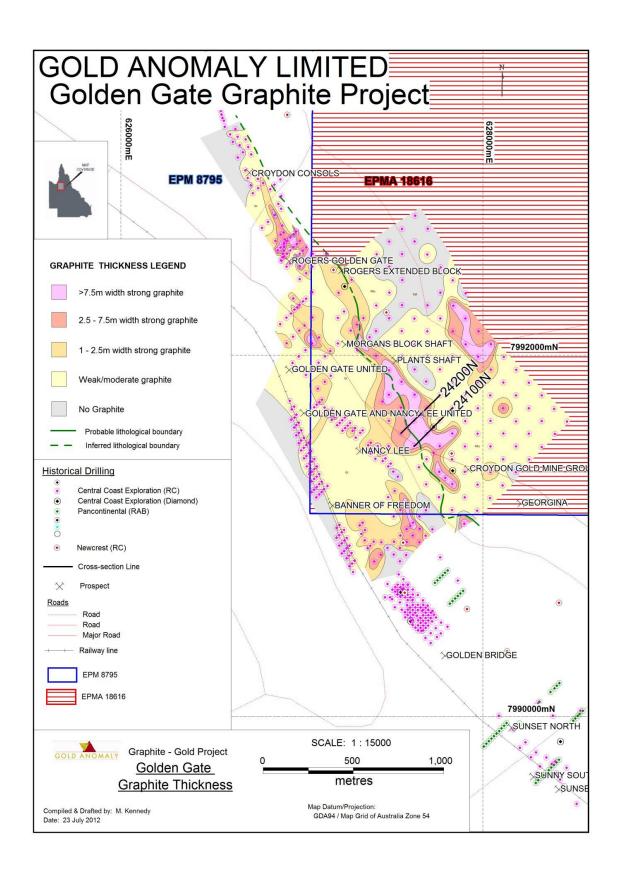
- The Company has fast tracked a program of confirmatory drilling, representative sampling/assaying and metallurgical testing of fresh graphite intersections, commencing late October-early November 2017, to increase the definition of the metallurgical characteristics and quality of this mineralisation.
- The program will involve the drilling of two geotechnical diamond core holes in zones of known graphite mineralisation for a total of 250 metres.

The Company announced a drilling evaluation program planned for commencement late October to Mid November 2017, to involve the drilling of two diamond holes for a total of 250 metres. Holes will be drilled to geotechnical standard using triple tube equipment, with an emphasis placed on achieving 100% core recovery, rather than on the number of metres drilled per shift. Thick intersections of fresh graphite mineralisation below the water table are expected in both holes. Samples of the graphite intersections will be assayed for gold and carbon and selected ones will be dispatched for metallurgical testwork to determine the characteristics of the graphite present.

#### **Previous Graphite evaluation work**

Metallurgical testwork by previous explorers at Golden Gate has not been conclusive. Testwork that was undertaken by the Company indicated that the graphite may be of low grade amorphous quality. However, mineralogical examination of the test samples provided contrary results, suggesting that the material may well have been flake graphite that had been pulverised by the action of the RC drilling bit used. Also, most of the samples tested were oxidised and not ideal for metallurgical testing.

In July 2004, the Company, then named Gold Aura Ltd, undertook preliminary assessment of graphite mineralisation from the Golden Gate gold mine area. Three vertical reverse circulation (RC) holes were also drilled by the Company between 2005 and 2007 and these confirmed that graphite zones were present at Golden Gate.



### **Corporate:**

#### **Company Secretary Resignation/Appointment**

The Company announced that Ms Andrea Betti joined Crater Gold Mining Ltd as Company Secretary, effective Monday 9<sup>th</sup> October 2017.

Ms Betti is an accounting and corporate governance professional with over 20 years experience in accounting, corporate governance, finance and corporate banking. She has a Bachelor of Commerce, Graduate Diploma in Corporate Governance, Graduate Diploma in Applied Finance and Investment and a Masters of Business Administration. Ms Betti has acted as Chief Financial Officer and Company Secretary for companies in the private and public sector, as well as senior executive roles in the banking and finance industry.

Mr Heath Roberts has resigned as Company Secretary, effective 9<sup>th</sup> October 2017, and the Company thanks him for his many years of service and dedication.

### **Change of Address:**

The Company advised that its Registered Office address and Principal Place of Business address changed to:

Level 3 216 St Georges Terrace PERTH WA 6000

Its postal address changed to:

P.O. Box 7054 CLOISTERS SQUARE PERTH WA 6850

### **COMPETENT PERSONS STATEMENT**

<u>Presentation of technical data and Competent Persons</u> review

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

- 21-12-11 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 date 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 Dorian L. (Dusty) Nicol or prepared by appropriately qualified external technical experts and reviewed by him. Mr Nicol is a Fellow of The Australasian Institute of Mining and Metallurgy 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 Nicol 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 Project near Croydon, Queensland, is based on information compiled 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 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.

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

Particulars	Project Name	Registered Holder	% Owned	Status	Expiry	Area (Km²)
EPM 8795	Croydon	CGN	100	Granted	6/09/2018	19.2
EPM 13775	Wallabadah	CGN	100	Granted	5/03/2020	32
EPM 16002	Foote Creek	CGN	100	Granted	30/01/2018	28.8
EPM 18616	Black Mountain	CGN	100	Granted	18/06/2018	96
EL 1115	Crater Mountain	Anomaly Ltd <sup>1</sup>	100	Renewal lodged	25/09/2016	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 1	100	Granted	4/11/2019	1.58

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

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