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Crater Gold Mining Limited ABN 75 067 519 779

# **QUARTERLY ACTIVITIES REPORT**

# For the period ended 30 June 2016

About Crater Gold Mining Limited

(ASX CODE: CGN)

Crater Gold Mining Limited ("CGN" or "the Company") is focussed on development of the HGZ project at the potentially world class Crater Mountain gold project in PNG, on the Fergusson Island gold project in PNG and on the A2 Polymetallic and Golden Gate graphite projects at Croydon in Queensland, Australia

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Russ Parker Managing Director

# **Key Points**

# Crater Mountain – HGZ Gold Mining Project, Papua New Guinea

Gold production from mining plant upgrade

#### Corporate

- EGM held on 21 June 2016
- Change of registered address

#### Subsequent to end of quarter

- Stoping commenced at HGZ project
- Richard Johnson appointed as Director
- Underwritten Rights Issue to raise \$2.12 million

#### **CRATER MOUNTAIN, PNG**

#### Key developments during the Quarter

#### High Grade Zone ("HGZ") gold mining project Crater Mountain, PNG

#### Gold production from mining plant upgrade

During the quarter the Company announced that it commenced gold production and also announced gold sales of \$ 351,000 from the recently installed and commissioned custom-made gold processing plant at the HGZ gold mining project. The gold sale was from processed material that was largely sourced from stockpiled material derived from initial development work at the HGZ project. Gold recovered from the stockpile was from a combination of country rock and initial development along structural veins to delineate mineralised zones of higher gold tenor.

Recent gold production has been predominantly from development material on 1980m level including material beyond the limits of the central high grade block to confirm the interpretation of the zone and to ensure that high grade gold would not be left behind when stoping began.

With the improved understanding of the geology and controls to mineralisation production is expected to ramp up rapidly over the next few months as new material is sourced from the higher grade material of the central high grade gold block of the HGZ mine (see ASX release 10 February 2016 for details of the block).

When fully commissioned, the upgraded mining plant will result in higher gold mining production. Full mining capacity is anticipated during the next few months as the mining plant upgrade is fully commissioned.

This marks an important milestone for the company as we transition from a developer to a gold producer. The newly installed processing plant enables us to work towards full production in the near term.

The objective of the Company is ongoing cash flow to establish the Company as a profitable gold producer. The HGZ project is expected to be a high margin operation because of our average low cost of production and the gold price in Australian dollar terms. We anticipate that the HGZ mine will generate strong cashflows, which will fund further expansion at the HGZ mine and enable further exploration activities at the Company's other assets. As our mining activities accelerate, revenue will rise.

While the current focus remains on the HGZ mine, there remains potential to increase the resource of 24Mt at 1.0 g/t Au for 790,000 ounces at the nearby Mixing Zone Project at Crater Mountain (refer ASX Release of 24 November 2011: "Crater Mt – 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 on the basis that the information has not materially changed since it was last reported. The Company is not aware of any new information or data that materially affects the information contained in that ASX release. All material assumptions and technical parameters underpinning the resource estimate continue to apply and have not materially changed).

Crater Mountain is located 50 km southwest of Goroka in the Eastern Highlands Province of PNG. Formerly a tier-1 BHP asset, there has been in excess of 14,500 metres of diamond drilling to date, the majority focussed on the Nevera prospect, which hosts the HGZ mine.

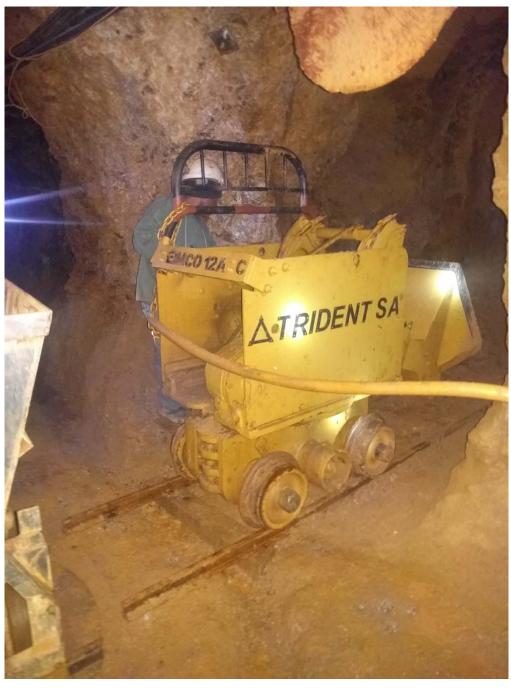


Figure 1 - Underground rocker shovel for mechanical loading



Figure 2 - Hammer mills, centrifugal concentrators and shaking tables

No drilling was undertaken during the quarter and the Company is not reporting on any sampling results related to its operations at the HGZ.

## Subsequent to end of quarter

• Stoping commenced within central high grade block at HGZ Gold mining project

Subsequent to the end of the quarter the Company announced that stoping commenced within the central high grade gold block at HGZ gold mining project.

The Company is expecting that the mining rate and the recovered gold grade will increase with stoping now underway.

#### **Corporate**

#### **EGM**

The Company held an EGM on the 21<sup>st</sup> of June 2016. All resolutions put before shareholders were passed.

#### **Change of Office Address**

During the quarter the **Company** changed its address:

#### New Registered Office

C/- BDO Level 11, 1 Margaret Street Sydney, NSW, 2000 Australia

New Principal Place of Business

New Postal Address

C/- Baxter IP Level 3a, 1 Bligh Street Sydney, NSW, 2000 PO Box R607 Royal Exchange NSW 1225

## Subsequent to end of quarter

Appointment of Mr Richard Johnson as Director

The Company announced the appointment of Mr Richard Johnson as a Director of the Company.

Mr Johnson, who acts as the Company's PNG General Manager and will continue in that role, is a mining engineer with extensive experience managing projects in many regions, including PNG. Between 2002 and 2005, Richard was responsible for turning around DRDGold's high grade underground Tolukuma Gold Mine in PNG's Central Province into a highly profitable operation. He has also held senior executive and Director positions in several other resources companies in the region, including Allied Gold and DRDGold.

Richard has been an integral part of the Crater team for several years now; it is a pleasure to welcome him to the Board. His extensive experience in-country will be of great value as Crater moves into the next stage of its operations

#### **Rights Issue**

On 27 July 2016 the Company announced an underwritten 1:8 rights issue at \$0.08 per share to raise \$2.12 million. The rights issue will be underwritten by Freefire Tchnology Ltd, a company associated with Chairman Mr Sam Chan. Further details regarding the rights issue will be provided to shareholders in accordance with the indicative timetable set out in the announcement.

#### **COMPETENT PERSON STATEMENTS**

The information contained in this report relating to exploration results and mineral resource estimate at Crater Mountain PNG is based on and fairly represents information and supporting documentation prepared by Mr Richard Johnson, PNG General Manager of Crater Gold Mining Limited. Mr Johnson 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 Johnson consents to the inclusion in this report of the 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	6/09/2016	19.2
EPM 9438	Mount Angus	CGN	100	Granted	14/07/2016	19.2
EPM 13775	Wallabadah	CGN	100	Granted	5/03/2017	32
EPM 16002	Foote Creek	CGN	100	Granted Renewal lodged	30/01/2013	28.8
EPM 18616	Black Mountain	CGN	94 <sup>1</sup>	Granted	18/06/2018	96
EL 1115	Crater Mountain	Anomaly Ltd <sup>2</sup>	100	Granted	25/09/16	41
EL 2203	Ubaigubi	Anomaly Ltd <sup>2</sup>	100	Granted	10/09/17	88
EL 2249	Crater Mountain	Anomaly Ltd <sup>2</sup>	90	Renewal lodged	11/11/15	10
EL 2318	South Crater	Anomaly Ltd <sup>2</sup>	100	Granted	10/09/17	20
EL 2334	Crater Mountain	Anomaly Ltd <sup>2</sup>	100	Granted	21/05/17	68
EL 2335	Crater Mountain	Anomaly Ltd <sup>2</sup>	100	Granted	22/05/17	78
EL 1972	Gameta	Anomaly Ltd <sup>2</sup>	100	Granted	19/12/16	37
EL 2180	Wapolu	CGN	100	Granted	27/06/17	67

<sup>&</sup>lt;sup>1</sup> 6% owned by Global Resources Corporation Limited

<sup>&</sup>lt;sup>2</sup> Anomaly Limited is CGN's 100% owned PNG subsidiary

#### **APPENDIX 1 TO QUARTERLY REVIEW OF OPERATIONS AS AT 30 JUNE 2016**

#### Background to the Company's projects

#### **Crater Mountain Project - PNG**

The Company's flagship Crater Mountain gold project is located in the Eastern Highlands of Papua New Guinea ("PNG") near the eastern end of the New Guinea Orogen geological province, which lies along the northern edge of the Australian continental plate and occupies the mountainous backbone of the island of New Guinea. The New Guinea Orogen hosts a number of world-class copper-gold deposits including the world's largest copper-gold mine at Grasberg in Indonesia's Papua Province, and Ok Tedi, Frieda River, Yandera and Wafi-Golpu in Papua New Guinea, as well as the Porgera and Hidden Valley gold deposits in Papua New Guinea. All of these deposits share a common geological mode of formation in large mineralised hydrothermal systems underlying variably eroded volcanic complexes from mid-Miocene to recent in age.

The Crater Mountain tenement block comprises andesitic volcanic rocks of the ancestral Pliocene Crater Mountain stratovolcano which grew to an immense size before undergoing caldron collapse on a ring fracture system 20 kilometres in diameter, perhaps 4 million years ago. This event was followed by a long period of volcanic quiescence and deep erosion which continued until about 1 million years ago when renewed andesite cones principally within and east of the northeast quadrant of the collapse structure. The volcanic rocks were intruded through and deposited on a rugged basement of Chim Formation Mesozoic marine shales, with intermittent reactivation of north-easterly-, northerly- and north-westerly-trending deep crustal fractures in the basement controlling the geometry of the sub-volcanic magmatic and hydrothermal activity and mineralisation.

Exploration by the Company at Crater Mountain is focused principally at the northern end of the large Nevera Prospect, one of four prospects identified within the Company's licences since exploration commenced in the region in the 1970s.

The results of mechanical benching and diamond drilling conducted by the Company around the end of a prominent ridge at the northern end of the Nevera Prospect indicate that the Prospect lies within a typical large and complex New Guinea Orogen mineralised hydrothermal system, with excellent potential to host a number of deposits within its bounds. Mineralisation is associated with sub-volcanic magmatic activity related to the locally-prominent Nevera Igneous Complex, and four different types of mineralisation have been identified:

- The relatively shallow Main Zone or Mixing Zone lying 150m to 300m below the northern end of the Prospect ridge, which comprises low-sulphidation epithermal carbonate-base metal sulphide-gold mixing zone mineralisation in excess of 600m long by 250m wide by 150m thick (with similarities to the Hidden Valley deposit in the nearby Morobe Goldfield).
- Note: A resource of 24Mt at 1.0 g/t Au using a 0.5 g/t Au cut-off for 790,000 ounces has been defined in the Main Zone; this includes 9.4Mt at 1.46 g/t using a 1.0 g/t Au cut-off for 440,000 ozs (ASX Release 24 November 2011: Crater Mt 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 on the basis that the information has not materially changed since it was last reported. The Company is not aware of any new information or data that materially affects the information contained in that ASX release. All material assumptions and technical parameters underpinning the resource estimate continue to apply and have not materially changed). (This inferred resource is open laterally and perhaps to depth, following down a possible steep plunge to the northeast)
- The High Grade Zone ("HGZ") high grade high-sulphidation epithermal quartz-pyrite-gold mineralisation, extending from surface to several hundred metres depth (possibly in excess of 500m); local artisanal miners produced an estimated 15,000 ounces from a small area of shallow workings (maximum 50m depth) in the base of a steep mineralised spur from 2005 to 2012

- A large porphyry copper-gold system identified by drilling at +800m depth below the northern end of the ridge ("Golpu" type from Wafi-Golpu in the Morobe Goldfield)
- A possible lead-zinc related quartz-carbonate-base metal sulphide-gold stockwork vein and breccia feeder zone (for the Mixing Zone mineralisation) at the margin of the deep intrusion (+600m) which is causing intense baking and fracturing of the sub-volcanic basement shales underlying the Mixing Zone (Porgera "Waruwari" type).

#### MINERALISATION AT THE NORTHERN END OF NEVERA PROSPECT

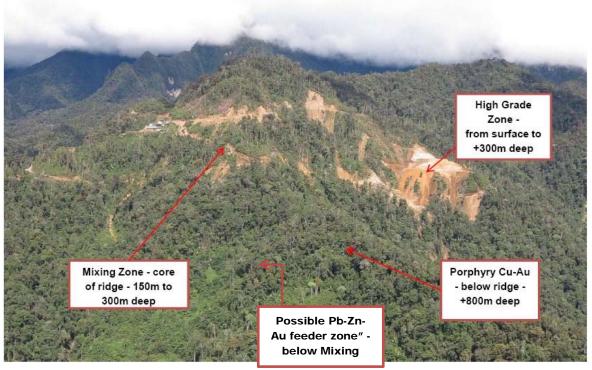


Figure 3 - Nevera Prospect

#### Fergusson Island Project - PNG

The Gameta gold deposit and the Wapolu gold deposit, located in close proximity to each other on the north-coast of Fergusson Island in Papua New Guinea, comprise the Company's Fergusson Island Project, upon which over \$15M has been spent since 1996.



Figure 4 – Location of Gameta and Wapolu deposits, Fergusson Island, PNG

The Fergusson Island Project comprises two drilled gold deposits, Gameta and Wapolu. The Company previously announced its first resource estimate reported in accordance with the JORC Code for the Gameta deposit, an Inferred Resource of 5.1 million tonnes at 1.8 g/t for 295,000 ounces of gold at a cut-off grade of 1.0 g/t gold (ASX release 8 October 2010: "Fergusson Island Gameta deposit – 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 on the basis that the information has not materially changed since it was last reported. The Company is not aware of any new information or data that materially affects the information contained in that ASX release. All material assumptions and technical parameters underpinning the resource estimate continue to apply and have not materially changed). Further drilling down-dip can be expected to increase the size of the resource.

The Gameta gold deposit lies close to the coastline in the north east of Fergusson Island in the D'Entrecasteaux Islands of Papua New Guinea's Milne Bay Province and is located about 30 kilometres east of the Wapolu gold deposit.

The D'Entrecasteaux Islands comprise a number of metamorphic core complexes which form prominent tectonic domes of probable Cretaceous age. The domes consist of a core of high-grade crystalline rocks surrounded by a layered outer zone, between 1 and 2 km thick, composed of amphibolite facies gneisses. This layered zone is separated from over-thrust sub-seafloor oceanic mantle by a decollement (Detachment Fault Zone); overlaying ultramafic rocks of the obducted block are largely serpentinised dunites, harzburgites, and pyroxenites. Thick colluvial deposits of landslide and slump debris mantle the margins of the domes and are prominent at Wapolu.

Mineralisation at Wapolu and Gameta is hosted in the Detachment Fault Zone and within the footwall dioritic gneiss and appears to be both fracture and dyke-related, and sulphide hosted. The overlying ultramafic plate, though strongly dyked, altered and fractured, carries only patchy and sporadic low-grade gold mineralisation.

The two properties have been explored for gold since the early 1980's during which time a total of 296 RC and air core holes (11,646m) and 97 diamond holes (6,401m) have been drilled at Wapolu (EL 2180) and 195 RC holes (10,179m) and 33 diamond holes (4,181m) have been drilled at Gameta (EL 1972). Much of the data from this drilling has not been subject to QA/QC and does not measure up to JORC reporting standards.

#### Croydon Gold and Graphite Project - Queensland Australia

A potentially large graphite deposit is located within EPM 8795 and EPMA 18616 at the Golden Gate Project at Croydon, North Queensland.

In July 2004, the Company, when named Gold Aura Ltd, undertook preliminary assessment of a large graphite deposit located at the Golden Gate gold mine. The graphite deposit was systematically drilled as part of a regional gold exploration program in the late 1980's by Central Coast Exploration (CCE). Three vertical reverse circulation holes were also drilled by the Company between 2005 and 2007 that confirmed that a thick graphite zone was present at Golden Gate.

The Golden Gate graphite project is located partially on Exploration Permit Mining EPM8795 and continues onto the contiguous EPMA18616. The graphite deposit has undergone electromagnetic geophysical surveys and systematic drilling during the late 1980's and limited drilling and testwork by CGN in 2004. Typical RC drill intercepts from CCE drilling in 1989 are presented in Table 1.

# SUMMARY OF RC DRILLING RESULTS AT GOLDEN GATE NOVEMBER 1989 (CCE Report #192/90)

Hole #	Co-ordinates		End of Hole	Graphite Intercept	Width (m)	Average %C @ 2% cut-off
<b>GGRC 2001</b>	24201N	9550E	50m	44 - 50	6	3.5
<b>GGRC 2002</b>	23998N	9584E	44m	-		-
<b>GGRC 2003</b>	24000N	9701E	91m	48 - 78	30	7.3
<b>GGRC 2004</b>	23859N	9642E	76m	32 - 74	42	6.6
<b>GGRC 2005</b>	24101N	9773E	97m	37 - 93	56	6.0
<b>GGRC 2006</b>	24200N	9799E	93m	60 - 89	29	4.5
<b>GGRC 2007</b>	24200N	9699E	60m	3 - 56	53	5.8
<b>GGRC 2008</b>	24300N	9649E	66m	-	-	
<b>GGRC 2009</b>	24399N	9699E	66m	-	~	-
<b>GGRC 2010</b>	24699N	9799E	30m	3 - 7	4	3.6
<b>GGRC 2011</b>	24901N	9700E	66m			
<b>GGRC 2012</b>	25000N	9949E	48m	2 - 40	38	4.8
<b>GGRC 2013</b>	24999N	10049E	66m	•	-	
<b>GGRC 2014</b>	25200N	10050E	80m	55 - 78	23	4.8/3.3
<b>GGRC 2015</b>	23799N	9324E	48m	5 - 24	19	3.8
<b>GGRC 2016</b>	25384N	9898E	48m	17 - 24	7	2.5
<b>GGRC 2017</b>	25599N	10099E	48m	7 - 28	21	3.8
<b>GGRC 2018</b>	24395N	10312E	66m	-	-	-
<b>GGRC 2019</b>	26600N	10400E	60m	(★)?	-	

Table 1 - Drill intercepts reported by Central Coast Exploration from drilling in 1989 at Golden

(NOTE: all drill holes reverse circulation and vertical orientation with chip sample intervals 2m and %C determined by method GRAV6 at Amdel Laboratories, Adelaide)

The deposit has a north-westerly strike and shallow easterly dip Hydrothermal or magmatic graphite deposits are an important source of graphite with examples being mined in Sri Lanka and Sweden that produce both flake and amorphous graphite.

Since the Golden Gate graphite deposit is reasonably well defined, the Company's exploration program will focus on collection of fresh drill core samples for modern metallurgical testwork. Past testwork done on RC chip samples and near surface grab samples with contradictory results.

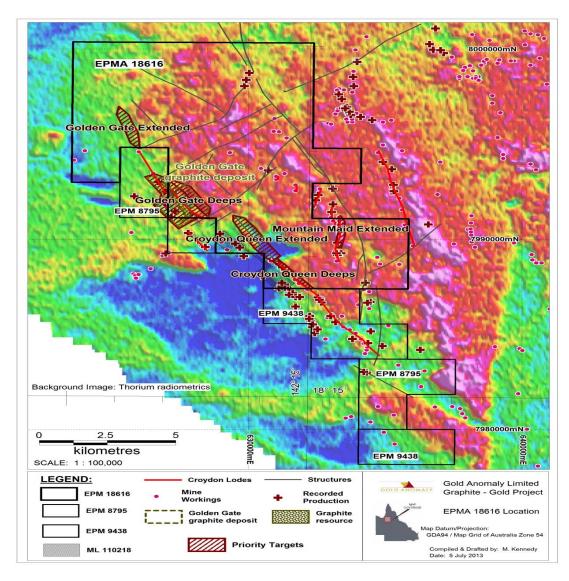


Figure 5 - Location Map of EPM18616 showing the Golden Gate graphite deposit as well as principal gold exploration targets

The acquisition of EPM18616 consolidated the length of the Golden Gate lode within tenements held by CGN. Five priority exploration targets along the trend of the Golden Gate lode have been identified. These areas were selected as having potential for gold mineralisation under shallow cover. Future exploration will involve ground geophysics (IP & EM surveys) across target trends followed by drilling.