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Crater Gold Mining Limited ABN 75 067 519 779

# **QUARTERLY ACTIVITIES REPORT**

#### For the period ended 30 September 2014

# About Crater Gold Mining Limited

(ASX CODE: CGN)

# KEY POINTS

#### Crater Mountain - Papua New Guinea

• Gold mining plant commissioned for HGZ project

Crater Gold Mining Limited ("CGN" or "the Company") is focussed on development 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

#### Crater Gold Mining Limited

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High grade gold drilling results continue at HGZ project

#### **Corporate**

Underwritten Non-Renounceable 1 Convertible Note for 1,000
 Shares Rights Issue

#### Subsequent to the end of the Quarter

#### Crater Mountain - Papua New Guinea

Environment Permit granted for HGZ project

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

#### Key developments during the Quarter

#### High Grade Zone ("HGZ") project

#### Gold Mining Plant Commissioned

A mining plant was acquired and is on site, installed and currently being commissioned. Rail and underground rail trucks are on site ready to be installed ahead of mining.

The plant is of such a scale that in the initial phase it will be used for bulk sampling individual parcels of mineralised material currently stored on surface from the rock extracted during development of the drive and cross cuts.

Metallurgical processing will be by simple gravity concentration via crushing, milling with a wet hammer mill and concentration using a centrifugal concentrator.

#### Drilling Programme at HGZ project

A drilling programme commenced in February 2014 at the High Grade Zone (HGZ).

The objective of the drilling program is to further delineate the gold mineralised zone to generate a measured gold resource prior to the commencement of gold production. The drilling program is designed to confirm immediate strike and dip continuity of narrow high grade structures encountered within a coherent zone in the underground exploration development (refer to the plan diagram in Figure 1 and the sections diagrams in Figures 2, 3, 4, 5 and 6 which show the drill hole positions relative to the underground development).

18 holes totalling 1473.5m have been fully reported with gold assay results. These holes have been drilled from a single drill platform on surface approximately 25m from the portal of the underground drive that has been developed through the known zone of mineralisation. Refer to Table 1 "Significant Drilling Intercepts".

The key outcome of the drilling results received to date is that they highlight the very strong correlation with the geology and grades encountered directly above in the underground development. Excellent results are all in the planned mining zone. Drilling confirms a broad mineralised zone hosting narrow high grade structures over a strike currently by 60m and down dip of approximately 90m which remains open. Detailed interpretation is being carried out for resource estimation and detailed production planning.

A further 7 diamond drill holes have been completed from a second drill pad approximately 25m north of the adit portal. These holes have been drilled in a south easterly direction to test possible East West structures mapped in the underground development. Results from these holes are awaited.

#### Drilling Results

The Company is pleased with continued excellent high grade gold assay results from its ongoing diamond drilling programme.

The results in Table 1 are from infill drill holes to reduce drill spacing to improve confidence in the interpretation of the narrow gold-bearing structures and for resource modelling.

Drill holes Nev42, Nev43 and Nev44 were completed, drilling to a depth of approximately 60m below the underground drive development on bearings from 85° through to 134°. The results in combination with historical results from drill hole Nev22 confirm that high grade mineralised structures continue down dip at least 90m and on strike by at least 60m.

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Diamond drill holes Nev45 through to Nev48 inclusive have been drilled on bearings of 96° and 126° respectively at dips which effectively close the drill spacing below the underground development to approximately 10 - 15m and to a depth of 50m below the underground development.

Drill holes Nev49 and Nev50 were down holes confirming depth continuity below the underground development.

The results from diamond drill holes Nev51 and Nev52 confirm the upward continuity of gold mineralisation above the underground development through to the ground surface in the vicinity of the artisanal workings on the 96° and 126° sections respectively.

The nature of mineralisation at the HGZ is that there is a clear set of mineralised structures trending approximately NS. However, evidence from artisanal mining and exposures in underground development show that there is a set of EW structures as well as shallow dipping link structures which influence the mineralisation and potential gold tenor.

The recent drilling campaign has effectively identified a number of mineralised NS structures but has not been well placed to confirm EW structures. Three drill holes in the current programme have intersected broad zones of low grade gold mineralisation. Nev34a reported 0.8g/t over 20.0m from 42.0m, Nev34b (twin of Nev34a) reported 0.8g/t over 30.0m from 28.0m and Nev38 reported 1.0g/t over 55.0m from 17.0m. From underground mapping and sampling it has generally been established that gold mineralisation is concentrated in very narrow oxidised structures rather than broad low grade zones.

Additional drilling will be carried out from a drill pad which will allow a sequence of holes to be drilled as close to NS as possible to test the importance of EW mineralised structures in the overall gold inventory of the HGZ.

### Significant Drilling Intercepts

	grade	From depth		
Interval (m)	(g/t)	(m)	Section Diagram	Reason for Interval Significance
Nev42	Figure 2		85 Deg Section	
1.0	13.3	49.5	Ū	Correlates with Nev22
0.5	14.0	65.5		Correlates with Nev22, Nev36 & Nev38
1.0	16.3	79.0		
Nev43	Figure 4		110 Deg Section	
3.5	9.4	59.5		Correlates with Nev35
incl 1.0	21.5	59.5		Discrete mineralised structure
and 0.5	15.4	62.5		Discrete mineralised structure
1.0	9.8	70.0		Correlates with Nev35
Nev44	Figure 6		134 Deg Section	
1.0	8.3	41.0		Correlates with Nev40
7.0	5.3	45.0		
Incl 1.0	18.7	49.0		
Nev45	Figure3		096 Deg Section	Infill Drill Section
1.0	8.7	25.0		
5.0	8.7	53.5		
incl 2.0	14.0	55.5		
Nev46	Figure 3		096 Deg Section	Infill Drill Section
1.0	11.5	19.5		
0.0	5.4	44.0		
3.0	16.5	67.0		
incl 0.5	40.7	67.0		High grade intercept of narrow vein
3.0	6.0	78.5		
incl 1.0	10.5	79.5		
Nev47	Figure 5		126 Deg Section	Infill Drill Section
1.5	46.8	37.5		Correlates with Nev35 on Sect 110 Deg
incl 1.0	64.2	38.0		& Nev40 on 134 Deg Bonanza grade intercept of narrow vein
		5010	12C Dec Cention	
Nev48 1.0	Figure 5 5.2	35.5	126 Deg Section	Infill Drill Section Correlates with Nev47
1.0 1.0	5.2 7.0	35.5 38.5		Correlates with Nev47 Correlates with Nev47
1.0	7.0 7.9	58.5 53.0		
		55.0	126 D 6	
Nev49	Figure 5	20.0	126 Deg Section	Infill Drill Section
1.0 0.5	9.8 7.9	30.0 47.0		
		47.0		
Nev50	Figure 3	20.0	96 Deg Section	Infill Drill Section
3.0	13.4	20.0		Correlates with Nev46
Incl 1.0	18.9	22.0		Correlates with Nev4C
4.5	9.2	39.5		Correlates with Nev46

Interval (m)	grade (g/t)	From depth (m)	Section Diagram	Reason for Interval Significance
Incl 3.0	12.5	40.0		
1.0	8.4	49.0		
Nev51	Figure 3		96 Deg Section	Infill Drill Section
0.5	56.3	35.2		Correlates with Main Drive Sampling
0.8	7.4	54.5		Correlates with East Cross Cut Sampling
1.0	7.2	72.5		Possible East West structure
Nev52	Figure 5		126 Deg Section	Infill Drill Section
0.5	11.8	13.0		
2.0	6.2	35.0		Correlates with East Cross Cut Sampling

Table 1 - Significant Drilling Intercepts

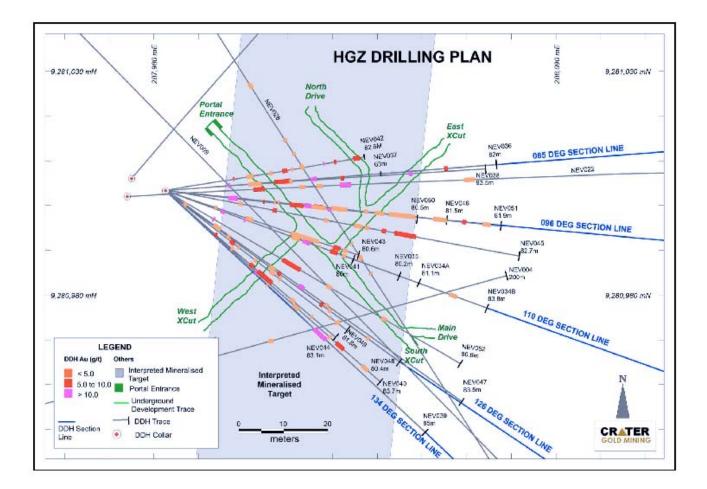


Figure 1 - Plan of Current Drill Hole Traces and Historic Drill Holes

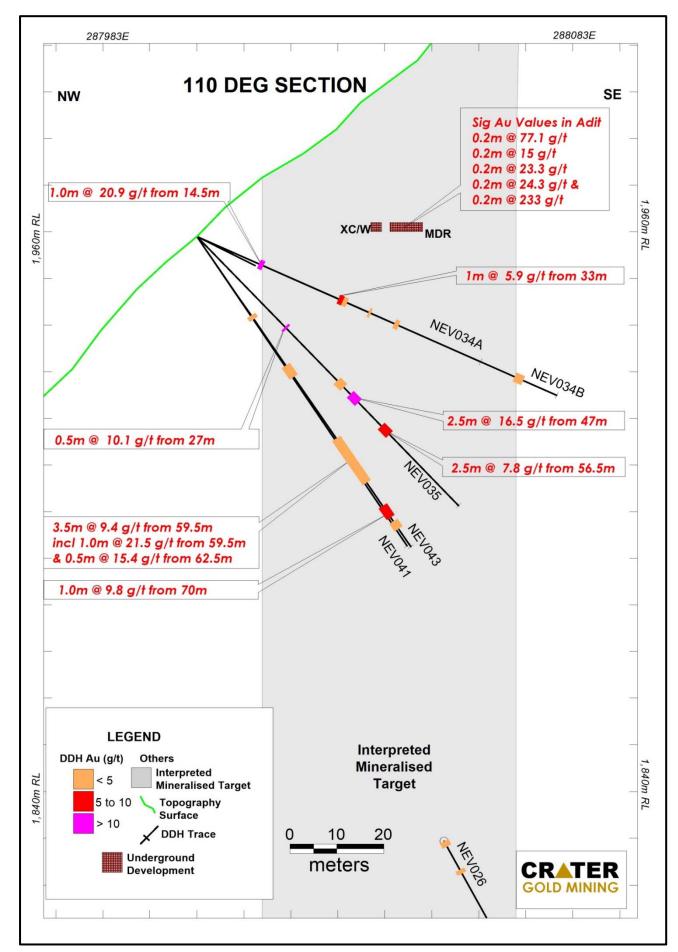


Figure 2- Cross Section of planned drilling on Bearing 110°

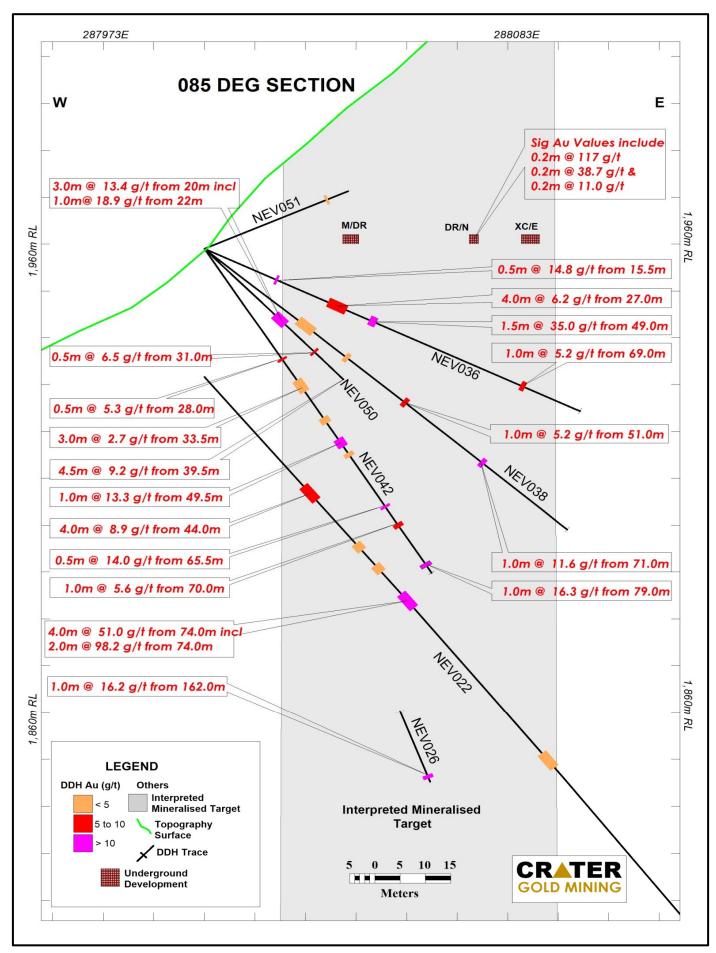


Figure 3 - Section of Drill Holes and Intercepts on 85° Bearing

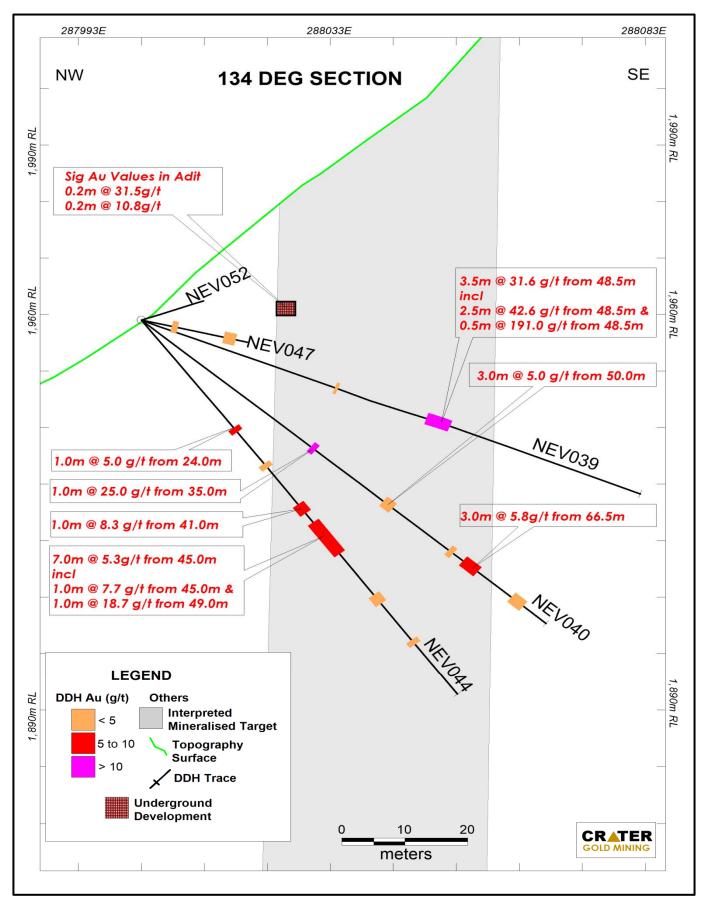


Figure 4 - Section of Drill Holes and Intercepts on 134° Bearing

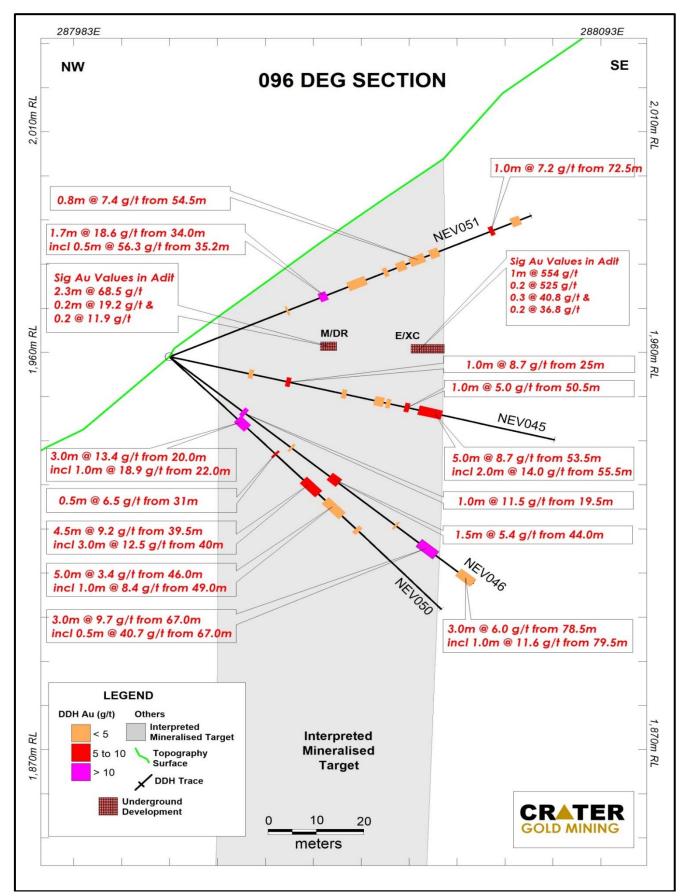


Figure 5 - Section of Drill Holes and Intercepts on 96° Bearing

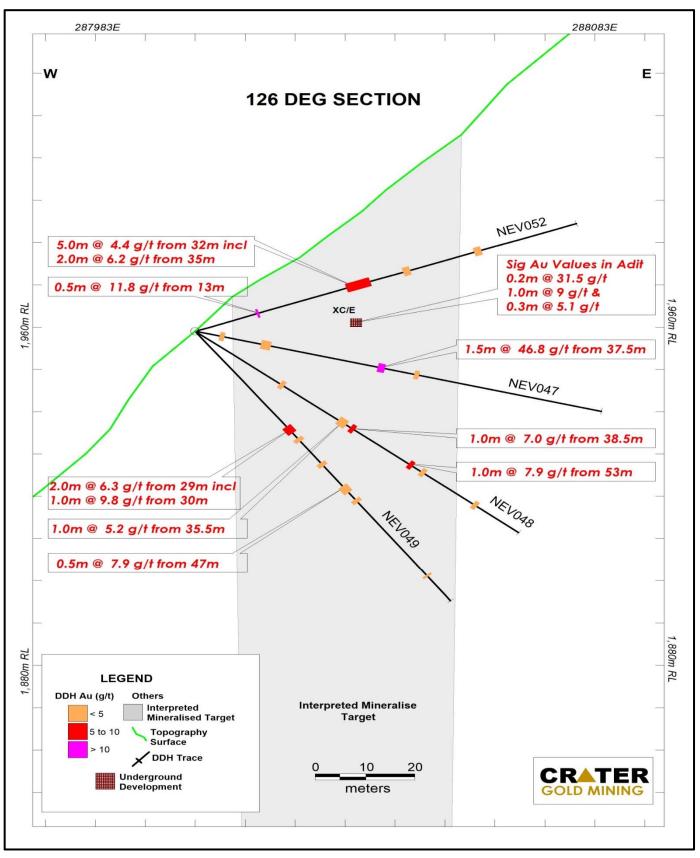


Figure 6 - Section of Drill Holes and Intercepts on 126° Bearing

#### Background

The Company has been exploring the HGZ since August 2013 through the development of an underground adit and cross cuts and an ongoing drilling program. This development passed through a wide zone of intense brecciation containing numerous narrow gold bearing mineralised structures correlating well with surface artisanal gold workings which historically produced an estimated 15,000 ozs of gold production using primitive mining methods by local artisanal miners.

The very high grades of coarse free gold mineralisation (ASX Release 19 November 2013 - "Bonanza gold grades intersected at High Grade Zone") confirmed by drilling results will support a small, highly selective narrow vein mining operation requiring simple mining infrastructure and recovery of gold by gravity separation without the need for complex processing technology, requiring modest capital with low operating costs. Mining will be carried out underground by hand held mining methods at a rate of approximately 1,000 tonnes per month. The Company believes that in the first year, production of 10,000 gold ounces is achievable.

Fast tracking gold production remains the Company's priority, as this will generate strong cashflow to assist ongoing development and exploration activities. The HGZ project is earmarked to commence gold production in the 4th quarter 2014.

While the current focus remains on the HGZ project, the Company also has the JORC compliant inferred resource of 24Mt @ 1.0g/t of Au for 795,000 ounces at the Mixing Zone. (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). Anticipated positive cash flow from mining the HGZ will be channelled into further testing of the Mixing Zone and into evaluating the porphyry copper-gold potential. See the Appendix for background information on the Crater Mountain Project.

#### Subsequent to end of Quarter

#### Environment Permit granted for HGZ project

The Environment Permit for the Company's High Grade Zone ("HGZ") project, was issued by the PNG Director of Environment to the Company's wholly-owned PNG subsidiary Anomaly Limited.

The grant of the Environment Permit marks a significant milestone towards the development of the HGZ project following its assessment by the PNG Department of Environment and Conservation.

#### CORPORATE

#### Key developments during the Quarter

#### Underwritten Non-Renounceable 1 Convertible Note for 1,000 Shares Rights Issue

The Company undertook a non-renounceable pro rata rights issue of one (1) convertible note for every one thousand (1,000) shares held at A\$25.00 per convertible note to raise up to \$3,454,750.

Under the rights issue the Company sought to raise up to \$3,454,750 from eligible shareholders. Application funds totalling \$2,564,775 were received and therefore the issue was undersubscribed by \$889,975. The rights issue was fully underwritten and the undersubscribed amount was taken up by the rights issue underwriters.

#### 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 Country 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.

The information contained in this report relating to exploration results and mineral resources at Fergusson Island, PNG is based on information compiled by Mr P Macnab, Non-Executive Director of Crater Gold Mining Limited. Mr Macnab is a Fellow 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 Macnab consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information contained in this report that relates to exploration results at Croydon, Queensland is based on and fairly represents information and supporting documentation prepared by Mr J V McCarthy, MAusIMM, consulting Geologist. Mr McCarthy is a Member 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 McCarthy consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

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 10302	Gilded Rose	CGN	100	Granted	31/12/2015	6.4
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 <sup>3</sup>	18/06/2018	96
EPM 25186	Croydon Gold	CGN	100	Application		60.8
EL 1115	Crater Mountain	Anomaly Ltd <sup>2</sup>	100	Granted	25/09/2014	41
EL 2249	Crater Mountain	Anomaly Ltd <sup>2</sup>	90	Granted <sup>4</sup>	11/11/2015	10
EL 1972	Fergusson Island	Anomaly Ltd <sup>2</sup>	100	Granted	20/12/2014	67
EL 2180	Fergusson Island	Anomaly Ltd <sup>2</sup>	100	Granted	27/06/2015	37

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

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

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

<sup>3</sup> Transfer of CGN's 94% share of this tenement occurred in January 2014

<sup>4</sup> EL2249 is a replacement EL for previous EL1384 and was granted to Anomaly Ltd on 11 November 2013

#### APPENDIX 1 TO QUARTERLY REVIEW OF OPERATONS AS AT 30 SEPTEMBER 2014

#### 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 JORC compliant inferred 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 meters 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 7 - Nevera Prospect

#### High Grade Zone

Based on artisanal miners' production using very simple mining and gravity separation methods, assays from historic surface trench and bench sampling, and the Company's limited drill results, the High Grade Zone has been assessed as an area where development of small scale, high grade underground mining can be undertaken. It is estimated that there could be gold in the fractures and ore shoots which are known to extend down at least 100m from surface and potentially extend many hundreds of metres deeper to the underlying magmatic source identified during the nearby drilling of the Mixing and Porphyry Zones.

By carrying out detailed geological mapping and sampling (in particular plotting the mineralised fractures and identifying the distinctive zoned alteration which surrounds the steeply plunging high grade ore shoots), it will be possible to derive a clear 3-dimensional picture of the mineralisation and assess its potential tonnage and grade .Quarrying of benches on the spur will also expose the outcropping structures for detailed mapping and sampling to tie in with the underground results.

Based on the high grade high-sulphidation vertical ore shoot nature of the mineralisation, current indications are that the main potential of the High Grade Zone lies below the artisanal workings in the base of the mineralised spur, extending to an unknown depth but possibly many hundreds of metres. The mineralisation comprises several sets of gold-mineralised sub-vertical narrow rubbly fractures with associated near-vertical bonanza-grade ore shoots up to one metre wide at their intersections, within a steeply-plunging elongate related to a high sulphidation epithermal gold mineralising event sourced in the deep intrusions underlying the northern end of the Nevera Prospect.

The Company believes that the Crater Mountain project has both the potential for near term low cost production as well as large scale, bulk tonnage for long term development. With financial markets still displaying volatility for the junior resource end the Company will focus on generating cash flow from the High Grade Zone.

#### 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 since1996.



Figure 8 – 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.

On the strength of a feasibility study completed in 1993 on the Wapolu Deposit by Macmin/ Union Resources based on their 1992 resource model a mining operation was initiated at Wapolu in December 1995. The operation was based on an estimated mining reserve of 2.0 Mt at 2.4 g/t Au and was planned to process 500,000 tonnes per annum for a 4 year mine life. Following crushing and grinding the process plant combined CIP (200,000 tpa) and NaCN vat leach (300,000 tpa) with overall gold recoveries predicted to be approximately 80% (resulting in roughly 30,000 ounces per year gold recovery). Mining was abandoned in 1997 due to poor performance arising from lower processing throughput than budgeted (including unforseen bouldery and clayey feed problems), and lower feed head grade and lower gold recovery than was predicted.

#### 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.

Hole #	Co-ord	inates	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		-	-

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

# Table 3 -Drill intercepts reported by Central Coast Exploration from drilling in 1989 atGolden Gate (NOTE: all drill holes reverse circulation and vertical orientation with chip sample<br/>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.

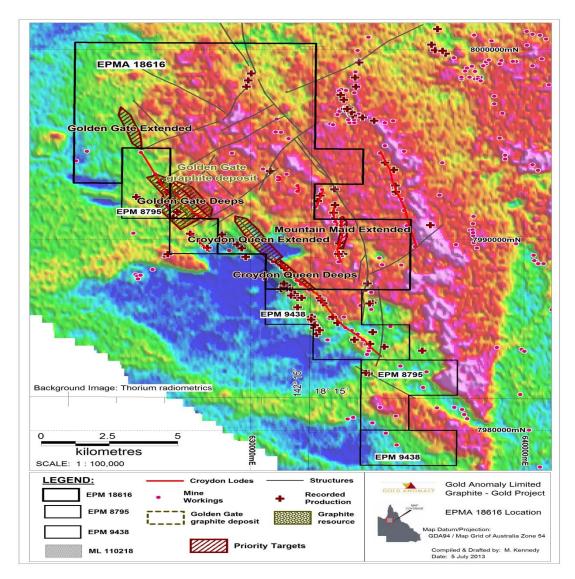


Figure 9 - Location Map of EPM18616 showing the Golden Gate graphite deposit as well as principal gold exploration targets

The acquisition of EPM18616 has 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.

#### **APPENDIX 2**

#### 1. JORC CODE, 2012 EDITION – TABLE 1

Notes on data relating to Drilling at Crater Mountain High Grade Zone

#### 1.1 Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections).

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Diamond drilling is used to obtain core from which samples at intervals ranging from 0.5-2.0m in length are submitted for analysis using FAA505 methodology. A 50g charge is used for fire assay for analysis for gold.</li> <li>All diamond drill core drilled by CGN is sampled in intervals based on geological logging. Previous diamond drilling was carried out with PQ, HQ and NQ diameter core and all core was cut with half core typically sent for sample preparation at SGS, Lae and pulps sent to SGS, Townsville for assay.</li> <li>Current diamond drilling is with LTK48 core, 35mm diameter. Whole core is sampled and sent for preparation and assay. Whole core is used to ensure sufficient sample mass and representivity.</li> <li>Underground exploration development is also carried out with drives and cross cuts. Face and sidewall channel samples are taken using moil and hammer to obtain samples of approximately 3kg. Channel lengths vary from 0.20-2.0m depending on geology.</li> </ul>

Criteria	JORC Code explanation	Commentary
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul> <li>Diamond drilling is currently carried out using an underground rig with LTK48 rods and standard tube core barrel. Core diameter is 35mm. The rig is also set up to drill from surface.</li> <li>Historical drilling by CGN at the Nevera prospect has been by diamond drilling PQ, HQ and NQ diameter core using triple tube and core orientation with a Reflex ACT II device</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>Core recoveryis measured for the complete hole based on the driller's mark-up, checked during core mark-up in 1m intervals by the geologist. Drill core is measured to accurately quantify sample recovery.</li> <li>Gold mineralisation at the CGN HGZ is typically concentrated in narrow oxidised structures. To ensure representative samples, whole core is sampled.</li> <li>This release relates to result from the first three holes in the current programme. It is not known whether a relationship exists between sample recovery and grade.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>A qualified geoscientist logs the geology of all holes in their entirety including geotechnical features. Drill core is geologically and routinely geotechnically logged to a level of detail considered to accurately support Mineral Resource estimation. The parameters logged include lithology with particular reference to veining, mineralogy, alteration, and grain size.</li> <li>All core is photographed. Recent digital photos and scans of film photography are stored electronically. All of the holes with results mentioned in the release have been logged and photographed in their entirety.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	<ul> <li>For samples of core, whole core is taken and bagged.</li> <li>Channel samples are bagged wet underground.</li> <li>Samples are sent to SGS, Lae for sample preparation.</li> <li>Samples dried in original calico bags at 105°C for 4+ hours in an Essa DO1 two cubic metre drying oven.</li> <li>Dried samples crushed to 90 per cent passing 3 mm using a Rocklabs Boyd Mark III jaw crusher.</li> <li>Crushed samples riffle split to collect 0.6 to 1.2 kilogram subsample.</li> </ul>

Criteria	JORC Code explanation	Commentary
Quality of	<ul> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Subsamples pulverised to 90 per cent passing 75 µm, for approximately three minutes in either of two Essa LM2-P pulverisers with B2000 bowl sets.</li> <li>One sample in 20 wet sieved to check pulveriser performance to target standards.</li> <li>One sample in ten selected randomly and resplit prior to pulverisation, with control samples shipped as part of the batch to SGS Townsville.</li> <li>Prepared assay pulps placed in wire-top bags, with several included in a heat-sealed plastic bag in a shipping box, sealed with packaging and SGS security tape.</li> <li>Up to three shipping boxes placed in a labelled, security sealed and numbered poly-weave sack and shipped to SGS Townsville by DHL Express.</li> <li>Assaying at SGS, Townsville is by FAA505 methodology fire assay for gold</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>All samples are currently assayed at SGS, Townsville. SGS maintains robust internal QA/QC procedures (including the analysis of standards, repeats and blanks) which are monitored with the analytical data by CGN geologists.</li> <li>Ore grade Certified Reference Material standards and blanks are introduced into the sample stream by the geologists. Blanks are also introduced by SGS after the sample preparation stage in Lae before shipment to Townsville.</li> <li>Based on the results of standard analysis, in addition to the internal QA/QC standards, repeats and blanks run by the laboratory, the laboratory is deemed to provide an acceptable level of accuracy and precision.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Signficant intersections are checked by the Senior Exploration Geologist.</li> <li>Twinned holes are drilled to represent approximately 20% of the holes drilled or at least one twinned hole per section line. The core is not sampled but logged and kept as a permanent whole core record.</li> <li>Original laboratory documents exist of primary data, along with laboratory verification procedures.</li> <li>The Crater Mountain drilling and channel sampling database exists in electronic form. The assay data are imported directly into the database from digital results tables sent by the laboratory. The Senior Exploration Geologist manages the drill hole assay database.</li> <li>No adjustment has been made to assay data received from the laboratory.</li> </ul>

Criteria	JORC Code explanation	Commentary
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down- hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>The initial datum was established using a single station differential GPS (DGPS) at two points. The mean of readings taken over 3 days was accepted as datum. Survey from the datum point is by theodolite with 20 second closure.</li> <li>Grid is UTM WGS84</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	Current drilling at the HGZ is intended to identify the nature and style of mineralisation.
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>At the HGZ a general north south trending zone of mineralization is interpreted with north south and east west mineralized fractures.</li> <li>Current drilling intersects this zone such that sampling of north south structures is considered unbiased.</li> <li>Possible east west cross cutting structures will require drill testing from additional drill pads in due course</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>For diamond drilling, whole core is collected in calico sample bagsmarked with a unique sample number which are tied at the top. Samples are transported to SGS, Lae under direct company supervision or secure independent contractor.</li> </ul>
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	No audits or reviews of sampling techniques and data were done.

#### **1.2 Section 2 Reporting of Exploration Results**

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Comment	ary						
<i>Mineral tenement and land tenure status</i>	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The results are from drilling and underground channel sampling within Exploration Licence EL1115 located at Crater Mountain, Lufa District, Eastern Highlands Province PNG. EL1115 is wholly owned by CGN and is due for renewal in September 2014.</li> </ul>							
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Four programs of diamond drilling were conducted at the Nevera Prospect from 1994, when EL 1115 was first granted with successive operators BHP Billiton Pty Limited (BHP), Macmin NL (Macmin) and Triple Plate Junction Plc (TPJ). CGN acquired control of EL1115 in 2008</li> </ul>							
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Crater Mountain Project lies within a typical large and complex New Guinea Orogen mineralised hydrothermal system. Mineralisation is associated with sub-volcanic magmatic activity related to the locally prominent Nevera Igneous Complex.</li> <li>The mineralisation models identified to date are:</li> <li>Low sulphidation epithermal carbonate-base metal sulphide-gold Mixing Zone mineralization High sulphidation high grade epithermal quartz-pyrite-gold mineralisation (High Grade Zone "HGZ") extending from surface to several hundred metres depth, comprising a series of subvertical fractures and associated near-vertical mineralized shoots.</li> <li>Deep porphyry copper-gold mineralization.</li> </ul>							
Drill hole Information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information	understanding of the are reported in Table 1 in the body of the release.							ercepts
	<ul> <li>for all Material drill holes:</li> <li>easting and northing of the drill hole</li> </ul>	Hole	Depth (m)	GridE	GridN	RL (m)	Grid Azimuth	Dip	
	collar	NEV004	200	287955.00	9280950.00	1962	74	-50	
	• elevation or RL (Reduced Level -	NEV009	458	287918.00	9281105.00	1930	135	-60	
	elevation above sea level in metres) of the drill hole collar	NEV022	282	287994.00	9281002.00	1942	85	-50	
	<ul> <li>dip and azimuth of the hole</li> </ul>	NEV026	306	287982.00	9281090.00	1968	148	-45	
				•					

Criteria	JORC Code explanation	Comment	ary						
	depth	NEV034A	66.1	288002.60	9281003.30	1959	110	-24	
	<ul><li> hole length.</li><li> If the exclusion of this information is</li></ul>	NEV034B	83.8	288002.60	9281003.30	1959	110	-24	
	justified on the basis that the	NEV035	80.2	288002.60	9281003.30	1959	110	-46	
	information is not Material and this	NEV036	82	288002.60	9281003.30	1959	85.5	-25	
	exclusion does not detract from the understanding of the report, the	NEV037	63	288002.60	9281003.30	1959	85.5	-40	
	Competent Person should clearly	NEV038	93.5	288002.60	9281003.30	1959	85.5	-43	
	explain why this is the case.	NEV039	85	288002.60	9281003.30	1959	131.5	-22	
		NEV040	83.7	288002.60	9281003.30	1959	131.5	-40	
		NEV041	80	288002.60	9281003.30	1959	110	-56	
		NEV042	82.6	288002.60	9281003.30	1959	78	-57	1
		NEV043	80.6	288002.60	9281003.30	1959	107.5	-56	
		NEV044	83.1	288002.60	9281003.30	1959	132	-52	
		NEV045	82.7	288002.60	9281003.30	1959	96	-13	
		NEV046	81.5	288002.60	9281003.30	1959	96	-39	
		NEV047	83.5	288002.60	9281003.30	1959	124	-13	
		NEV048	80.4	288002.60	9281003.30	1959	124	-36	
		NEV049	81.8	288002.60	9281003.30	1959	127.5	-51.3	
		NEV050	80.5	288002.60	9281003.32	1959	096	-45	
		NEV051	81.9	288002.60	9281003.32	1959	096	23	
		NEV052	80.6	288002.60	9281003.32	1959	124	18	
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of</li> </ul>	recovered length. Si are limite applied Where ag of lower which inc	d core wit ignificant i d to 1.0m ggregate i grade res ludes a sh	hin the report ntercepts are g or less and to ntercepts incol ults the proce norter length of	ed intervals trea lenerally reporte 1g/t for interce rporate short len dure is to repor f higher grade.	ated as ed at a lo pts grea ngths of t the ag	gth-weighted av no grade but in wer cut off of 2 g ter than 1.0m. N high grade resu gregate longer i intercept reporte	cluded in th /t Au where lo top cuts l lts and long length of lo	ne sample intercepts have beer ver lengths

Criteria	JORC Code explanation	Commentary
	<ul> <li>low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	8.0m at 7.02 g/t Au from 43.0m,and
Relationship between mineralisatio n widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul> <li>Appropriate plans and section views are presented in the release.</li> </ul>
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	<ul> <li>interest, have been included in the results tables.</li> <li>Low grade mineralisation is characterised by grades considered to be sub-economic. Such</li> </ul>
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical</li> </ul>	geochemistry, geological mapping, geophysical survey, trenching and drilling.

Criteria	JORC Code explanation	Commentary
	test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>The planned scope of the drilling programme is depicted on a plan and sections in the release showing testing depth extensions.</li> <li>Future drilling is dependent on the outcome of the current programme.</li> </ul>

#### Appendix 2

#### **Mineralisation Sampling and Core Recovery**

Mapping and sampling of the gold bearing structures in the underground development confirmed that coarse free gold is largely confined to narrow (<0.2m wide) oxidised structures within an intensely brecciated zone. High grade gold, up to 847g/t is found in the presence of hematite - limonite oxidation in narrow veins with residual vuggy silica alteration.

Three sets of high grade structures have been identified in underground development. Two of these sets of structures trend roughly NS and EW with a third shallow dipping set which are interpreted as link structures. Bonanza grades are typically found at the junction of these sets of structures. (ASX Release 19 November 2013: "Bonanza gold grades intersected at High Grade Zone") Drilling from one drill pad has been broadly on an easterly azimuth from 85° to 134°. Consequently the EW trending and shallow dipping link structures were less likely to be intersected in the current programme as these structures are sub-parallel to the general azimuth of the drill holes. Further holes have been drilled in a broadly south easterly direction from another drill pad to test the EW trending structures.

An ongoing drilling programme is being undertaken from selected surface and underground drill pads planned to target these structures

Logging of the drill core confirms this style of mineralisation in very narrow veins. However, drilling is being carried out with LTK48 standard tube gear which produces 35mm core. Owing to the fractured nature of the breccia and also that the mineralised structures are for the most part very narrow, it was decided to sample whole core. Cutting of 35mm core would result in significant loss of sample, particularly in friable ground, thus reducing the mass of sample and representivity for sampling purposes. All core is logged in detail and photographed before sampling. Regular twinned holes are planned in the programme to effectively retain a permanent whole core reference across the zones.

## Appendix 3

#### (Information about material drill holes)

Hole	Depth (m)	GridE	GridN	RL (m)	Grid Azimuth	Dip
NEV004	200	287955.00	9280950.00	1962	74	-50
NEV009	458	287918.00	9281105.00	1930	135	-60
NEV022	282	287994.00	9281002.00	1942	85	-50
NEV026	306	287982.00	9281090.00	1968	148	-45
NEV034A	66.1	288002.60	9281003.30	1959	110	-24
NEV034B	83.8	288002.60	9281003.30	1959	110	-24
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NEV036	82	288002.60	9281003.30	1959	85.5	-25
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NEV040	83.7	288002.60	9281003.30	1959	131.5	-40
NEV041	80	288002.60	9281003.30	1959	110	-56
NEV042	82.6	288002.60	9281003.30	1959	78	-57
NEV043	80.6	288002.60	9281003.30	1959	107.5	-56
NEV044	83.1	288002.60	9281003.30	1959	132	-52
NEV045	82.7	288002.60	9281003.30	1959	96	-13
NEV046	81.5	288002.60	9281003.30	1959	96	-39
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NEV048	80.4	288002.60	9281003.30	1959	124	-36
NEV049	81.8	288002.60	9281003.30	1959	127.5	-51.3
NEV050	80.5	288002.60	9281003.32	1959	096	-45
NEV051	81.9	288002.60	9281003.32	1959	096	23
NEV052	80.6	288002.60	9281003.32	1959	124	18