Market Release

12 April 2018

Supplementary data on Updated Wafi-Golpu Feasibility Study

On 19 March 2018, Newcrest released an update to the Wafi-Golpu Feasibility Study prepared by the Wafi-Golpu Joint Venture (WGJV) project team. This updated Study incorporated the findings from the earlier Pre-Feasibility and Feasibility Studies announced in February 2016, interpretation of the additional orebody data derived from further drilling and geotechnical studies, together with further work undertaken on mine design, hydrology, tailings and port and power options. The mine plan that is the basis of the updated production target included in the updated Study, is based solely on the Probable Ore Reserves. Today Newcrest releases the JORC Code 2012 Edition – Table 1 which underpins the Golpu Mineral Resource and Ore Reserve, and a summary of material assumptions underpinning the updated Golpu Ore Reserve.

Golpu Mineral Resource

The Mineral Resources for Golpu Project remain unchanged from the release titled "Wafi-Golpu – Update on Stage One Feasibility and Stage Two Prefeasibility Studies" dated 15 February 2016 (the original release). Newcrest confirms that it is not aware of any new information or data that materially affects the information included in the original release in regard to Mineral Resources, and that all material assumptions and technical parameters underpinning the Mineral Resource estimate in the original release continue to apply and have not materially changed. Newcrest confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original release.

Mineral Resources are reported inclusive of Ore Reserves.

Golpu Ore Reserve

As stated in the market release "Updated Wafi-Golpu Feasibility Study" dated 19 March 2018, the Feasibility Study Update Ore Reserve is estimated to contain 5.5 million ounces of gold and 2.5 million tonnes of copper (Newcrest's 50% interest). This estimate is materially in line with previous estimates and reflects updated long term cost and metal price assumptions and optimised designs in the Golpu Feasibility Study Update (refer Golpu Ore Reserve Table below).

BC44 and BC42, which are at a feasibility level of accuracy, account for 49% of gold Ore Reserves and 52% of copper Ore Reserves. BC40, which is at a pre-feasibility level of accuracy, accounts for 51% of gold Ore Reserves and 48% of copper Ore Reserves.

Golpu Ore Reserve[1]

	Tonnes (Mt)	Gold Grade (g/t Au)	Copper Grade (% Cu)	Insitu Gold (Moz)	Insitu Copper (Mt)
Probable Ore Reserve	200	0.86	1.2	5.5	2.5

[1] Data is reported to two significant figures to reflect appropriate precision in the estimate and this may cause some apparent discrepancies in totals. The Ore Reserve shown represents Newcrest 50% interest.

Material Assumptions for Ore Reserves

Preceding Pre-Feasibility and Feasibility studies completed in 2012, 2014 and 2015 deemed block caving to be the appropriate underground mining method to maximise the economic output of the Golpu Mineral Resource. A Feasibility Study Update was completed in March 2018 for the development of an underground mine comprising of three block caves (BC44, BC42 & BC40). The Feasibility Study Update provides supporting basis for this Ore Reserve estimate. BC44 and BC42 are at a Feasibility confidence level, while BC40 is at a Pre-Feasibility confidence level. The first block cave, BC44, will be situated at 4,400 mRL. The second block cave, BC42, will be situated at 4,200 mRL. These block caves are expected to be mined for 7 and 9 years respectively during the first 14 years of the mine life. The third block cave, BC40, proposed to be situated at 4,000 mRL, is expected to be mined for 16 years leading to a total mine life of 28 years from first production of the processing plant (excluding construction and closure phases). The proposed Watut Process Plant is a compact copper concentrator that is progressively built (in line with the profile of the mine ramp up) to be capable of safely and efficiently processing 17Mtpa of crushed ore to produce a high-grade copper concentrate. Metallurgical testwork has been executed on the Golpu deposit during the 2018 Feasibility Study Update and in preceding studies. The testwork undertaken is of an adequate level to ensure an appropriate representation of metallurgical characterisation and the derivation of corresponding metallurgical recovery factors.

Golpu is a greenfield site and currently does not have infrastructure to support mining operations. Major infrastructure required is included in the Feasibility Study. Capital cost estimates are based on multiple market prices across all technical disciplines. Provision has been made for capital expenditure requirements for new equipment, infrastructure and replacement of infrastructure and equipment during the life of the mine is based on the studies. A contingency has also been factored into the capital cost estimate consistent with the level of accuracy of the study. Operating cost estimate first principles cost modelling expenses have been quantified as far as possible and where practicable supported by quotations.

Key economic outcomes of the Feasibility Study conclude that Golpu will be in the lowest decile C1 cost copper production of $0.26/lb (or minus $2,128/oz AISC in gold production terms), initial capital expenditure to commercial production of approximately $2.8bn, Life of Mine capital expenditure of approximately $5.4bn, NPV of approximately $2.6bn and IRR in real terms of approximately 18.2%[2].

Ore Reserve Classification

The Ore Reserve classification is based on Indicated Mineral Resources only. No Measured Mineral Resources are stated for this deposit. This classification is based on geological confidence as a function of continuity and complexity of geological features; data spacing and distribution and estimation quality parameters including distance to informing samples for block grade estimation.

Diluting material has been included within the Probable Ore Reserve as mined dilution due to the non-selective nature of block cave mining. This represents 7% of the gold metal and 5% of the copper metal in the Ore Reserve. Even without consideration of the metal contained in the dilution incorporated in the Ore Reserve, the economic analysis indicates an economic Probable Ore Reserve.

Mining Method

The Feasibility Study Update defined a three lift block cave mine plan. Extraction levels for the three block caves are; 4400mRL (BC44), 4200mRL (BC42), and the 4000mRL (BC40) on the basis of:

- First block cave, BC44, will be situated at 4,400 mRL, the second block cave, BC42, will be situated at 4,200 mRL. These block caves are expected to be mined for 7 and 9 years respectively during the first 14 years of the mine life. The third block cave, BC40, proposed to be situated at 4,000 mRL, is expected to be mined for 16 years leading to a total mine life of 28 years from first production of the processing plant (excluding construction and closure phases).
- An Advanced Undercutting strategy employed during cave establishment utilising a W Cut undercut design with Apex level.

[2] These figures are estimates from the updated Feasibility Study (as at 19 March 2018) and as such were prepared with the objective of being subject to an accuracy range of ±15%, with the exception of block cave 40 (due to limited geotechnical data; further work is planned to obtain orebody data to confirm rock strength across the BC40 footprint) and associated infrastructure which was prepared with a prefeasibility accuracy range of ±25%. As timing for finalisation of the SML or a suitable fiscal and stability framework and supporting arrangements is uncertain, valuation outcomes are shown at the time of commencement of earthworks for the access Nambonga decline. Costs are based on December 2017 real estimates. Neither the costs nor real cost escalation impacts prior to commencement of earthworks are included in the valuation outcomes. The figures are subject to all necessary permits, regulatory requirements and Board approval and further works as described below. Ore Reserves information can be found on page 1, based on Newcrest's 50% interest in the project. The production target utilises 98% of the full project's probable Ore Reserves contained metal.

- Use of an El Teniente extraction level layout.
- Average draw column heights are 320m (BC44), 490m (BC42) and 590m (BC40) with maximum draw column heights of 530m (BC44), 805m (BC42) and 1,120m (BC40).
- Initial underground access via the Nambonga Decline to provide earlier and quicker access to underground drill platforms, second means of egress and ventilation.
- Primary underground access via the Watut Portal and the twin Watut Declines to the underground block cave mine. The Watut Declines also form part of the primary ventilation circuit and materials handling system conveying ore to the Watut Process Plant.
- A 'Cave Engineering Level' established above the Reid Fault at 4,870 metres reduced level (mRL) for data gathering, further refinement of the rock mass, monitoring of the cave and potentially for dewatering.
- Ore extracted via three block caves producing at 17Mtpa (design capacity) using an inclined conveying system to discharge on a stockpile on the surface.

The following Modifying Factors have been applied:

- All development has mining factors for dilution and recovery applied to accurately represent the expected mined tonnes.
- Decline, access and infrastructure shapes for BC42 and BC40 outside of the Mineral Resource have tonnes contributing but not metal; these tonnes are allocated to unclassified material.
- PCBC™ software is used for cave production scheduling and estimation of grade for material drawn from the block caves.
- The total Life of Mine dilution is approximately 17%.

Ore Reserves estimates and statements are required to include estimates of dilution. The dilution included in the total Ore Reserve (400Mt on 100% basis) is approximately 79Mt due to the block cave mining method. The dilution included in the Ore Reserve contains 7% of the gold metal and 5% of the copper metal of the Ore Reserve and does not have a material impact upon the estimate.

Ore Processing

The proposed Watut Process Plant is a compact copper concentrator that is progressively built (in line with the profile of the mine ramp up) to be capable of safely and efficiently processing 17Mtpa of crushed ore to produce a high-grade copper concentrate. The plant is designed to treat approximately 8.4Mtpa of ore for the first three years of operation, with an additional ball mill and additional flotation cells in the fourth year designed to ramp up to approximately 17Mtpa and installation of the pyrite flotation and regrind circuit the following year facilitates the processing of ore containing a higher metasediment content from year five onwards. The technology associated with the ore processing is an industry standard for this style of deposit.

Metallurgical testwork has been executed on the Golpu deposit during the 2018 Feasibility Study Update and in preceding studies. The testwork undertaken is of an adequate level to ensure an appropriate representation of metallurgical characterisation and the derivation of corresponding metallurgical recovery factors. A total of 13 geometallurgical domains were assigned to represent an improved geological interpretation of the Golpu deposit and increase the understanding of the copper and gold recoveries in the deposit. Gold and copper recoveries on average over Life of Mine are 68% and 95% respectively. Concentrate grade average over the Life of Mine is assessed to be 29% copper and 15g/t gold.

Final concentrate derived from the testwork was utilised to conduct a product quality assessment, which incorporated chemical analysis for major elements and potential deleterious elements. The analysis indicated that the levels of deleterious elements in concentrate did not exceed any of the typical concentration restrictions for sale.

Three types of tailings management options have been considered during the various studies undertaken since 2012, those being various terrestrial tailings storage facilities, dry-stacking and DSTP. Oceanographic and environmental studies in the Western Huon Gulf to date have confirmed that area to be a highly suitable environment for DSTP. In the light of the factors considered in relation to terrestrial tailings storage, the outcomes from the study of 45 terrestrial sites and the outcomes of the DSTP study work undertaken to date, the updated Feasibility Study identifies the use of DSTP as the preferred tailings management solution.

Cut-off Grade

The Golpu Ore Reserve employs a value based cut-off determined from the Net Smelter Return (NSR) and site operating costs based on the outcomes of the Feasibility Study Update. The NSR calculation takes into account

revenue factors, metallurgical recovery assumptions, transport costs, refining charges and royalty charges. The site operating costs include mining cost, processing cost, relevant site general and administration costs and relevant sustaining capital costs.

Estimation Methodology

The Feasibility Study Update was completed in March 2018 for the development of an underground mine comprising of three block caves (BC44, BC42 & BC40). The Feasibility Study Update which provides supporting basis for this Ore Reserve estimate involved standard steps of mine optimisation, mine design, production scheduling and financial modelling. Factors and assumptions have been based on numerical modelling as well as experience and performance in similar caving operations. BC44 and BC42 are at a Feasibility confidence level, while BC40 is at a Pre-Feasibility confidence level.

Material Modifying Factors

Newcrest and Harmony Gold Mining Company Limited (Harmony) each currently own 50% of Wafi-Golpu through the WGJV. The State of PNG retains the right to purchase, at a pro rata share of accumulated exploration expenditure, up to 30% equity interest in any mineral discovery at Wafi-Golpu, at any time before the commencement of mining. If the State of PNG chooses to take-up its full 30% interest, the interest of each of Newcrest and Harmony will become 35%.

A Level 2B Environment Permit (EP) has been granted for exploration activities. Applications for a Special Mining Lease (SML) and related ancillary tenements have been submitted by WGJV to the Mineral Resources Authority. Approval of the Project by the PNG Government will be founded on the assessment of the Environmental Impact Statement (EIS) due to be submitted by the WGJV to the PNG government by the end of June 2018. This EIS will inform government's decision to grant an SML, related ancillary tenements and a Level 3 EP. The grant of these key instruments is a prerequisite for execution of the Project.

To assess the social and economic impacts of the Project upon communities, the Feasibility Study Update included an in depth Social and Cultural assessment, including leveraging off historical assessment work completed. In addition, an assessment of the potential economic impacts of the Project (if developed) was undertaken by WGJV.

Other key agreements that will be required for project development include: the Memorandum of Agreement (a Development Forum process) in relation to benefits that might be accrued to effective landholders and a Mining Development Contract with the Independent State of PNG.

Golpu is a greenfield block caving project and will require the following mining infrastructure to support the block caves including ventilation fans and refrigeration equipment, dewatering equipment, crushing and conveying equipment, underground workshop and meal room facilities. Major Infrastructure also required and included in the Feasibility Study to support the mining operations are a new Northern Access road, processing plant, tailings and concentrate export pipelines plus associated dewatering and loading facilities at the Lae Tidal Basin, accommodation camp and modular power generation plant.

The Golpu deposit is located in a seismically active area in a region close to a source of earthquakes that can produce seismic accelerations at the site. This risk has been taken into account in infrastructure and mine design.

To demonstrate the Ore Reserve as economic it has been evaluated through a standard financial model. All operating and capital costs as well as revenue factors were included in the financial model. This process demonstrated the Ore Reserves for Golpu has a positive Net Present Value (NPV).

The remaining areas of uncertainty at the current study stage are with the geotechnical parameters for the mining area below 4200mRL (i.e. BC40) that has been investigated to a Pre-Feasibility Study (PFS) level of confidence and is constrained by an incomplete set of orebody data with rock strength only being confirmed in the north east quadrant of the planned BC40 footprint. An analysis has indicated that based on the known rock strength being extrapolated across the remaining areas of lower orebody knowledge, mining is feasible. The Modifying Factors (key inputs) applied within PCBC™ cave scheduling software relies upon geology and geotechnical data such as structural geology and rock mass strength.

Further orebody data is required to confirm the geological and geotechnical information and is planned as part of the Forward Works Programme.

JORC Code 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	Diamond drill holes are the principal source of geological and grade information for the Golpu deposit. Diamond core drilling was used to obtain continuous samples ranging in size from PQ3 to NQ3 with rare intervals of BQ which were cut into half (in the case of HQ, NQ and BQ) and into half or quarter (in the case of PQ) using a diamond core saw, from which half or quarter is prepared for assay and the remaining core retained in the core farm as reference. The half or quarter core sent for assay was bagged in labelled calico sample bags with the sample number scribed on an aluminium strip included in the bag. The calico bags were placed in larger polyweave bags and transported by road or helicopter to Lae by company employees. Sampling intervals are typically 1m or 2m fixed intervals. The entire half or quarter core is dispatched for sample preparation. Core recovery is recorded to ensure a representative sample is obtained. All core was logged and photographed prior to cutting. Some core was wrapped in tape during sampling to maintain core quality. Oriented core is cut along the orientation line at the bottom of hole to reduce the possibility of sample bias. Sample numbers and drill hole intervals were recorded by the responsible geologist and used by technicians for cutting and sampling. A sample despatch sheet documenting the sample numbers and required assay work was sent with each sample batch to the laboratory. All drill core is sampled and assayed over the entire hole length. However empirical rock strength data is required for geotechnical input to mine designs - since 2011 approximately 20cm of whole core was taken at 50m intervals from all holes for Unconfined Compressive Strength testing which were not assayed. This is not considered to present a material impact on sample quality due to the disseminated, stockwork and micro-fracture infill nature of the mineralisation.
Drilling techniques	Diamond core drilling, PQ, HQ, NQ and BQ in diameter, triple tube core barrels and oriented typically using the ACE core orientation system.
Drill sample recovery	Core recovery is recorded for all diamond drilling on a metre by metre basis as a percentage. Sample recovery was 96.4% over the entire drilling dataset including oxide material and the adjacent Wafi epithermal mineralisation but increases to 98.4% within the Golpu Mineral Resource volume. All drilling is conducted using triple tube core barrels and appropriate core handling protocols. No material relationship has been identified between core recovery and grade due to the diffuse nature of the mineralisation in the Golpu porphyry-style deposit.
Logging	All diamond drill core has been geologically and geotechnically logged to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Geological logging is both qualitative and quantitative and records lithology, mineralisation, alteration mineralogy, weathering, structures and other physical characteristics of the core.
Sub-sampling techniques and sample preparation	Sample preparation protocols for drilling in the Golpu area has varied over time. However, all core is sawn in half or quarter typically cut beside the orientation line. Only minor intervals of second half core submission has been conducted. The entire sawn half or quarter core is submitted for the first stage of sample preparation. All subsequent sampling is by riffle or rotary splitters to ensure sub-sample representivity until homogenised in the pulverisers. Grind size screening was typically applied also to maximise sub-sampling representivity and to ensure compliance to sub-sampling sample mass requirements. Historic sampling from CRAE/Elders drilling 1990-1996 was prepared at Pilbara (Analabs) Laboratories in Lae. All samples were dried and jaw crushed to a nominal 5mm, then entirely pulverised to 180 microns. A sub sample of 500g was obtained with a riffle splitting device which was pulverised in a LM2 to nominal 75 micron. A 100g sub sample (pulp) was obtained and despatched for analysis. Sample preparation for Harmony and WGJV drill holes 2005-2011 was carried out at Intertek Lae sample preparation facility with pulps sent to Intertek Jakarta for assay. All samples were dried at 60°C and then jaw crushed to nominal 2mm. A sub sample of 1.5kg was obtained with a riffle splitting device which was pulverised to 75 micron using LM2 mill. An approximate 250g sub sample (pulp) was obtained and despatched for analysis. Sample preparation for WGJV drill holes 2012-2014 was carried out at the Intertek sample preparation facility in Lae. All samples were dried at 60°C, then crushed in a Boyd Crusher to a minimum 95% passing 2.8mm. A sub sample of 3.5kg (±0.5kg) is obtained using a Rotary Splitting Device (RSD) and pulverised in a LM5 mill with a minimum 95% passing

Criteria	Commentary
	106 microns. An approximate 250g sub sample (pulp) was obtained and despatched for analysis. Representative pulverised material and crushate reject is retained for all samples. Repeat samples are obtained from pulverised material at the rate of 1 in 20 samples and check crusher duplicates have also been analysed. The sampling techniques used over the history of the project are considered appropriate for assessment of porphyry mineralised systems.
Quality of assay data and laboratory tests	QAQC protocols for Golpu drilling have varied over the project's 24 year history. CRAE and Elders (1990-1996) sampled at Pilbara Laboratories Lae did not have the support of regular submission standards or duplicates and but were supported by regular submission of pulp splits to a second laboratory. Gold was determined by 50g Fire Assay with AAS finish and multi-element analyses including copper, silver, molybdenum, arsenic and iron were determined using AAS. Approximately 20% of composites used in the Golpu Mineral Resource model are derived from CRAE / Elders drilling – this are located in the upper Golpu Porphyry where there is also significant drill data acquired by Harmony. Drilling by Harmony and WGJV 2005-2014 was analysed at Intertek Laboratories Jakarta and included submission of certified standards, blanks, quarter core duplicates and re-assay of selected pulp splits at a second laboratory. Gold was determined by 50 or 30g Fire Assay with AAS finish, multi-element analyses including copper, silver, molybdenum, arsenic and iron was determined by 2 acid ICPMS\OES finish analyses. From October 2013 multi-element analyses have been determined by 4-acid (full) digest with ICPMS/OES finish. From 2013 gold has been analysed at the Intertek Lae Laboratory. Total sulphur was determined by Leco. Pulp samples shipped to Jakarta are re-dried in their original pulp packets at <60°C for a minimum of 4 hours or until dry before analysis. Certified reference materials were inserted at the rate of 1 in 20 samples. Matrix-matched samples from coarse reject Wafi-Golpu sample material were homogenised, independently certified and implemented into the QA sample stream from April 2013. Pulp samples (second sample from LM5 bowl) within each sample batch are submitted at the rate of 1 in 20 samples. Coarse duplicates have also been analysed and additionally 5% of all pulps with accompanying new standards are checked at an independent laboratory. Assay results are assessed on a per-batch basis on receipt of assays to determine appropriate levels of accuracy and bias in gold and copper analyses. The acceptance tolerance must be within defined site QAQC protocols. Routine check assay programmes are conducted on a periodic basis. All preparation and analytical laboratories including check laboratories have been reviewed for operational procedures and QAQC compliance by project geologist and QAQC chemists. The analysis methods employed are considered appropriate for the material and mineralisation. No material issues have been identified that invalidate the use of primary assays now held in the Wafi-Golpu Datashed database for Golpu deposit grade estimations.
Verification of sampling and assaying	All field data is captured digitally into a Logchief logging system, stored electronically in a Datashed database, and exported to a Lae based Datashed database, which is maintained by the Database Manager. Digital assay files are received directly from the laboratory and input directly to Datashed. Significant intersections are reported by the geology team, and verified by the Geology Manager. No specific holes have been twinned at Golpu. However due to the drilling configuration (typically towards grid west or to grid west on the common sections and multiple holes from a single drill pad with small variation in dip), multiple holes cross in close proximity. No inconsistency in sampling and assaying have been identified. No adjustment has been made to reported assays for use in the estimation of the Mineral Resource.
Location of data points	The local grid called Wafi Local Grid (WLG) is a planar grid oriented approximately 45 degrees from north which is used up for block modelling and geology databases. The height datum is Mean Sea Level but 5,000m is added for WLG. WLG is datum point referenced to PNG Geodetic Datum 1994. Topographic control is by digital terrain models derived from a high resolution Lidar survey of the Golpu area conducted in 2007 with a reported spatial accuracy of 0.2m. Drill hole collar locations are located using hand held global positioning system (GPS) and completed drillhole collars surveyed in the Wafi Local Grid by a qualified and competent surveyor using a theodolite or differential GPS. Downhole surveys were completed on all holes typically at 18m and then every 30m down the hole. Elders and CRAE drillholes were surveyed using an Eastman single shot camera and Harmony / WGJV drillholes were surveyed using a Reflex downhole survey tool. From

Criteria	Commentary
	2011 surveys have been conducted by a fully competent and licensed contractor using a north-seeking gyroscope instrument. For all periods of the drilling programme, downhole surveying was determined using the latest available methodology. These are considered sufficiently accurate to locate all assays to the level of precision required for classification as an Indicated or Inferred Mineral Resource.
Data spacing and distribution	Drillhole spacing within the Golpu deposit ranges from less than 100m x 100m in the upper portion of the deposit and up to 200m x 200m in the lower portions of the deposit. The drill spacing is considered sufficient to establish the degree of geological and grade continuity appropriate for Mineral Resource classification of a large porphyry gold/copper system. Drillholes are entirely sampled at regular 1m or 2m intervals regardless of lithological or mineralogical boundaries. Assays are composited to 10m downhole intervals for use in grade estimation.
Orientation of data in relation to geological structure	The Golpu mineralised system is approximately elliptical in plan elongated towards 345 degrees WLG with a steep west to sub-vertical dip. The majority of drilling is oriented across this orientation, but the dataset does include holes drilled parallel to the long axis. Most holes are complete transects through the porphyry and enclosing mineralised host sediments. The orientation of sampling is considered unbiased toward known structures and adequate for the diffuse nature of the mineralisation style i.e. porphyry gold copper mineralisation.
Sample security	Diamond drill core is delivered directly from the drill rig at the end of each shift by the drill crew to the logging shed within the fenced and patrolled Wafi Camp security compound. Core is marked up and photographed as soon as possible to identify any core loss and ensure size and consistency of the samples. Historically all core was sawn in half at the Wafi site and half core for assay bagged into calico bags and in turn secured in plastic bags. Samples are identified by both internal aluminium tags and external labelling. Some whole core was directly shipped as plastic-wrapped and secured trays to the dedicated core farm within the security patrolled compound at Nine Mile, Lae. Core is sawn, bagged and identified as for the Wafi site procedures. Whether transported as whole core in trays or bagged sawn core samples, all transport is always under the direct supervision of WGJV employees within tamper evident packaging from site until delivery to the Intertek Laboratory in Lae. Pulps and crusher residues are returned from the Lae laboratory to the Nine Mile core farm for long term storage again under direct supervision of WGJV staff. Since 2005, core samples were prepared in Intertek, Lae within their secured premises and pulps are air-freighted by international couriers to Intertek Laboratory in Jakarta, Indonesia for assaying. A detailed labelling, documentation and tamper evident packing protocol is in place for this transfer. Pulps are stored on a long term basis in Jakarta. Assay results from Intertek Jakarta are returned to WGJV network and loaded to the Wafi database by dedicated administrators after correlation against despatch records and after passing QAQC protocols.
Audits or reviews	Internal reviews of core handling, sample preparation and assays laboratories were conducted on a regular basis by both project personnel and owner representatives. External consultants also reviewed sampling protocols and based on heterogeneity studies for sampling mass and sampling precision provided recommendations to improve QAQC early in the drilling program. In the Competent Persons opinion, the sample preparation, security and analytical procedures are consistent with current industry standards and are entirely appropriate and acceptable for the styles of mineralisation identified and will be appropriate for use in Mineral Resource estimates. There are no identified drilling, sampling or recovery factors that materially impact the adequacy and reliability of the results of the drilling programme in place on the Wafi-Golpu Property.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	The Wafi-Golpu project is located in Exploration Licence (EL440) within the Morobe Province of Papua New Guinea. The property is located at approximately 6º52'S latitude, 146º27'E longitude approximately 60 km southwest of Lae, the nearest commercial centre within the region with a population of about 90,000.

Criteria	Commentary
	The owner of the project is the Wafi-Golpu unincorporated joint venture (WGJV), one of three unincorporated joint ventures in the Morobe Province of Papua New Guinea between subsidiaries of Newcrest (50%) and Harmony (50%) referred to collectively as the Morobe Mining Joint Ventures (WGJV). The WGJV holds two exploration licences covering a total area of approximately 129 km^2, registered in the name of the WGJV participants Newcrest PNG2 Ltd (50%) (a wholly owned Newcrest subsidiary) and Wafi Mining Limited (50%) (a wholly owned Harmony subsidiary). Key proposed infrastructure areas are located on adjoining EL1105. EL440 tenement licence expires in March 2018 and a renewal was lodged in December 2017 which is currently pending. The EL1105 tenement licence expires in January 2019. Both tenements remain in good standing. Subject to the project being developed, a royalty of 2% of net smelter revenue and a Mining Levy of 0.25% is payable to the Government of Papua New Guinea. A compensation agreement with local landowners is in place whereby specified payments are made due to impacts of exploration activities including loss of trees, impact on water resources, access restrictions, and disturbance to sacred sites and burial sites. Consistent with the current administrative practice of the Government of Papua New Guinea and under the terms of the Wafi-Golpu exploration licences, the Government of Papua New Guinea has reserved the right to acquire up to a 30% equitable interest in the project. In January 2011, the PNG Government indicated an intention to exercise the option, nominating the State-owned Petromin PNG Holdings Limited to take up the interest. The option is exercisable at any time prior to commencement of mining. Under the terms of the State option set out in the Wafi-Golpu exploration licences, the price payable for the interest is the proportionate share of the accumulated exploration expenditure at the point of exercise. Post-exercise, the State holding entity will be responsible for their proportionate share of continuing exploration, development and project costs.
Exploration done by other parties	Exploration has been conducted by the WGJV since 2008. Previous exploration activity has been documented by many workers, and notably includes Harmony, Abelle, Elders and CRA during their tenure since the 1970's. The Golpu Porphyry was discovered by Elders in 1991 and the high grade Hornblende (Livana) Porphyry by WGJV in 2010. Data transferred from previous exploration programmes has been assessed for quality and risk associated with inclusion of this data evaluated in the Mineral Resource estimation.
Geology	The Golpu deposit lies in a block of deformed Upper Mesozoic to Middle Miocene metasedimentary to sedimentary rocks cut by Miocene-Pliocene calc-alkaline dioritic intrusives. Copper and gold mineralisation results from a multiple intrusive porphyry system with the upper portion overprinted by high sulphidation epithermal alteration. Post mineral faulting has displaced and rotated the original intrusive configuration. The deformational history of PNG is characterised by accretion during oblique collision of the Australian and Pacific plates. A series of arc-normal transfer structures formed across PNG which taped mantle derived melts to high crustal levels. One of these structures termed the Wafi Transfer Structure is interpreted to have facilitated the emplacement of the Golpu intrusives. The Golpu Porphyry system consists of multiple, hornblende-bearing diorite porphyries intruded into host sediments. The porphyries are separated based on their spatial position, and where not texturally destroyed, into coarse hornblende-rich, feldspathic-rich or quartz 'eye' inclusions variants. Intrusives range from small dykes to small stocks and apopheses. Individual intrusions pinch and swell vertically over tens of metres and form stocks, pipes and dykes. The Golpu deposit is approximately 800m by 400m elliptical in plan and extends from 200m below surface to approximately 2,000m. Hydrothermal alteration related to the porphyry gol-copper mineralisation forms a predictable zonal arrangement grading from potassic core to propylitic margins. A high-sulphidation epithermal system is 'telescoped' over the upper portion of the porphyry system forming a central alunite–quartz (advanced argillic) core grading out to dickite–kaolinite (argillic) with an outer margin of sericite alteration. This results in either epithermal-dominant, interaction (mixed) or porphyry-only zones within the Golpu deposit. Mineralisation is derived from either the porphyry or epithermal systems. Within the porphyry environment, mineralisation is disseminated, microfracture and stockwork vein controlled. The dominant copper-gold sulphide species varies laterally and vertically within the deposit from an inner bornite (plus chalcopyrite) core, chalcopyrite as the dominant copper sulphide grading to a pyrite only shell. The porphyry system is mineralised with gold, copper, silver and molybdenum. The Livana Porphyry is the main mineralised porphyry. Other porphyries act either as weak mineralisers or as benign hosts.

Criteria	Commentary
	In the high sulphidation epithermal system which is 'telescoped' over the upper portion of the Golpu Porphyry, gold occurs within pyrite or as electrum associated with pyrite-enargite-tetrahedrite. Abundant arsenian pyrite results in high sulphur and elevated arsenic levels in the epithermal altered volume. Mineralisation broadly follows the metasedimentary and volcanic host rocks stratigraphy (40° dip to east). Post-mineral thrust (reverse) faulting has dismembered the original porphyry and epithermal systems with offsets of up to 200m within the mineralised column and rotated the high grade porphyry core between faults to dip 70 degrees to grid west.
Drill hole Information	No exploration has been reported in this statement, therefore there is no drill hole information to report. This section is not relevant to this report on Mineral Resources. Comments relating to drill hole information relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling techniques" and "Drill sample recovery".
Data aggregation methods	No exploration has been reported in this release, therefore there are no drill hole intercepts to report. This section is not relevant to this report on Mineral Resources. Comments relating to data aggregation methods relevant to the Mineral Resource estimate can be found in Section 1 – "Sampling techniques", "Drilling techniques" and "Drill sample recovery".
Relationship between mineralisation widths and intercept lengths	No exploration has been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This section is not relevant to this report on Mineral Resources.
Diagrams	No exploration has been reported in this release; therefore, no exploration diagrams have been produced. This section is not relevant to this report on Mineral Resources.
Balanced reporting	No exploration has been reported in this release, therefore there are no results to report. This section is not relevant to this report on Mineral Resources.
Other substantive exploration data	No exploration has been reported in this release, therefore there are no results to report. This section is not relevant to this report on Mineral Resources.
Further work	No further exploration is planned for the Golpu Mineral Resource volume. Specific underground drill programs have been designed within the 2015 Golpu FS BC1 and BC2 volumes to increase confidence in local grade precision and refine geotechnical conditions at critical mine and supporting infrastructure locations. Such programs would be implemented after establishment of access declines. Proposed additional surface drilling is confined to infill geotechnical investigations of access paths. These proposed drill programmes are not exploration related.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
Database integrity	Data from the Golpu Project is stored within the WGJV 'Datashed' software database located at the Lae office, PNG. Drill core is logged directly into laptops in the core shed with periodic integration to the WGJV database. Assay data is received from the laboratory in digital format which is subsequently uploaded to the WGJV database using import templates. All data uploaded to the database must pass a data integrity checks and reviews. User access to the database is controlled by a hierarchy of permissions and are controlled by WGJV database administrators with oversight of data integrity by an external Datashed software specialist. Historical assay data collated by CRAE was imported into the WGJV database from an existing MS Access database. The process used by CRAE to transfer assay data into their database is not recorded, however checks of the assay data in the database with the original hardcopy results indicate they are satisfactory for use in a Mineral Resource estimate. Detailed data review was completed before the estimation of the Golpu December 2015 Mineral Resource estimate. Checks included validation of collar surveys against planned locations and downhole surveys consistency of hole path. Assays were reviewed and compared against observed mineralisation. Logging records were reviewed against core photographs as part of the interpretative geology compilation. All corrections were completed before final data extraction for input to the Mineral Resource estimation.
Site visits	The Competent Person is an employee of Newcrest Mining and travelled to site on a regular basis as a former member of the WGJV team during the last resource drilling campaign. Site visits validated the documented mapping, drilling, logging and sampling processes and on-site data management. Laboratory visits to the Lae preparation laboratory, Lae fire assay

Criteria	Commentary
	laboratory and Jakarta assaying facilities were conducted to verify assaying and QAQC procedures.
Geological interpretation	The December 2015 geology model for the Golpu deposit includes lithology, alteration, oxidation, sulphide distribution and structures wireframes. Fault wireframes include major thrust faults which displace mineralisation. The most significant thrust is the Reid Fault which displaces the upper Golpu mineralisation approximately 200m up-dip with a small displacement to the north. All lithological, porphyry-related alteration and fault models were constructed in Leapfrog software using implicit modelling interpolations from primary logging codes and modified for interpretative correlations of logged intervals. The implicit modelling methodology is considered less subjective than traditional sectional interpretations. ASD and 'Corescan' spectral mineralogical data was used in conjunction with the current logged alteration dataset. This enables a higher level of resolution of the layered epithermal system especially for subdivision of clays and other difficult to distinguish indicator minerals of alteration type and intensity. Estimation domains are a combination of mineralised porphyry or host units, alteration type and fault partition. All geological contacts are honoured in the geological interpretations used for grade estimation domains. The confidence in the geological volumes and lithological and faulted contact correlations that were used in the estimation domains is reflected in the resource classification. The geological and structural framework used in the Mineral Resource has also been externally reviewed. It concluded that the current model is supported by contacts seen in core and makes kinematic and geometric sense with no obvious flaws. There is sufficient drill data to constrain the geological model that alternative interpretations will not be materially different from the framework used in the 2015 Mineral Resource. The geological and structural model has defined the major structural and lithological contacts that impact grade continuity.
Dimensions	The Golpu deposit is approximately 800m by 400m elliptical in plan and extends from 200m below surface to approximately 2,000m depth.
Estimation and modelling techniques	The Golpu Mineral Resource grades were estimated with Ordinary Kriging using pairwise variograms of 10m composites for seven elements: gold, copper, silver, molybdenum, sulphur, arsenic, and iron with Vulcan software using domain specific variograms and search for informing 10m composites using the variogram anisotropy. The grades were estimated into a block model with 40m x 40m x 40m parent cells with 10m x 10m x 10m resolution on domain margins. This reflects the estimation precision available from the drillhole spacing of less than 100m x 100m in the upper portion of the deposit and up to 200m x 200m in the lower portions of the deposit and the planned mining method (block caving). Variograms are typically low nugget (7-17% for gold and 5-30% for copper) with long ranges. Search parameters vary by element and estimation domain but reflect the orientation and ranges of the variograms. The maximum number of samples per block typically restricts the actual distance of informing samples to substantially less than the search limits. While there are spatial associations between elements, all are estimated independently. The grade estimation is based on an underlying 'diffusion' model where grade trends from lower to higher values from the mineralisation margin to the porphyry core in a relatively continuous relationship. Domain drift is apparent for the porphyry system and pairwise variograms were used for modelling grade continuity. Contact analyses indicated the Hornblende (Livana) Porphyry has abrupt grade contacts and is modelled independently. Estimation domains are also bounded at all major thrust faults where drilling has demonstrated clear grade truncations. Most other estimation domains are continuous 'diffusive' transitions from mineralised porphyry margins to the mineralisation limit regardless of host lithology. All porphyry-related domains are modelled with an orientation defined by the elongation of the porphyry system. All epithermal, oxidation and cover sequence domains have shallow dips to grid east again reflecting their overall orientation. Top-cuts were applied to gold and copper composite grades but have no impact on global estimated Mineral Resources. No top cuts were applied to arsenic composites. This is a potential contaminant in copper concentrate and sensitivity to high grade arsenic composites is required to evaluate the final As content potentially delivered to concentrate. Silver and molybdenum are modelled as they may reach potentially extractable by-products however silver and molybdenum are not included in the revenue estimation. Sulphur and iron are estimated as they inform sulphide speciation and gold:sulphur and copper:sulphur ratios are included in metallurgical recovery models.

Criteria	Commentary
	The model has been validated by comparison with informing composite declustered statistics and alternative modelling methods including conditional simulations. Alternative models constructed included nearest neighbour, inverse distance, raw variogram Ordinary Kriging, Discrete Gaussian Model, and Conditional Simulation models with Sequential Gaussian into nodes and Direct Block Simulation using Turning Bands into 10m blocks. The impact of independently domaining the Livana Porphyry as a 'hard' boundary compared to incorporation into a continuous grade trend was also evaluated. The risk associated with the inclusion of historical data has been evaluated by re-modelling without the non-QAQC validated data - there is no material change between models. Historical assays have been included in the Mineral Resource estimate to improve local estimation precision only. There are no selective mining units applied to the Mineral Resource reflecting the planned mining method. The grade, recovery and value models used to quantify the Golpu Mineral Resource are considered appropriate for the style of mineralisation and are suitable for the required estimation precision for the planned mining method – block caving.
Moisture	All tonnages are calculated and reported on a dry tonnes basis.
Cut-off parameters	The Mineral Resource estimate is reported within a break-even value shell using the 2017 (unchanged from 2015) Mineral Resource revenues from gold and copper only and the cost structure from the 2015 Stage 2 PFS (Life-of-Mine-Plan based on 14Mt/year from block cave mining with processing by sulphide flotation producing a copper concentrate for pumping to Lae port and shipment to overseas smelters). Costs include block cave mining, treatment / processing and General and Administration (G&A). Net Smelter Return (NSR) includes metallurgical recoveries and off-site realisation (TCRC) including royalties. Gold revenues assumptions are US$1,300/oz and copper US$3.40/lb. The value of each in-situ block is estimated and a smoothed shell generated at the break-even margin. The shell includes internal below value cut-off blocks and excludes isolated above cut-off blocks. While not a block-cave design, the shell is representative the bulk mining method planned – block caving. All Mineral Resources are constrained within the margin breakeven 'value' shell representing the limit to eventual economic extraction.
Mining factors or assumptions	The Mineral Resource estimate is reported within a notional constraining shell at the marginal break-even cut-off, based on mass mining by block caving with no internal selectivity. The 40m x 40m x 40m block-model size and the application of a constraining spatial shell that includes all internal materials and excludes above margin break-even blocks outside the notional shell reflects the non-selective planned mining method.
Metallurgical factors or assumptions	The metallurgical recovery included in the margin estimation is based on ore processing by copper flotation with copper and gold recovery to copper sulphide concentrate. Significant test-work has been completed to establish recovery algorithms for copper and gold. Metallurgical domains are based on the host lithology and alteration type. Each metallurgical domain is assigned a recovery algorithm further subdivided on copper:sulphur and gold:sulphur ratios. Estimated metallurgical recovery is included in the quantification of the Mineral Resource reporting margin value cut-off. For the Mineral Resource cut-off, recovery models are applied for porphyry, high chalcopyrite porphyry, sediments and epithermal alteration domains. Silver and molybdenum are included in the Mineral Resource reporting volume but revenues are not included in the margin value estimation in line with the 2015 Stage 2 PFS. There is no dedicated recovery and revenue path in the 2015 Life-of-Mine PFS for these elements but both have reasonable prospects of eventual economic extraction with only minor changes to the metallurgical flow-sheet. Current modelling indicates silver in copper concentrate will not consistently be above payable grades but this can be potentially achieved during concentrate marketing negotiations. Molybdenum will similarly not always be above cut-off grades however potentially economic grades are present within the block-cave volume.
Environmental factors or assumptions	Based on environmental characterisation completed to date, there are no recognised physico-chemical or biological environmental factors that will limit potential mining or milling operations. Geochemical assessment of rock and tailings has been completed to quantify acid forming characteristics and composition of the material. Waste rock locations, construction and dump design alternatives have been evaluated and designed given this information, with adequate controls allowed for acid rock drainage management. Hydrological models have been undertaken and test water bores have been constructed to evaluate mine vicinity water flows. Mine water will require treatment for both entrained silt contents and acid rock drainage and pH management before eventual discharge to the

Criteria	Commentary
	receiving environment. Treatment of water will ensure a quality that meets PNG Receiving Water Criteria to mitigate potential impacts to downstream communities and the environment. Options for terrestrial tailings dams have been evaluated and viable options designed. All development and production activities will be permitted by the PNG Department of Environment and Conservation under the Environment Act (2000).
Bulk density	Bulk density has been determined on 10cm core samples typically at 10m intervals down all holes. Methods used to derive bulk density values include air/water (approximately 95%) and wax/water (approximately 5%) where samples are friable. The average bulk density, after statistical review and removal of outliers, is assigned to domains derived from a combination of oxidation, alteration and lithology. The assignment of a constant bulk density per domain assumes limited internal variation within the domain. No elements reflecting sulphide mineralogy are considered significantly abundant to correlate bulk density and grade within the reported Mineral Resource volume.
Classification	The Mineral Resource is classified based on: geological confidence as a function of continuity and complexity of geological features; data spacing and distribution; and estimation quality parameters including distance to informing samples for block grade estimation. Indicated Mineral Resource, where the geological framework can be modelled with confidence and mineralisation continuity can be assumed, is classified from below the intense epithermal alteration zone to the 4,100m Wafi Grid Level (WGL) - approx. 1,400m below surface or to a major interpreted fault at similar depth. Below this fault and above 3780m WGL, drillhole spacing is increased and geological and grade continuity is less reliable – this volume is classified as Inferred Mineral Resource. All Mineral Resources are constrained within the margin breakeven 'value' shell representing the limit to eventual economic extraction. It is the Competent Person's view that the classifications used for the Mineral Resources are appropriate for the deposit.
Audits or reviews.	The geological and structural framework used in the Mineral Resource has also been externally reviewed. It concluded that the current model is supported by contacts seen in core and makes kinematic and geometric sense with no obvious flaws. The Mineral Resource estimate was the subject of independent external review by AMC. No material issues were identified in these reviews and AMC concluded that the estimates had been prepared using accepted industry practice and classified and reported in accordance with the JORC 2012 Code.
Discussion of relative accuracy/ confidence	For an Indicated Resource estimate it is considered reasonable for the local relative uncertainty to be +/- 15% in tonnage, grade and metal (exclusive of each other, i.e., each variable has to satisfy the criteria) for an annual production volume at a 90% confidence level. Direct block co-simulations (gold and copper) of the annual production volumes represented by the average height of draw for BC1 and BC2 in the 2015 Golpu FS were evaluated to demonstrate confidence intervals. This evaluation indicates this criterion can be satisfied. Relative uncertainties and confidence level estimates are considered for both copper and gold as they are both significant economic contributors. There is no production from the Golpu deposit to compare relative accuracy and confidence.

Section 4 Estimation and Reporting of Ore Reserves

Criteria	Commentary
Mineral Resource Estimate for conversion to Ore Reserves	The Golpu deposit lies in a block of deformed Upper Mesozoic to Middle Miocene metasedimentary to sedimentary rocks cut by Miocene-Pliocene calc-alkaline dioritic intrusives. Copper and gold mineralisation results from a multiple intrusive porphyry system with the upper portion overprinted by high sulphidation epithermal alteration. Post mineral faulting has displaced and rotated the original intrusive configuration. The Golpu Mineral Resource grades were estimated with Ordinary Kriging using pairwise variograms of 10m composites for seven elements: gold, copper, silver, molybdenum, sulphur, arsenic, and iron. The grades were estimated into a block model with 40m x 40m x 40m parent cells with 10m x 10m x 10m resolution on domain margins. This reflects the estimation precision available from the drillhole spacing and the planned mining method (block caving). The Mineral Resource is classified based on: geological confidence as a function of continuity and complexity of geological features; data spacing and distribution; and estimation quality parameters including distance to informing samples for block grade

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>estimation. Indicated and Inferred Mineral Resources were constrained within a margin breakeven ‘value’ shell representing the limit to eventual economic extraction.

The reported Golpu Mineral Resources are inclusive of Ore Reserves.</td></tr>
<tr><td>Site Visits</td><td>The Competent Person for the Ore Reserve estimate travelled to site on the following occasions:
April 2015 – Site familiarisation to confirm suitability for infrastructure and inspect core.
June 2016 – Inspect progress on geotechnical drilling programme.
June 2017 – Select a site for the proposed Nambonga decline portal.</td></tr>
<tr><td>Study Status</td><td>A Feasibility Study Update was completed in March 2018 for the development of an underground mine comprising of three block caves (BC44, BC42 & BC40). The Feasibility Study Update provides supporting basis for this Ore Reserve estimate. BC44 and BC42 are at a Feasibility confidence level, while BC40 is at a Pre-Feasibility confidence level.

These studies show that the mine plan is technically achievable and economically viable taking into consideration all material Modifying Factors.</td></tr>
<tr><td>Cut-off Parameters</td><td>The Golpu Ore Reserve employs a value based cut-off determined from the Net Smelter Return (NSR) and site operating costs based on the outcomes of the Feasibility Study Update. The cut-off values applied for the estimation of Ore Reserves are:<table><tr><th>Activity</th><th>Units</th><th>USD (real)</th></tr><tr><td>Development prior to first BC44 crusher commissioning</td><td>USD/t ore milled</td><td>10</td></tr><tr><td>BC44</td><td>USD/t ore milled</td><td>60</td></tr><tr><td>BC42</td><td>USD/t ore milled</td><td>40</td></tr><tr><td>BC40</td><td>USD/t ore milled</td><td>19.15</td></tr></table>The NSR calculation takes into account reserve revenue factors, metallurgical recovery assumptions, transport costs, refining charges and royalty charges.

The site operating costs include mining cost, processing cost, relevant site general and administration costs and relevant sustaining capital costs.</td></tr>
<tr><td>Mining factors or assumptions</td><td>Estimation of the Golpu Ore Reserve involved standard steps of mine optimisation, mine design, production scheduling and financial modelling. Factors and assumptions have been based on numerical modelling as well as experience and performance in similar caving operations. The basis of the analysis is considered at Feasibility (BC44 and BC42) and Pre-Feasibility (BC40) study levels.

Preceding Pre-Feasibility and Feasibility studies completed in 2012, 2014 and 2015 deemed block caving to be the appropriate underground mining method to maximise the economic output of the Mineral Resource. The Feasibility Study Update (on which this Ore Reserve statement is based) defined a three lift block cave mine plan. Extraction levels for the three block caves are; 4400mRL (BC44), 4200mRL (BC42), and the 4000mRL (BC40). Geotechnical assessment during the studies has resulted in the following key block cave mine design parameters in the Feasibility Study Update:</td></tr>
</table>

Criteria	Commentary

Mine Design Parameter	Value	
Undercutting Strategy	Advanced Undercut	
Undercut Design	W Cut with Apex level	
Extraction Level Layout	El Teniente	
Extraction Spacing	30m x 18m	
Draw Column Height	Average BC44 320m BC42 490m BC40 590m	Maximum BC44 530m BC42 805m BC40 1,120m

Additional drilling will be required to collect further data for further geological, geotechnical and metallurgical studies to inform final design.

Grade control during the production phase will be in the form of block cave drawpoint sampling.

The in situ grade model estimated in July 2014 was the basis for the Ore Reserve estimate.

The Feasibility Study Update proposes the following mining approach:

- Secondary/Initial underground access via the Nambonga Decline to provide earlier and quicker access to underground drill platforms, second means of egress and ventilation.
- Primary underground access via the Watut Portal and the twin Watut Declines to the underground block cave mine. The Watut Declines also form part of the primary ventilation circuit and materials handling system conveying ore to the Watut Process Plant.
- A 'Cave Engineering Level' established above the Reid Fault at 4870mRL for data gathering, further refinement of the rock mass, monitoring of the cave and potentially dewatering.
- Ore extracted via three block caves producing at 17Mtpa (design capacity) using an inclined conveying system to discharge on a stockpile on the surface.

The following Modifying Factors have been applied:

- All development has mining factors for dilution and recovery applied to accurately represent the expected mined tonnes.
- Decline, access and infrastructure shapes for BC42 and BC40 outside of the Mineral Resource have tonnes contributing but not metal; these tonnes are allocated to unclassified material.
- PCBC™ software is used for cave production scheduling and estimation of grade for material drawn from the block caves.

The total Life of Mine dilution is approximately 17%.

The geological model is classified as Indicated and Inferred Mineral Resources. There is no Measured Mineral Resource. Mine plans are based on the extraction of caving blocks solely delineated on the basis of Indicated Mineral Resources.

Ore Reserves estimates and statements are required to include estimates of dilution. The dilution included in the total Ore Reserve (400Mt on 100% basis) is approximately 79Mt due to the block cave mining method. The dilution included in the Ore Reserve contains 7% of the gold metal and 5% of the copper metal of the Ore Reserve and does not have a material impact upon the estimate. Even without consideration of the metal contained in the dilution incorporated in the Ore Reserve, the economic analysis indicates an economic Probable

Criteria	Commentary
	Ore Reserve. The Wafi-Golpu Project is a greenfield block caving project and will require the following mining infrastructure to support the block caves: • ventilation fans and refrigeration equipment; • dewatering equipment; • crushing and conveying equipment; and • underground workshop, service and personnel facilities.
Metallurgical factors or assumptions	The ore will be processed on site at the proposed treatment plant with a design capacity of 17 Mtpa using conventional single stage SAG and ball mill grinding, recycle crushing and flotation methods that are incrementally sized to match the mining rate to produce a copper and gold concentrate. The technology associated with the ore processing is industry standard for this style of deposit. The key metallurgical testwork for the Golpu deposit can be grouped into five main programmes as follows: • Testwork completed prior to 2011 on samples from above 5120mRL. • 2012 PFS Variability testwork and Metallurgical Domain Model completed on samples over the vertical extent of the known Golpu deposit from 5120mRL to 3850mRL across 14 exploration drill holes. • 2013/14 Variability and flowsheet development testwork from 102 composites in the 2012 PFS programme. Variability samples were prepared from material selected from exploration drill holes to provide spatial and grade variability within the respective domains. The testwork samples were obtained from 14 exploration drill holes across seven metallurgical domains. • 2015 Feasibility Study testwork programme executed testwork through the chosen process flowsheet using bulk samples from a mine plan targeting the development of two block caves. Based on the mine development, the ore types identified in the early years of production included domains 29 (Sericite metasediment), domain 30 (Sericite porphyry) and domain 33 (Actinolite porphyry) and account for 92% of material mined within the planned block caves. • 2018 Feasibility Study Update testwork programme including comminution testwork to determine milling characteristics for ore from 4000mRL. This ore is characterised by higher work indices than the ore higher in the orebody, thus additional work will be executed in the near future to confirm characteristics and if necessary alter the mill specifications during detailed design. A total of 13 geometallurgical domains were assigned to represent an improved geological interpretation of the Golpu deposit and increase the understanding of the copper and gold recoveries in the deposit. Gold and copper recoveries are calculated for each domain. The geometallurgical domains are based upon 103 composite samples assembled from 17 exploration drillholes through the entire deposit. Life of Mine metallurgical recoveries are: • Gold 68% • Copper 95% Final concentrate derived from the testwork was utilised to conduct a product quality assessment, which incorporated chemical analysis for major elements and potential deleterious elements. The analysis indicated that the levels of deleterious elements in concentrate did not exceed any of the typical concentration restrictions for sale.
Environmental	Feasibility study level analysis is in progress assessing the potential environmental impacts of the mining and processing operations required for the mining of the Golpu deposit and an Environmental Impact Statement is proposed to be submitted by the WGJV to the PNG government by the end of June 2018. NAF (Non-Acid Forming) waste rock would be produced from the first 300m of the Nambonga Decline and the first 2,000m of the twin Watut Declines. This material would be used to construct the retaining wall, base and access road for the PAF (Potentially Acid Forming) cells. PAF would be expected to be encountered from below these points for the remaining scope of the mine. This material will either be stored in cells encapsulated in impervious material or treated via the processing plant.

Criteria	Commentary
	Deep Sea Tailings Placement (DSTP) has been identified in the Feasibility Study Update as the preferred method for tailings management.
Infrastructure	The Wafi-Golpu Project is a greenfield project and currently does not have infrastructure to support mining operations. Major Infrastructure is required and included in the Feasibility Study Update, including: • access road; • ventilation and refrigeration plant; • processing plant (copper concentrator); • Deep Sea Tailings Placement system including tailings pipeline from site to the discharge point near Lae; • concentrate export pipeline plus associated dewatering and loading facilities at the existing Lae Port; • accommodation camp; and • on site power station. The land in which the Project is located is mostly under customary land title, some of which has been in dispute between customary land title holders since mineral exploration began in the early 1980s. The compensation of landholders is a requirement to the start of work however, Section 160 of the *Mining Act 1992* means that a dispute between customary land title holders of this nature will not impede Project execution.
Costs	Capital and Operating costs have been determined as part of the Feasibility Study Update. Capital cost estimates are based on multiple market prices across all technical disciplines. Provision has been made for capital expenditure requirements for new equipment, infrastructure and replacement of infrastructure and equipment during the life of the mine. Contingency has also been factored into the capital cost estimate consistent with the level of accuracy of the study. Operating cost estimate first principles cost modelling expenses have been quantified as far as possible and where practicable supported by quotations. Long term metal prices and exchange rate assumptions adopted in the Ore Reserve estimate are the WGJV approved long term assumptions for the Project. No cost impact is expected from deleterious elements. It has therefore not been necessary to include realisation penalties (additional costs) relating to minor elements when preparing the Ore Reserve estimate. Transport and refining charges have been based on forecast supply and demand assumptions. The following allowances have been made for royalties payable in the preparation of the Ore Reserve estimate: • Royalty of 2.00% of net smelter revenue (i.e. gross revenue from all mining sales adjusted for realisation and freight charges). • Mining Levy of 0.25% of gross revenue from all mining sales.
Revenue factors	Long term metal prices and exchange rate assumptions adopted in the Ore Reserve estimate are the WGJV approved long term assumptions for the Project and are: • USD1,200/oz for gold • USD3.00/lb for copper • USD/AUD 0.75 • PGK/USD 3.10 The NSR calculation takes into account reserve revenue factors, metallurgical recovery assumptions, transport costs and refining charges and royalty charges. Metallurgical testwork analysis has indicated that the levels of deleterious elements in concentrate did not exceed any of the typical concentration restrictions for sale.

Criteria	Commentary
Market assessment	Third party forecasts were used in the Feasibility Study Update (noting that this information is commercial in confidence). The Wafi-Golpu Project's natural market for concentrate is Asia due to the proximity of the mine to Asian region smelters. The Wafi-Golpu Project is expected to achieve first ore milled approximately 4.75 years post SML grant. At such time, the Wafi-Golpu Project may face competition from both new and established mines. Concentrate volume forecasts were derived from the Feasibility Study Update production schedule.
Economic	The Ore Reserve has been evaluated through a financial model. All operating and capital costs as well as revenue factors stated in this document were included in the financial model. A discount factor of 8.5% real was applied. This process demonstrated the Golpu Ore Reserve to have a positive NPV. Sensitivities were conducted on the key input parameters including commodity prices, capital and operating costs, ore grade, discount rate, exchange rate and recovery which confirmed the estimate to be robust. The NPV range has not been provided as it is commercially sensitive.
Social	To assess the social and economic impacts of the Project upon communities, the Feasibility Study Update included an in depth Social and Cultural assessment, including leveraging off historical assessment work completed. In addition an assessment of the potential economic impacts of the Project (if developed) was undertaken by WGJV. The land in which the Project is located is mostly under customary land title, some of which has been in dispute since mineral exploration began in the early 1980s. The compensation of landholders is a requirement to the start of work however, Section 160 of the *Mining Act 1992* means that a dispute of this nature will not impede Project execution. Other key agreements that will be required for project development include: the Memorandum of Agreement (a Development Forum process) in relation to benefits that might be accrued to effective landholders and a Mining Development Contract with the Independent State of PNG. The respect for all landowners, and regular engagement with them, will be vital to the maintenance of a social licence to operate.
Other	A Level 2B Environment Permit (EP) has been granted for exploration activities. Applications for a Special Mining Lease (SML) and related ancillary tenements have been submitted by WGJV to the Mineral Resources Authority. Approval of the Project by the PNG Government will be founded on the assessment of the Environmental Impact Statement (EIS) due to be submitted by the WGJV to the PNG government by the end of June 2018. This EIS will inform government's decision to grant an SML, related ancillary tenements and a Level 3 EP. The grant of these key instruments is a prerequisite for execution of the Project. The Golpu deposit is located in a seismically active area in a region close to a source of earthquakes that can produce seismic accelerations at the site. This risk has been taken into account in infrastructure and mine design.
Classification	The Ore Reserve classification is based on Indicated Mineral Resources only. No Measured Mineral Resources are stated for this deposit. This classification is based on geological confidence as a function of continuity and complexity of geological features; data spacing and distribution and estimation quality parameters including distance to informing samples for block grade estimation. Diluting material has been included within the Probable Ore Reserve as mined dilution due to the non-selective nature of block cave mining. This represents 7% of the gold metal and 5% of the copper metal in the Ore Reserve. Even without consideration of the metal contained in the dilution incorporated in the Ore Reserve, the economic analysis indicates an economic Probable Ore Reserve.

Criteria	Commentary
	It is the Competent Person's view that the classifications used for the Ore Reserves are appropriate.
Audits or reviews	SRK Consulting (Australasia) Pty Ltd (SRK) was commissioned to conduct an independent review of the mining section of the Feasibility Study Update, which included the Ore Reserve estimation processes and results. SRK concluded that the Ore Reserve estimates had been prepared using normal industry practice and has been appropriately classified as Probable Ore Reserve. SRK did not identify any material issues with the estimate.
Discussion of relative accuracy/ confidence	The accuracy of the estimates within this Ore Reserve is mostly determined by the order of accuracy associated with the Mineral Resource model. BC44 and BC42 are at a Feasibility confidence level (+/-15% accuracy), while BC40 is at a Pre-Feasibility confidence level (+/- 25% accuracy). The Competent Person views the Golpu Ore Reserve a reasonable assessment of the global estimate. The remaining areas of uncertainty at the current study stage are with the geotechnical parameters for the mining area below 4200mRL (i.e. BC40) that has been investigated to a Pre-Feasibility Study (PFS) level of confidence and is constrained by an incomplete set of orebody data with rock strength only being confirmed in the north east quadrant of the planned BC40 footprint. An analysis has indicated that based on the known rock strength being extrapolated across the remaining areas of lower orebody knowledge, mining is feasible. The Modifying Factors (key inputs) applied within PCBC™ cave scheduling software relies upon geology and geotechnical data such as structural geology and rock mass strength. Further orebody data is required to confirm the geological and geotechnical information and is planned as part of the Forward Works Programme. Golpu is a greenfields site and there is no previous production from the Golpu deposit to compare relative accuracy and confidence.

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Forward Looking Statements

This release includes forward looking statements. Forward looking statements can generally be identified by the use of words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “continue”, “outlook” and “guidance”, or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs. The Company continues to distinguish between outlook and guidance. Guidance statements relate to the current financial year. Outlook statements relate to years subsequent to the current financial year.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company’s actual results, performance and achievements to differ materially from statements in this presentation. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits and diminishing quantities or grades of Ore Reserves, political and social risks, changes to the regulatory framework within which the Company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward looking statements are based on the Company’s good faith assumptions as to the financial, market, regulatory and other relevant environments that will exist and affect the Company’s business and operations in the future. The Company does not give any assurance that the assumptions will prove to be correct. There may be other factors that could cause actual results or events not to be as anticipated, and many events are beyond the reasonable control of the Company. Readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in this release speak only at the date of issue. Except as required by applicable laws or regulations, the Company does not undertake any obligation to publicly update or revise any of the forward looking statements or to advise of any change in assumptions on which any such statement is based.

Non-IFRS Financial Information

Newcrest results are reported under International Financial Reporting Standards (IFRS) including EBIT and EBITDA. This release also includes non-IFRS information including Underlying profit (profit after tax before significant items attributable to owners of the parent company), All-In Sustaining Cost (determined in accordance with the World Gold Council Guidance Note on Non-GAAP Metrics released June 2013), AISC Margin (realised gold price less AISC per ounce sold (where expressed as USD), or realised gold price less AISC per ounce sold divided by realised gold price (where expressed as a %), Interest Coverage Ratio (EBITDA/Interest payable for the relevant period), Free cash flow (cash flow from operating activities less cash flow related to investing activities), EBITDA margin (EBITDA expressed as a percentage of revenue) and EBIT margin (EBIT expressed as a percentage of revenue). These measures are used internally by Management to assess the performance of the business and make decisions on the allocation of resources and are included in this release to provide greater understanding of the underlying performance of Newcrest’s operations. The non-IFRS information has not been subject to audit or review by Newcrest’s external auditor and should be used in addition to IFRS information.

Ore Reserves and Mineral Resources Reporting Requirements

As an Australian Company with securities listed on the Australian Securities Exchange (ASX), Newcrest is subject to Australian disclosure requirements and standards, including the requirements of the Corporations Act 2001 and the ASX. Investors should note that it is a requirement of the ASX listing rules that the reporting of Ore Reserves and Mineral Resources in Australia comply with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code) and that Newcrest’s Ore Reserve and Mineral Resource estimates comply with the JORC Code.

Competent Person's Statement

The information in this report that relates to Golpu Mineral Resources is based on information compiled by the Competent Person, Mr David Finn, who is a member of The Australasian Institute of Mining and Metallurgy. Mr David Finn, is a full-time employee of Newcrest Mining Limited or its relevant subsidiaries and holds options and/or shares in Newcrest Mining Limited. Mr David Finn has sufficient experience which is relevant to the styles of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code 2012. Mr David Finn consents to the inclusion of material of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Golpu Ore Reserves is based on information compiled by the Competent Person, Mr Pasqualino Manca, who is a member of The Australasian Institute of Mining and Metallurgy. Mr Pasqualino Manca, is a full-time employee of Newcrest Mining Limited or its relevant subsidiaries, holds options and/or shares in Newcrest Mining Limited and is entitled to participate in Newcrest's executive equity long term incentive plan, details of which are included in Newcrest's 2017 Remuneration Report. Ore Reserve growth is one of the performance measures under that plan. Mr Pasqualino Manca has sufficient experience which is relevant to the styles of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code 2012. Mr Pasqualino Manca consents to the inclusion of material of the matters based on his information in the form and context in which it appears.