

Stage 1 of Cadia Expansion Project approved to proceed

The Newcrest Board has approved to Execution phase the first of two stages in the Cadia Expansion Project. The first stage comprises commencement of the next cave development (PC2-3) and an increase in the nameplate capacity of the process plant to 33mtpa. The second stage, which is in Feasibility Study, is focussed on a further increase in processing capacity to 35mtpa and recovery rate improvement projects.¹

The two stages of the Cadia Expansion Project, with an estimated total capital cost of \$865m^{1,3}, are summarised as follows:

- Stage 1, approved from Feasibility Study to Execution:
 - Estimated capital cost of \$685m
 - Comprises PC2-3 mine development, materials handling system upgrades, associated infrastructure and the initial works to increase plant capacity to 33mtpa
 - PC2-3 mine targeting first production in FY23;
- Stage 2, in Feasibility Study:
 - Estimated capital cost of \$180m
 - Comprises further plant expansion to 35mtpa and recovery improvements targeting completion in late FY22, which is prior to the completion of PC2-3 mine development.

The rate of ore mined from Cadia is expected to vary over time according to draw rates, cave maturity and cave interaction as further caves are developed. From FY27 onwards, life of mine (LOM) Cadia mining rates are generally expected to be in the range of 33-35mtpa, with an average of 34mtpa used for financial evaluation purposes. Gold recovery improvements resulting from Stages 1 and 2 are expected to achieve LOM gold recovery rates of around 80% and copper recovery rates of around 85%.

Based on latest estimates by the Company and separate to the Cadia Expansion Project capital, the replacement of the Concentrator 1 SAG mill motor is planned to occur in the second half of FY21.

Summary of estimated financial outcomes from both stages^{1,2,3}

- Expected Net Present Value (NPV) of \$1,170m (real)
- Internal Rate of Return (IRR) of 21.5%
- Payback 7.6 years

Key improvements over the 2018 Pre-Feasibility Study (PFS)^{1,2,3}

- Gold recoveries are expected to be higher, at ~80% LOM
- Copper recoveries are expected to be higher, at ~85% LOM
- Additional 1.8moz of gold and 67kt of copper production expected over LOM
- Increase in estimated free cash flow generation of \$800m over LOM

¹ Stage 1 of the Cadia Expansion Feasibility Study has been prepared with the objective that its findings are subject to an accuracy range of $\pm 15\%$. Stage 2 has been completed to a Pre-Feasibility Study level with its findings at an accuracy range of $\pm 25\%$. The findings in the Study and the implementation of the Cadia Expansion Project are subject to all necessary approvals, permits, internal and regulatory requirements and further works. The estimates are indicative only and are subject to market and operating conditions. They should not be construed as guidance.

² The production targets underpinning the estimates are contained in the graphs on page 3 under the heading "indicative production profiles". The production targets are based on utilisation of 100% of the Cadia East Ore Reserves, being 21Moz Probable Reserves as at 31 December 2018 (see release titled "Annual Mineral Resources and Ore Reserves Statement – 31 December 2018" dated 14 February 2019), but subject to depletion for the period since 1 January 2019.

³ As Cadia is an AUD functional currency operation, the Studies have been assessed in AUD and the outcomes in this market release have been converted to USD using an exchange rate of AUD/USD 0.75.

Newcrest Managing Director and Chief Executive Officer, Sandeep Biswas, said “This expansion plan is an improvement on the previous 2018 Pre-Feasibility Study, with an estimated additional 1.8moz of gold production and 67kt of copper production and an estimated \$800m increase in projected free cash flow generation by Cadia over its life. The capital investment has an estimated 21.5% rate of return and ensures Cadia remains a Tier One asset for many years to come.”

Life of Mine key statistics^{1,2,3}

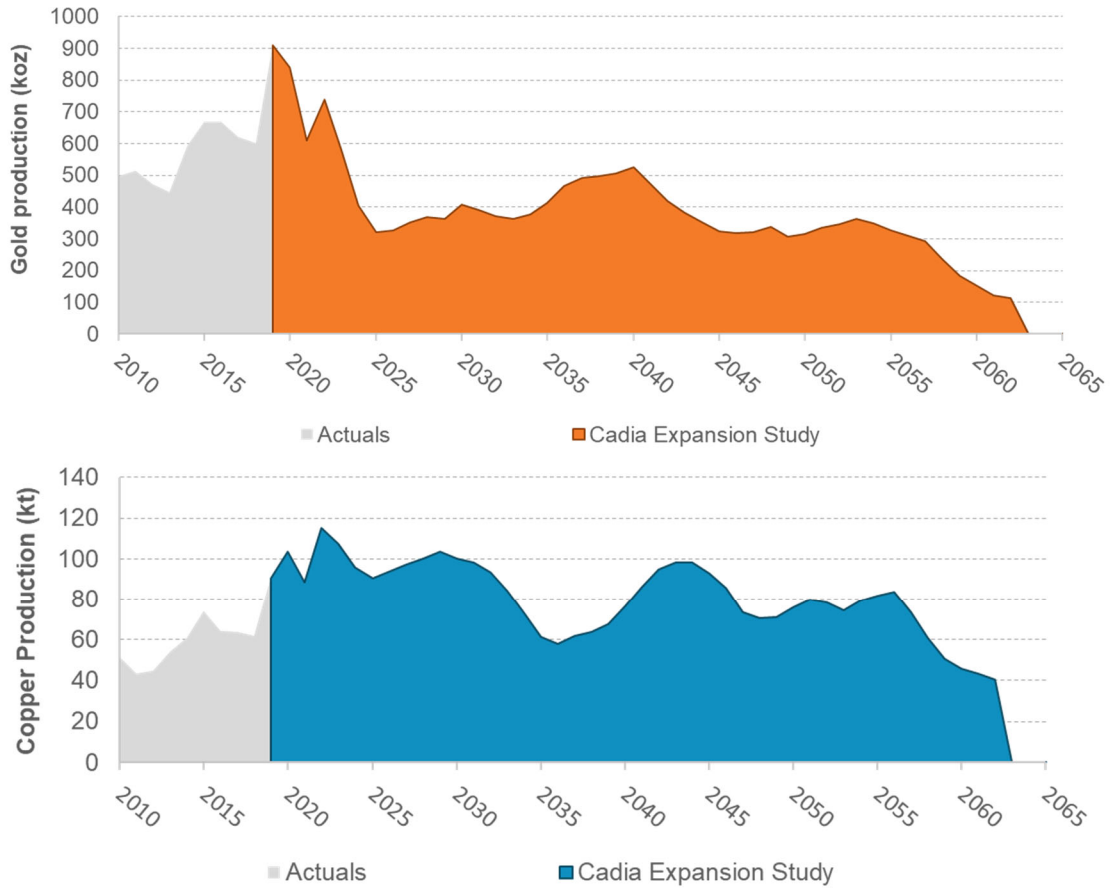
Area	Measure	Unit	Restated FY18 PFS LOM ⁴	FY19 Study LOM	Variance
Production	Ore milled / throughput (from FY27)	Mtpa	33	34	1
	Life of Mine (LOM)	Years	44	45	1
	Ore mined (LOM)	Mt	1,337	1,370	33
	Average gold grade (LOM)	g/t	0.48	0.46	(0.01)
	Average copper grade (LOM)	%	0.30%	0.30%	0.00%
	Gold produced (LOM)	koz	14,594	16,379	1,786
	Copper produced (LOM)	kt	3,405	3,472	67
	Average annual gold production (LOM)	koz	332	381	49
	Average annual copper production (LOM)	kt	77	81	4
	Gold recoveries (LOM)	%	71%	80%	9%
	Copper recoveries (LOM)	%	84%	85%	1%
Capital	Stage 1 Capital	\$m (nominal)	642	685⁵	43
	Stage 2 Capital	\$m (nominal)	N/A	180	180
	Total capital, sustaining & major (LOM)	\$m (real)	6,676	7,171	495
Operating	Total operating cost (LOM) ⁶ (real)	\$/t	11.76	12.14	0.38
	All-In Sustaining Cost (LOM)	\$/oz sold	43	75	32
Economic assumptions	Gold price	\$/oz	1,250	1,250	0
	Copper price	\$/lb	3.00	3.00	0
	Long term exchange rate	AUD/USD	0.75	0.75	0
	Discount Factor	% (real)	4.75	4.75	0
Financials	Free cashflow LOM (real)	\$m	9,672	10,475	803

⁴ 2018 PFS LOM has been restated to remove actual FY19 production and align the underlying calculation of tax to a nominal basis

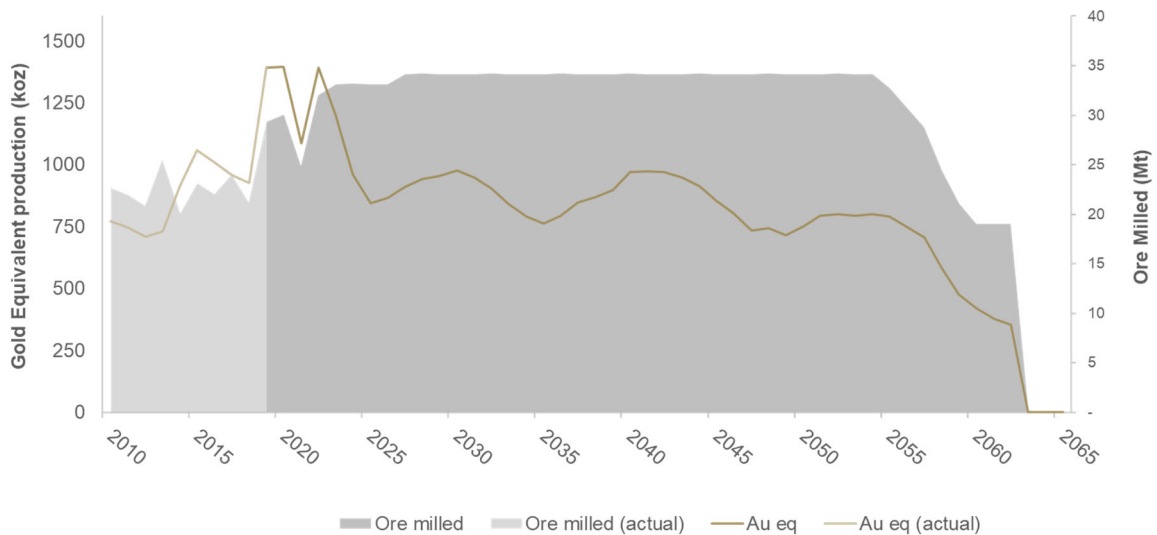
⁵ Project capital values are shown net of the revenue derived from pre-commercial production ounces

⁶ Total operating costs include mining costs, processing costs, infrastructure costs and general and administrative costs

Indicative production profile^{1,7,8}



Ore milled and Gold Equivalent production by year^{1,9}



⁷ The production profile is based on utilisation of 100% of the Cadia East Ore Reserves, being 21Moz Probable Reserves, as at 31 December 2018 (see the release titled “Annual Mineral Resources and Ore Reserves Statement –31 December 2018” dated 14 February 2019), but subject to depletion for the period since 1 January 2019.

⁸ For financial evaluation purposes, the projected mine and throughput rates post completion of the expansion are shown at the midpoint of this 33-35mtpa range.

⁹ Assumptions include: Gold price of US\$1,250/oz, copper price of US\$3.00/lb, AUD:USD exchange rate of 0.75. Recovered Gold & Copper Production as provided in the charts above under the heading “Indicative production profile” as indicative of the forward metal sales profile. Gold-equivalent production (by-product basis) = Recovered Au oz+ (Cu Price \$US/lb) x 2204.62 / (Au Price US\$/oz) x (Recovered copper tonnes as provided in the chart above, as indicative of the forward production profile). Gold grades are as set out in the indicative mine production profile on page 5 under the heading “Indicative mine production profile”. Based on LOM Au recovery of approximately 80% and approximately 85% for Cu. In the Company’s opinion, all elements included in the above metal equivalents calculation have a reasonable potential to be recovered and sold.

Mine development and sequence^{1,2}

Panel Cave	Start Construction	First production	Ore (mt)
PC2-3 (approved to execution)	FY19	FY23	142
PC1-2	FY22	FY25	408
PC3-1	FY33	FY36	149
PC2-4	FY42	FY44	113
PC5001	FY44	FY47	96
PC1-4	FY48	FY50	175
PC2-5	FY51	FY54	35

Total capital expenditure for the development of PC2-3 is estimated to be around \$595m, with first production expected in FY23. The timing of PC2-3's development is expected to ensure that the total Cadia mine production rate is sustained above 30mtpa as production from the currently operational PC1 and PC2 begins to decline from FY24.

The Feasibility Study for PC2-3 recommended several mine design changes from the PFS, including:

- The relocation of the crushing and materials infrastructure to the eastern side of the footprint which has lower exposure to potential seismic activity, thereby enhancing the safety of personnel and reliability of the operation
- An increase in the number of extraction drives (from nine to fourteen)
- A reduction in operational constraints which is expected to increase production rates from 13 to 15mtpa.

The Feasibility Study incorporates a change in cave establishment technique from a low lift advanced undercut to a high lift, post undercut panel cave (the method used in PC1) with intensive preconditioning. The key changes from the PFS include:

- Incorporation of additional hydrofracturing into the cave establishment methodology
- A 20m high undercut blast zone, 15m higher than in the PFS
- A further 30m of focused intensive blast preconditioning has been introduced to the design, bringing the total blasted height to 50m.

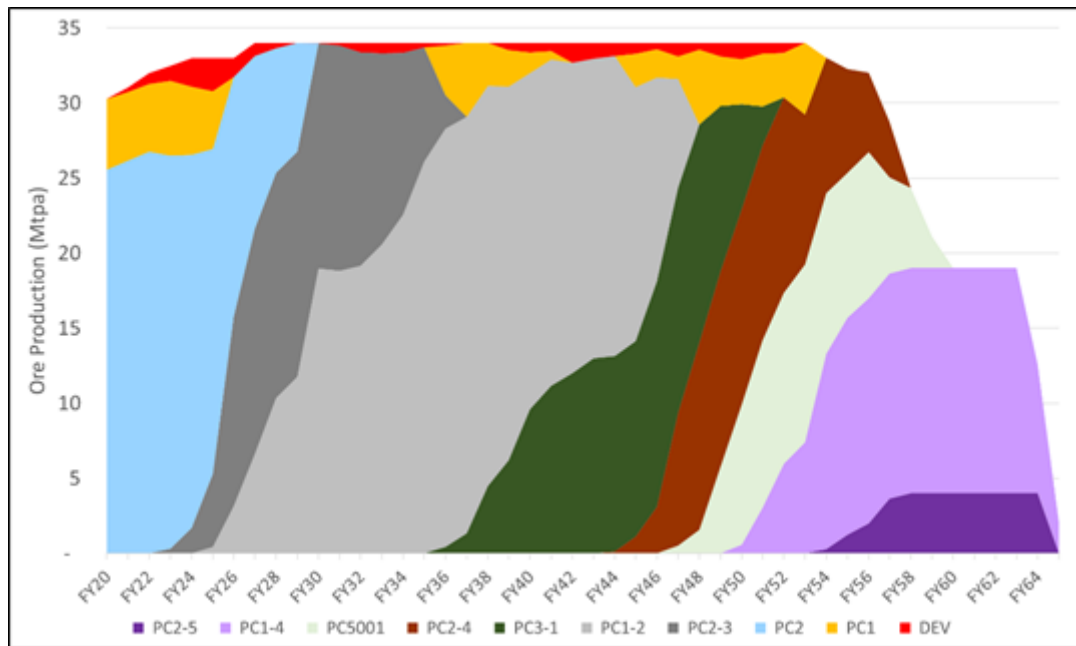
The planned approach to cave establishment improves cave ramp-up productivity by engineering out the amount of oversized material reporting to drawpoints early in the mine life, thereby reducing secondary breakage requirements, increasing effective production time, reducing costs and minimising personnel exposure to the activity of addressing oversized material. It is anticipated that these changes will enhance the production profile of PC2-3 with an additional 4.5mt of ore extraction over the first five years of mine life when compared to the PFS approach.

The PC2-3 cave is expected to take approximately five years to reach its maximum production capacity from the time of the blasting of the first drawbell. During steady state production, PC2-3 is expected to produce at a rate of up to 15mtpa, which is an increase of 2mtpa compared to the PFS. Changes to the footprint layout increase the total mine inventory of PC2-3 by ~20mt, with some of this increase coming from low grade areas resulting in a reduction in the net average grade for the cave.

Separate to the Cadia Expansion Study, Newcrest has also progressed to PFS stage the study pertaining to development of the next cave following PC2-3 (referred to as PC1-2). This PFS for PC1-2 will continue to incorporate the knowledge gained in PC2-3 as well as further advance the introduction of Newcrest's NextGen Caving techniques. The PFS for PC1-2 is expected to be completed in calendar year 2021.

The following chart shows the expected profile of ore source by block cave development over the life of the Cadia mine.

Indicative ore production profile^{1,2,10}



Indicative mine production profile^{1,2,11}

Year	Ore Source	Total material movement (mt)	Plant Feed (mt)	Average Gold Grade (g/t)	Average Copper Grade (%)
FY20-22	PC 1 & PC2	~92	~87	1.0	0.4
FY23-25	PC1, PC2, PC2-3, PC1-2	~99	~99	0.5	0.3
FY26-28	PC2, PC2-3, PC1-2	~101	~101	0.4	0.4
FY29-31	PC2, PC2-3, PC1-2	~102	~102	0.4	0.3
FY32-34	PC2-3, PC1-2	~102	~102	0.4	0.3
FY35-37	PC1, PC2-3, PC1-2, PC3-1	~102	~102	0.5	0.2
FY38-40	PC1, PC1-2, PC3-1	~102	~102	0.6	0.2
FY41-43	PC1, PC1-2, PC3-1	~102	~102	0.5	0.3
FY44-46	PC1, PC1-2, PC3-1, PC2-4	~102	~102	0.4	0.3
FY47-49	PC1, PC1-2, PC3-1, PC5001, PC2-4	~102	~102	0.4	0.3
FY50-52	PC1, PC3-1, PC5001, PC2-4, PC1-4	~102	~102	0.4	0.3
FY53+	Remaining Ore Reserves if any, subject of ongoing study				

¹⁰ Processing volumes are expected to progressively ramp up to be in the range of 33-35mtpa, subject to ore presentation from the mine which will vary over time according to draw rates, cave maturity and cave interaction as further caves are developed. For financial evaluation purposes, the projected mine and processing volumes post completion of the expansion are shown at the midpoint of this 33-35mtpa range.

¹¹ Based on the Company's knowledge and good faith assumptions as at the date of this release. The above table will be updated on an annual basis in February each year, or sooner if there are significant changes in the underlying assumptions.

Proposed plant expansion^{1,3}

The total amount of capital expenditure associated with the plant expansion is estimated to be approximately \$270m, which includes upgrades to Concentrator circuits 1 and 2, the addition of a coarse ore flotation circuit and ancillary upgrades to equipment. Of this \$270m, \$90m has been approved as part of Stage 1 of the Cadia Expansion Project. The Stage 2 capital of \$180m continues to be subject to a Feasibility Study that is expected to be completed around the middle of calendar year 2020.

Stage 1

Concentrator 1 is currently constrained by secondary crushing motor power and SAG motor power. The plant expansion works in Stage 1 of the Cadia Expansion Project look to increase Concentrator 1 throughput in stages from 23mtpa up to 25mtpa by means of the following:

- Conveyor upgrades and installation of a new secondary crushing circuit (which together are expected to increase throughput by 1mtpa); and
- SAG Mill motor replacement to increase power from 20MW to 22MW (expected increase in throughput of 1mtpa).

The Cadia Expansion Feasibility Study recommends increasing the grind size, which allows a further 1mtpa in expected throughput of Concentrator 1 to a total rate of 26mtpa. Together with the currently installed capacity of Concentrator 2 of 7mtpa, this provides Cadia with 33mtpa of milling capacity.

The Expansion Study assumes that the Concentrator 1 SAG mill motor replacement occurs in the second half of FY21, which is earlier than assumed in the 2018 PFS. This is the primary reason for the reduction in milled tonnes in FY21.

Stage 2

Stage 2 of the Cadia Expansion Project looks to increase the combined installed design capacity of Concentrator 1 and 2 to 35mtpa and improve recoveries. Processing volumes are expected to progressively ramp up to be in the range of 33-35mtpa, subject to ore presentation from the mine which will vary over time according to draw rates, cave maturity and cave interaction as further caves are developed.

Stage 2 capital works comprise the following:

- Concentrator 1 - to maintain and improve recoveries, it is planned that additional coarse ore flotation capacity be installed on Train 1 and Train 2, complementing the existing circuit on Train 3.
- Concentrator 2 - the proposed upgrade is expected to increase the throughput from 7mtpa up to 9mtpa and increase recoveries by means of:
 - Minor conveyors upgrades
 - Replacing the existing secondary and tertiary cone crushers with more powerful units
 - Upgrades to pumps, hoppers, pipes and thickeners
 - Additional tertiary grinding capacity through new Vertimills
 - Installation of a large Jameson Cell to provide additional roughing capacity

Recovery improvements¹

Targeted improvements to gold recovery as outlined at the 2018 Investor Day have been confirmed, with the Cadia Expansion Feasibility Study completing the geometallurgical testwork necessary to better understand projected recovery rates at lower grades and recommending the following:

- Extended use of Jameson cells
- Upgrades to the gold gravity circuit
- Installation of additional coarse ore flotation
- Expansion of the flotation circuits
- Increased grinding and crushing capacity.

Based on the study findings, these improvements are expected to deliver a LOM gold recovery of ~80%, which is 9% above the rate articulated in the 2018 PFS. A 1% benefit in LOM copper recovery is also expected as a result of changes to the processing circuit. The LOM average copper recovery is now expected to be ~85%.

Permitting

Newcrest will apply for modification of Cadia's permits for the processing rates and mine expansion targeted by the Cadia Expansion Project once the engineering approach to the repair of the Northern Tailings Storage Facility (NTSF) is resolved. Obtaining a permit for the production rate increase from the currently permitted 32mtpa, and the mine life extension, remains uncertain until the NTSF is resolved. Development of PC2-3 does not require further permitting as it is generally in accordance with the existing approval.

Tailings and water usage

Cadia has continued to implement water saving efficiency measures which has resulted in net water recycling rates increasing from approximately 65-70% to approximately 85%. This higher rate of water recycling has been driven by improving the level of water recycle from the tailings thickeners in the process plant and by exceptionally high water recycle rates being delivered from the Cadia Hill open pit tailings storage facility¹².

Net external water consumption has reduced by approximately 30% over the last 18 months on a per tonne of ore milled basis. Cadia continues to pursue further water saving initiatives in the plant and optimisation of onsite bores.

The next modification to the project approval conditions to increase the capacity for the Cadia Hill open pit tailings storage facility has been submitted. It is expected that the total usable life of the Cadia Hill open pit storage facility in combination with the Southern Tailings Storage Facility is approximately 10 years, subject to ongoing approvals.

Newcrest continues to evaluate options for tailings disposal beyond the life of the existing Northern, Southern and Cadia Hill Open Pit tailings storage facilities, including consideration of alternative technological solutions that look to improve water recovery from tailings.

Estimated Project Capital Expenditure profile^{1,3,13}

	FY20	FY21	FY22	FY23	FY24+	Total
Stage 1 Capital Expenditure (\$m)	160	273	175	55	21	685
<i>PC2-3 Capital (\$m)</i>	<i>155</i>	<i>193</i>	<i>169</i>	<i>55</i>	<i>21</i>	<i>595</i>
<i>Plant Capital (\$m)</i>	<i>5</i>	<i>80</i>	<i>6</i>	<i>-</i>	<i>-</i>	<i>90</i>
Stage 2 Capital Expenditure (\$m)	5	145	30	-	-	180
Total Project Capital Expenditure (\$m)	166	419	204	55	21	865

¹² Calculated under Minerals Council of Australia "Water Accounting Framework for the Minerals Industry" guidelines section 3.6

¹³ During cave establishment, ore grade material is mined during the execution of some capital activities (development, drawbells & undercut). When this occurs both the cost of the work and the revenue derived from the work (net of all costs including mine & mill operating costs, tailings disposal costs, G&A, TCRC's and taxes as applicable) is treated as capital. Project capital values are shown net of the revenue derived from pre-commercial production ounces.

Metal price and exchange rate sensitivity analysis^{1,2}

The actual IRR of the project will vary according to the copper and gold prices realised. Base case assumptions are a gold price of \$1,250/oz, copper price of \$3.00/lb and AUD/USD exchange rate of 0.75.

The table below shows how the estimated Base Case 21.5% project IRR would vary using different price assumptions.

Scenario		IRR
Gold price per ounce	\$1,150/oz	20%
	\$1,350/oz	23%
Copper price per pound	\$2.50/lb	18%
	\$3.50/lb	24%
AUD/USD	\$0.70	24%
	\$0.80	19%

Mineral Resources and Ore Reserves

There has been no material change to Mineral Resources or Ore Reserves from that reported in the Annual Statement of Mineral Resources and Ore Reserves as at 31 December 2018. A summary of material assumptions and JORC Table 1 is provided below.

Summary of Mineral Resource

Geology and Geological Interpretation

The Cadia gold copper deposits are hosted by a late Ordovician to early Silurian volcano-intrusive complex which forms part of the larger zone of arc-related volcanic and associated intrusive rocks in the eastern Lachlan Fold Belt. Mineralisation at Cadia is hosted by the mid to late Ordovician Forest Reefs Volcanics and the underlying Weemalla Formation and by the late Ordovician to early Silurian Cadia Intrusive Complex. Post-mineral cover comprises Silurian Cadia Coach Shale and a relatively thin capping of Tertiary basalts and gravels in some areas. Recognised structural controls include the regional northwest corridor – dilation zone thought to control the emplacement of the Cadia Intrusive Complex and post-mineral faulting in two dominant orientations striking northwest and north-south.

The Cadia East deposit is hosted within the Forest Reef Volcanics and porphyry intrusions. A north-east trending mass of narrow sheet like dykes of monzonitic to dioritic compositions intrude the lower parts of the Forest Reef Volcanics at Cadia East. These intrusives are largely restricted to the eastern half of the deposit although some narrow dykes and isolated bodies of monzonite have been recognised in the western end. At the upper western end of the deposit immediately underneath the Gibb fault, isolated narrow intersections have been identified with south dipping mineralised quartz veining. These occurrences are interpreted to be the Cadia Hill Monzonite.

Mineralisation at Cadia East can be divided into two broad overlapping zones: an upper, copper rich disseminated zone and a deeper gold-rich zone associated with sheeted veins. The upper zone forms a relatively small cap to the overall mineralised envelope and has a core of disseminated chalcopryrite, capped by chalcopryrite-pyrite mineralisation. The upper zone mineralisation is stratigraphically controlled within the volcanoclastic unit. This zone is transitional to the deeper vein style mineralisation. The deeper zone is localised around a core of steeply dipping sheeted quartz-calcite-bornite-chalcopryrite-molybdenite, with the highest gold grades associated with the bornite-bearing veins. Copper and molybdenite form a mineralised blanket above and to the east of the higher grade gold envelope.

The geology model for the Cadia East deposit includes lithology, alteration, and structural faults. The structural interpretation includes the pyrite faults, Ca-La Crunch faults and Carbonate faults. Modelling of the fault planes and lithological boundaries comprises data obtained from drill core and underground mapping. The major faults

were used as estimation domains, with semi-soft boundaries implemented where geostatistical testing warranted. The factor most influencing grade continuity is that Cadia East is a porphyry copper-gold mineralisation exhibiting properties of the diffusion model.

Drilling Techniques

The drilling of the Cadia East deposit is diamond core NQ3, HQ3, and PQ. Triple tube is used to maximise core recovery. Most drill holes are collared as PQ or HQ for accurate and safe drilling. The size is then reduced at the geologist's discretion as the drill hole advances. All recent drilling is orientated.

Sampling and Sub-sampling

Data used for resource estimation is obtained from drill core, which is sampled and assayed on 2.0 metre intervals. Drill core is sampled by cutting the core in half with a diamond saw. The left hand of the cut core is placed in a calico bag, marked with the appropriate sample number and sent to the laboratory for assaying. The remaining half-core is stored in the original tray on a pallet at the core processing facility for an unspecified period and then moved to storage at the Cadia Core Farm. Sample preparation is conducted at the Newcrest Laboratory facility located in Orange and all routine drill core samples are processed on site. Pulp replicates and crushed coarse reject duplicates are routinely undertaken.

Sample Analysis Methods

Samples are routinely assayed for gold by fire assay and copper, silver, molybdenum, lead, zinc, and sulphur by ICP-OES analysis, with additional cyanide-soluble copper analysis. Comprehensive QA/QC procedures have been in place since drilling and sampling programs at Cadia East began. These processes are undertaken at both the laboratory and site that includes a combination of check samples (blind reference material, random blanks, duplicates, repeats, replicates, and second lab checks), meetings, visits, and external audits. Various primary laboratories located on Orange have been used including Newcrest Services Laboratory since June 2010, ALS-Chemex between May 2004 and May 2010, and AMDEL prior to May 2004.

Estimation Methodology

Ordinary Kriging of copper, gold, sulphur, silver, molybdenum and fluorine are undertaken directly into 20 m x 20 m x 20 m blocks. The resource model was domained utilising structural surfaces for gold, copper, silver, molybdenum and sulphur. Semi-soft boundaries were used between the Ca-La Crunch faults while the lower porphyry surface was treated as a hard boundary. The 0.1% copper grade shell was used to constrain estimation as a global domain. The fluorine estimation domains utilise the Ca-La Nth structure, the lower porphyry surface and the combined basalt lithology. Kriging Neighbourhood Analysis is used to define the search neighbourhood for all elements. All elements are estimated independently of each other. Copper and gold grades are not capped. The resource model is validated via visual, geostatistical and production reconciliation methods.

Mineral Resource Classification

The Mineral Resource has been classified as an Indicated Mineral Resource only, based on an assessment of geological confidence as a function of geological and mineralisation continuity. Grade continuity and drill hole density is assessed using Extension Variance methods, whilst the reported resources were constrained within a 'value' shell representing the limit to eventual economic extraction.

Cut-off Grade

A value algorithm is used to calculate the net smelter return (NSR) for each block using revenue and cost assumptions as at 31 December 2017. The NSR calculation takes into account Mineral Resource revenue factors, metallurgical recovery assumptions, transport costs and refining charges and royalty charges. The break even cut off value takes into account the site operating costs include mining cost, processing cost, relevant site general and administration costs and relevant sustaining capital costs. The break even cut off value equates to approximately AUD18.50/t milled.

Mining and Metallurgical methods and parameters and other modifying factors

No mining or environmental factors have been incorporated into the estimation. Metallurgical factors have been incorporated into the value algorithm which constrains the Mineral Resource classification.

Summary of Ore Reserve

Material Assumptions for Ore Reserves

A Pre-Feasibility Study was completed in 2018 to provide supporting basis for the Cadia East Ore Reserve estimate. Cadia East Panel Cave is an operating mine for the Cadia province and the Pre-Feasibility Study incorporates learnings from operational execution to date. A Feasibility Study for the PC2-3 mining block has been completed. This study provides an update for the mining plan for this specific area of the operation along with updates to the production plan, site cost and metallurgical parameters for the life of mine reserves plan. These updates did not result in any material change in the Ore Reserve estimate.

Ore Reserve Classification

The Ore Reserve classification is based on Indicated Mineral Resources with a small portion of diluting material included within the estimate due to the nature of the mining method chosen. 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.

Mining Method

The Pre-Feasibility Study completed in 2018 and current underground cave mining activities at Cadia East support the appropriateness of the selected caving mining method as the basis of the forward Ore Reserve estimate. The Feasibility Study for PC2-3 has also recommended panel caving as the mining method for this mining block. Ongoing geotechnical studies and monitoring utilising experience and data from the current underground operations provide ongoing key direction for stability, design and schedule sequence parameters.

Ore Processing

Processing of the Cadia East underground ore stream will be through Cadia's Ore Treatment Plant concentrators 1 and 2. Metal recovery is through gravity and conventional flotation to a Copper/Gold concentrate. This circuit currently processes Cadia East Material with similarly styled material to future ore sources. Cadia East is the sole source of feed for both Concentrator 1 and Concentrator 2. Production of 33mtpa is anticipated to be produced through the concentrators. While the scale of processing will position the operation among the world's largest gold mines, the technology associated with the ore processing is industry standard for this style of deposit and is already custom and practice at Cadia.

An update to the process plant infrastructure and recovery assumptions were completed during the Cadia Expansion Feasibility Study (2019) including proposed upgrades to the circuit to boost throughput and recovery. These assumptions have been validated to at least a PFS level through detailed analysis, laboratory testwork and the baseline confirmed as representative by reconciliation of production parameters to date of Cadia East ore through the currently installed processing plant. Recoveries for gold are anticipated to range between approximately 70% and 85% and recoveries of copper are expected to range between approximately 80% and 87% through the life of the project.

The construction of a molybdenum plant has been gated into execution, driven by the production schedule with grades of molybdenum expected to rise to economic levels. The molybdenum plant is planned to create a specific molybdenum concentrate sold as a separate saleable product with revenue from molybdenum included in the Ore Reserve estimation process. Fluorine is the key deleterious element for the gold/copper concentrate product with smelter penalties incurred on the basis of fluorine content. Newcrest has installed sufficient auxiliary processing facilities to remove fluorine from the final concentrate as a penalty element from sales of its concentrate.

Cut-off Grade

Cadia East Ore Reserve employs a value based cut-off by determining the NSR value equal to the relevant site operating cost. The NSR calculation takes into account Ore Reserve revenue factors, metallurgical recovery assumptions, transport costs and 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. This cost equates to a break even cut off value of approximately AUD18.50/t milled.

Estimation Methodology

Estimation of the Cadia East Ore Reserve involved standard steps of mine optimisation, mine design, production scheduling and financial modelling. Factors and assumptions have been based on operating

experience and performance in Cadia caving operations. 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 4.75% real was applied. This process demonstrated the Cadia East 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.

Material Modifying Factors

All development has mining factors for dilution and recovery applied to accurately represent the expected mined tonnes. PCBC™ software is used for cave production scheduling and estimation of grade for material drawn from the block caves. Due to the approach adopted in the resource model where low grade material is included within all mining zones, no additional mining dilution or recovery factors have been applied to the Ore Reserve estimate. This assumption is supported by the actual reconciliation between resource model and mill performance at the project to date being within an acceptable uncertainty range for the style of mineralisation under consideration.

Other Modifying Factors

Modifications to this Project Approval under the NSW Environmental Planning and Assessment Act 1979 (EP&A Act) will be required over the life of the Ore Reserves period with the storage of tailings and efficient recovery of water a key consideration. Studies to finalise the engineering approach to the repair of the current NTSF and to determine the long term tailings storage beyond the current facilities are ongoing and will be submitted for modification as required over the life of the asset. Studies that look to improve water recovery from tailings, including the use of alternative technologies, are also ongoing.

JORC Code 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	Data used for resource estimation is obtained from drill core (PQ, HQ, NQ), which is sampled and assayed on 2.0 metre intervals. Drill core is sampled by cutting the core in half with a diamond saw; this ensures sample representivity. The left hand of the cut core is placed in a calico bag, marked with the appropriate sample number (generated in acQuire) and sent to the laboratory for assaying. The remaining half-core is stored in the original tray on a pallet at the core processing facility for an unspecified period and then moved to storage at the Cadia Core Farm where a GPS location of the trays is stored within Newcrest's computer network.
Drilling techniques	The drilling of the Cadia East deposit is diamond core NQ3 (47.6 mm core diameter), HQ3 (63.5 mm core diameter) and PQ (85 mm core diameter). Triple tube is used to maximise core recovery. Most drill holes are collared as PQ or HQ for accurate and safe drilling. The size is then reduced at the geologist's discretion as the hole advances. All recent drilling is orientated using either the BallMark® orientation system or the ACE electronic (accelerometer) tool.
Drill sample recovery	Core recovery is recorded as a measure of the drill run against the actual core in tray, and stored in an acQuire software database. Triple tube is used to maximise core recovery. There are only minor zones of lost core or poor core recovery. In total, not including the surface core to 20 metres depth, the average recovery equates to 99.5%.
Logging	The majority of diamond drill holes are geologically and geotechnically logged in entirety. The geologist logs the diamond drill core for lithology, alteration, structure, mineralisation and geotechnical parameters. All core is logged and photographed after marking up metre intervals and prior to cutting and sampling. Logging data are entered into the acQuire database via a laptop computer or historically via manual data entry. Logging intervals have been 1 m historically for various drilling programmes from 1993 to 2000. Subsequent to these programmes lithology has been logged with intervals derived from combinations of rock type, alteration, structure, and mineralization. Hyperspectral imaging of selected drill core for type sections have been undertaken to assist in alteration modelling.
Sub-sampling techniques and sample preparation	Core samples are half core. Sample preparation is conducted at the Newcrest Laboratory facility located in Orange and all routine drill core samples are processed on site. Sample preparation for analysis is as follows: Samples are dried in an oven at 105°C for several hours. All of the samples are crushed to 2 mm maximum diameter by a Boyd crusher and split to a maximum weight of 3 kg using a rotary sampler. Each 3 kg sample is pulverised using a Labtechnics LM5 pulverizing mill to specified grind parameters of 90% passing 106 µm. A 250 g sub-sample is collected for analysis and

Criteria	Commentary
	submitted to the assay laboratory. From the 250 g sample, 2 x 30 g samples are created for fire assay and ICP-OES analysis. Pulp replicates and crushed coarse reject duplicates are routinely undertaken (1 in 20 samples). The sampling protocols are adequate to ensure representivity of porphyry copper-gold type mineralisation.
Quality of assay data and laboratory tests	<p>Since June 2010 Newcrest Services Laboratory (Orange, NSW) has been the primary laboratory used for assaying. Prior to this ALS-Chemex (Orange) was used between May 2004 and May 2010. AMDEL (Orange) was used as the primary laboratory for assaying till May 2004. ALSChemex (Orange) is now our second laboratory for check assaying of samples. Check assays have also been completed at Genalysis (Townsville) and ALS-Chemex (Townsville) in the past.</p> <p>Samples are routinely assayed for gold, copper, silver, molybdenum, lead, zinc, sulphur and cyanide-soluble copper. Gold analysis is by fire assay with 30 g charge and Atomic Absorption Spectroscopy (AAS) finish and detection limit of 0.01 ppm (g/t).</p> <p>Newcrest resource development QA/QC procedures have been in place since drilling and sampling programs at Cadia East began. All data received are checked and verified in accordance with the Newcrest Resource Management QA/QC and database management procedures. A monthly report is created to highlight current successes and issues. This report is issued to the laboratory and Newcrest management.</p> <p>The laboratory QA/QC currently involves analysis of the following.</p> <ul style="list-style-type: none"> • Blind reference material (standards) at a rate of one in twenty samples or one per batch, whichever is more. • Random Blank samples (Silurian samples or quartz pebbles sourced from local landscape suppliers). • Duplicates from the Boyd crusher coarse splits. • Duplicates from the LM5 pulveriser pulp. • Checks on grind and crush size from the sample preparation stage. • Replicate submissions of pulps to an alternate laboratory for analysis. • Visits to the laboratory and random laboratory audits to confirm procedures are in place and applied/executed correctly. • Monthly QA/QC meetings with laboratory personnel to discuss results, procedures, issues arising. • Analysis of received sample weights. • External audits of QA/QC. <p>Cadia procedures include:</p> <ul style="list-style-type: none"> • Visits to the laboratory for confirmation of actual procedures applied. • Monthly QA/QC meetings with laboratory personnel. • External audit of QA/QC. Cadia East QA/QC dates from 2000 to 2009. • From 2005, five standards manufactured from Cadia East material and prepared by Ore Research have been used. Three new standards generated and certified in 2015 for gold, copper, silver, molybdenum, and sulphur. • The gold and copper standards performed well with no systematic biases present. Standard performance in general varies between -1 and +1 standard deviation. • Sulphur standards in general exhibited a negative grade bias and underperformed till December 2014. From this point sulphur standards continually exhibit a positive bias. • Duplicates show around 60% of the gold population has a relative paired difference (RPD) below 10%, unlike copper that has in excess of 95% below 10%. • Repeat assays at 1 in 20 from the Boyd crusher are regularly analysed for gold, copper and sulphur. No issues are observed in the repeat assay analysis. • Pulps from two complete drill holes were re-submitted to a second laboratory. Results confirmed good repeatability between the laboratories with no systematic bias apparent.
Verification of sampling and assaying	<p>As Cadia East is a bulk underground producing mine with relatively low grade variability (copper-gold porphyry), verification of significant intersections by independent/alternative personnel nor use of twinned holes is deemed necessary.</p> <p>All data and interpretative inputs to Mineral Resource estimates are checked and verified in accordance with a range of Newcrest standard operating procedures. Diamond drill core samples are processed in-house using a dedicated core processing facility, sample preparation and analytical laboratory. All resource logging data is automatically uploaded to the resource database via logging notebook computers. Newcrest employs a centralised resource drill hole database team to check, verify and validate new data and to ensure the integrity of the total resource database.</p>

Criteria	Commentary
	<p>Day-to-day management of the resource data is undertaken by the database administrator on site using the acQuire database system. Prior to resource estimation a centralised resource team conducts further data checks to ensure data integrity prior to estimation. The 2012 resource model flagged issues with Ag assays and detection limits for a range of drill holes. The 2016 resource model addressed these issues by validating the database against the original hard copy results. This saw the removal of negative values, correction of values below detection limit and correction of the raw assay values in the database to reflect that of the original hard copy. In addition, a campaign of re-assaying of stored pulps for silver was undertaken to bring the precision levels for silver assays to industry standard for Mineral Resource and Ore Reserve reporting.</p> <p>Regular internal and external reviews of all geological and Mineral Resource estimation processes are conducted to check the quality and integrity of these procedures. No adjustments have been made to assay data.</p>
Location of data points	<p>Majority of drill hole collars are recorded by mine surveyors and loaded by the database administrator, validated by supervising geologist. Drill holes that require high accuracy are set up by mine surveyors before commencement of drilling.</p> <p>Drill holes are normally surveyed using a combination of electronic and gyroscope survey tools. Currently, single shot surveys using the Ranger EMS system are completed at 30 m intervals downhole, unless an increase in downhole monitoring is required. This system provides a rudimentary control on the drill hole path. Multi Shot EMS Surveys using the Reflex system are conducted at end of hole or during a drill bit or core diameter change as the drill hole is drilled.</p> <p>Where drilling angles have permitted, recent holes have been gyroscope surveyed as close to the end of hole as possible. Where Gyro surveys were not taken due to poor access or unavailability, the Multishot surveys are checked, edited if required and smoothed with a 5 point smoothing formula.</p> <p>The Cadia East grid and coordinate system is consistent across Cadia. The grid is aligned at 30 degrees to the east of true north and at 19 degrees to the east of magnetic north.</p> <p>Surface topography across the Cadia East area is based on a combination of theodolite surveyed ground pick-ups and air photogrammetry. Photogrammetry is levelled by ground surveyed points. The data are considered accurate to within 500 mm.</p>
Data spacing and distribution	<p>As Cadia East is a producing orebody and a classified Mineral Resource, data spacing for reporting of Exploration Results is not applicable.</p> <p>The data spacing varies from 20 m x 20 m to 200 m x 200 m. In current caving operations the drill hole spacing is 60 m x 60 m. Cadia East is a copper-gold porphyry deposit mined on a bulk underground scale with grade distributions characterised by low nugget effects and long variogram ranges. As such the data spacing is sufficient to establish the degree of geological and grade continuity appropriate for Indicated Mineral Resource and Probable Ore Reserve classification.</p> <p>Drill hole data are 10 m downhole composited for geological interpretation and grade estimation. No other type of samples (e.g. grabs) nor compositing have been applied.</p>
Orientation of data in relation to geological structure	<p>Gold and copper mineralisation at Cadia East is predominately hosted in a sheeted quartz vein system that strikes East-West and dips 75° towards the north. Majority of the drill programs conducted prior to 2012 are surface drill holes and drilled orthogonal to the vein system orientation (North to South or South to North).</p> <p>Drill holes since 2012 are underground sub-vertical primarily for preconditioning of Panel Cave 1 Stage 1 and Panel Cave 2 Stage 1. These holes are assayed and used in resource estimates. In addition, horizontal infill holes are drilled occasionally from underground to map major structures and provide grade confidence for production reliability.</p> <p>There does not appear to be any bias between drilling orientation and assay results.</p>
Sample security	<p>Samples are transported from drill site to the core shed by the drilling contractor. On completion of cutting the core, the samples are dispatched by courier to the Newcrest Laboratory in Orange. Sample dispatches are reconciled against Laboratory samples received and discrepancies reconciled by geology staff.</p>
Audits or reviews	<p>Independent external reviews of sampling techniques have been undertaken in the past with no fatal flaws identified.</p>

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	<p>The Cadia East copper-gold deposit is located approximately 20 km south-west of Orange in central NSW.</p> <p>Cadia East is situated within ML1405, granted 5 Oct 1996 and covering 3116 ha. Leases are wholly owned by Newcrest. Infrastructure relating to mining of the deposit is also contained within ML1481, granted 8th March 2001 covering 584.1 ha., ML1689, granted 11 Sept 2012 covering 153.6 ha., and ML1690, granted 10 Sept 2013 covering 70.4 ha</p>
Exploration done by other parties	<p>Gold was discovered in the Cadia Valley in 1851. Little Cadia was discovered and excavated a short distance by Samuel Stutchbury (Government Geologist) in May 1851. Mining occurred by the Canobolas Copper Mining Company from 1856 to 1861. Activity commenced in 1856 at the Cadiangullong Mine. The Scottish Australian Mining Company leased the land in July 1861. Mining commenced in October 1861. The erection of a smelter established a focus for the mine and a village arose for the mine and smelter workers. During the period from the 1870's to the turn of the century, the local population was largely sustained by small scale gold mining and brief periods of copper mining but never on a scale similar to the 1860s.</p> <p>In 1899 the Scottish Australian Mining Company turned to possible exploitation of the iron ores at Big Cadia. The lease at Big Cadia was confirmed in November 1907, but required the construction of a branch rail line from Spring Hill to Cadia. In February 1908, Carne reported that the principal focus of the Syndicate was to exploit the secondary copper ore under the Big Cadia (Iron Duke) iron lode. Other lodes in the area were being mined for sulphide ore for fluxing. Mining peaked during 1913 but closed down in 1914 when WW1 broke out. Intermittent mining was carried out until 1917 when the mine was permanently closed.</p> <p>Modern era exploration at Cadia was prompted by its proximity to the Cadia mineralised district, and in particular by the recognition of magnetic features, which can easily be interpreted as westward extensions or repetitions of the magnetic anomaly over the magnetite skarn at Big Cadia. In 1985, Homestake Australia drilled two percussion holes to a depth of 95 metres to test a magnetic anomaly with poor results.</p> <p>The Cadia area was acquired by Newcrest in 1991. After initially exploring the Big Cadia (Iron Duke) skarn, the focus changed to Cadia Hill. The recognition of the porphyry-style system, partially obscured by post mineral Silurian sediment cover, resulted in a core drilling programme with the discovery hole being drilled in 1992. At the same time an extensive halo of low grade mineralisation was delineated to the northwest of the deposit confirming the northwest – southeast alignment of mineralisation.</p>
Geology	<p>The Cadia gold copper deposits are hosted by a late Ordovician to early Silurian shoshonitic volcano-intrusive complex which forms part of the larger zone of arc-related volcanic and associated intrusive rocks in the eastern Lachlan Fold Belt. Mineralisation at Cadia is hosted by the mid to late Ordovician Forest Reefs Volcanics and the underlying Weemalla Formation and by the late Ordovician – early Silurian Cadia Intrusive Complex (CIC). The CIC is a multi-phase alkalic intrusive suite petrographically ranging from gabbro to syenite with volumetric dominance by monzonite and diorite. All mineralisation in the Cadia area is thought to be related to igneous and hydrothermal fluids derived from this complex of intrusive rocks. Post-mineral cover comprises Silurian Cadia Coach Shale and a relatively thin capping of Tertiary basalts and gravels in some areas. Recognised structural controls include the regional northwest corridor – dilation zone thought to control the emplacement of the CIC and post-mineral faulting in two dominant orientations: northwest striking faults including the PC40 fault through the Big Cadia skarn deposit and the North Fault at Ridgway; and north-south faults typically west over east thrust systems including Cadiangullong and Gibb Fault.</p> <p>The Cadia East deposit is hosted within the Forest Reef Volcanics (FRV) and porphyry intrusions. A north-east trending mass of narrow sheet like dykes of monzonitic to dioritic compositions intrude the lower parts of the FRV at Cadia East. These intrusives are largely restricted to the eastern half of the deposit although some narrow dykes and isolated bodies of monzonite have been recognised in the western end. At the upper western end of the deposit immediately underneath the Gibb Fault, isolated narrow (10 m) intersections have been identified with south dipping mineralised quartz veining. These occurrences are interpreted to be the Cadia Hill Monzonite.</p> <p>Mineralisation at Cadia East can be divided into two broad overlapping zones: an upper, copper rich disseminated zone and a deeper gold-rich zone associated with sheeted veins. The upper zone forms a relatively small cap to the overall mineralised envelope and has a core of disseminated chalcopyrite, capped by chalcopyrite-pyrite mineralisation. The upper zone mineralisation is stratigraphically controlled within the volcanoclastic unit. This zone is transitional to the deeper vein style mineralization. The deeper zone is localised around a core of steeply dipping sheeted quartz-calcite-bornite-chalcopyrite-molybdenite, with the highest gold grades associated with the bornite-bearing veins. Copper and molybdenite form a mineralised blanket above and to the east of the higher grade gold envelope.</p>

Criteria	Commentary
Drill hole Information	No exploration results are reported in this release, therefore this section is not relevant. The treatment of drill data has been articulated in Section 1.
Data aggregation methods	No exploration results are reported in this release, therefore this section is not relevant. Drill hole data are downhole composited to 10 m and used in the Mineral Resource estimate in entirety.
Relationship between mineralisation widths and intercept lengths	No exploration results are reported in this release, therefore this section is not relevant. Drill hole data are downhole composited to 10 m and used in the Mineral Resource estimate in entirety.
Diagrams	No exploration results are reported in this release, therefore this section is not relevant.
Balanced reporting	No exploration results are reported in this release, therefore this section is not relevant.
Other substantive exploration data	No exploration results are reported in this release, therefore this section is not relevant.
Further work	No exploration results are reported in this release, therefore this section is not relevant.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
Database integrity	Data are stored in an SQL acquire database. Assay and geological data are electronically loaded into acQuire and the database is replicated in Newcrest's centralised database system in Melbourne. Regular reviews of data quality are conducted by site and corporate teams prior to resource estimation, in addition to external reviews.
Site visits	The Competent Person for the Mineral Resource estimate is an employee of Newcrest's Melbourne corporate Resource Management group and visits Cadia on a regular basis.
Geological interpretation	The geology model for the Cadia East deposit includes lithology and major structural faults. The structural interpretation was updated from the 2012 model for the pyrite faults, Ca-La Crunch faults and Carbonate faults across the Cadia East deposit. Modelling of the fault and lithological boundaries/planes comprised of data obtained from drill core and underground mapping. Alteration was also interpreted in anticipation of being used as alternative estimation domains, however, statistical testing did not give any convincing evidence of alteration being a major control on estimation domains. Similarly, lithology as estimation domains also turned out to be unconvincing. The major faults were used as estimation domains, with semi-soft boundaries implemented where geostatistical testing warranted. The factor most influencing grade continuity is that Cadia East is a porphyry copper-gold mineralisation exhibiting properties of the diffusion model, which adds high confidence in the geological interpretation.
Dimensions	The Cadia East deposit occupies a mineralised zone 2.3 km in a strike length (East – West), 1.1 km in width and 1.8 km in a vertical extent. The deposit does not outcrop as it is overlain by between 80 and 200 metres of post mineralisation sandstones and shales.
Estimation and modelling techniques	Geostatistical testing of the gold and copper grade distributions showed that the Cadia East mineralisation exhibits classical diffusion properties (where the grades transgress from the high-grade core to lower-grade peripheries in a systematic and controlled manner). Variogram models for copper and gold also exhibit low nuggets and long ranges. The coefficient of variation of copper and gold are relatively low at around 1 - 1.5 indicating that grade estimation will not be problematic. Cadia East is a bulk mining (block cave) operation, and the SMU is basically the whole panel footprint divided vertically into yearly draw increments. However, individual draw point dimensions are taken into account for local estimation precision (the mineralisation style allows so). Ordinary Kriging (OK) of copper, gold, sulphur, silver, molybdenum and fluorine are undertaken directly into 20 m x 20 m x 20 m blocks. There are no assumptions made regarding recovery of by-products. Prior to 2012 estimation domains were defined based on grade shells. Domain boundaries were treated as hard contacts. The 2012 and 2016 Resource Models were domained utilising structural surfaces for gold, copper, silver, molybdenum and sulphur. Semi-soft boundaries (20 m) were used between the Ca-La Crunch

Criteria	Commentary
	<p>faults while the lower porphyry surface was treated as a hard boundary. The 0.1% copper grade shell was used to constrain estimation as a global domain. A review of the 2012 fluorine domains was conducted as per SRK recommendation and the fluorine estimation domains for the 2016 resource model utilises the Ca-La Nth structure, the lower porphyry surface and the combined basalt lithology. Fluorine is a potentially deleterious element.</p> <p>Kriging Neighbourhood Analysis is used to define the search neighbourhood for all elements. All elements are estimated independently of each other regardless of the degree of correlation, as each element has its own grade continuity characteristics which are not necessarily reflected in the correlations.</p> <p>Copper and gold grades are not capped as Monte Carlo based Metal-at-Risk analysis indicates that all the 10 m composites are representative of the mineralisation style.</p> <p>The resource model is validated via visual, geostatistical and production reconciliation methods.</p>
Moisture	All tonnages are calculated and reported on a dry tonnes basis.
Cut-off parameters	<p>A value algorithm is used to calculate the NSR for each block using revenue and cost assumptions as of 31 December 2017.</p> <p>The NSR calculation takes into account Mineral Resource revenue factors, metallurgical recovery assumptions, transport costs and refining charges and royalty charges.</p> <p>The site operating costs include mining cost, processing cost, relevant site general & administration costs and relevant sustaining capital costs. This cost equates to a break even cut off value of approximately AUD18.50/t milled.</p> <p>Blocks above AUD18.50/t are eligible to qualify for Mineral Resource reporting.</p>
Mining factors or assumptions	<p>As Cadia East is a bulk mining operation employing panel caving, the Mineral Resource reporting does not allow a block by block classification.</p> <p>Instead a shell is generated using AUD18.50/t as the value cut-off and the contents of the shell are reported in its entirety as the Mineral Resource (provided they also classify Indicated and/or Inferred).</p>
Metallurgical factors or assumptions	Metallurgical amenability is derived from current operating Cadia Plant performance. Metallurgical factors have been incorporated into the value algorithm which constrains the Mineral Resource classification. These include recovery formulas for gold, copper, silver and molybdenum.
Environmental factors or assumptions	No environmental factors were deemed necessary for the resource estimate.
Bulk Density	All bulk density measurements are carried out in accordance with site standard procedures for Specific Gravity. Intervals for bulk density determination are selected according to lithology/ alteration/mineralisation type to best represent certain intervals as defined by the geologist. The measurements are performed on site by geologists or geological assistants as part of the logging process. Measurements are generally taken at 20 metre to 50 metre intervals down hole.

Criteria	Commentary
Classification	<p>The Mineral Resource estimate has been classified as Indicated. Criteria used to classify the resource estimate are summarised below:</p> <ul style="list-style-type: none"> • Constrained inside a AUD18.50/t value shell; <ul style="list-style-type: none"> ○ Indicated resources are constrained within the value shell. ○ Value algorithm incorporates mining, processing, transport and administration costs. Metallurgical recovery formulas are applied to all metals. • Grade continuity and drill hole density; <ul style="list-style-type: none"> ○ Classification is based on Extension Variance methods. These methods are consistent with classification approaches used at other Newcrest and joint venture sites (for similar mineralisation styles). Based on this work Indicated is defined within weighted average distances \leq100 m and/or has a gold slope of regression value of >0.75. In locations where the slope of regression criteria was fulfilled, yet the average distance exceeded 120 m, the blocks were removed from the Indicated classification. The Cadia East Resource Model does not include an Inferred Resource. • Geological and mineralisation continuity; <ul style="list-style-type: none"> ○ Mineralisation at Cadia East is a very large, diffuse, low to moderate grade porphyry related gold-copper-silver-molybdenum deposit. Aside from the Gibb Fault, structural dismemberment is negligible and does not affect continuity. <p>The resource classification methodology has been tested with geostatistical evaluations, and appropriately confirms the Competent Person's view of the deposit.</p>
Audits or reviews	<p>The current Mineral Resource estimate has been externally reviewed by SRK in December 2016 and there are no issues or concerns with the Mineral Resource inputs, process and execution. SRK conclude that the Mineral Resource estimate is suitable for reporting in accordance with the requirements of the JORC Code (2012).</p>
Discussion of relative accuracy/ confidence	<p>For an Indicated Resource it is considered reasonable for the 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. Geostatistical evaluations indicate that based on the annual processing throughput this criteria is satisfied. Relative uncertainties and confidence level estimates are considered for both gold and copper.</p> <p>Detailed monthly mine reconciliations have been maintained since production commenced. The mine reconciliations confirm that the in situ tonnage, grade and metal variances are well within the Indicated Resource relative uncertainty band.</p> <p>Overall reconciled performance of the Cadia East Ore Reserve estimate for FY19 was 100% tonnes, 100% gold metal and 102% copper metal when reconciled to mill production.</p>

Section 4 Estimation and Reporting of Ore Reserves

Criteria	Commentary
Mineral Resource Estimate for conversion to Ore Reserves	<p>Cadia East is a large low to moderate grade, porphyry related gold and copper deposit that is located immediately east of Cadia Hill and separated by a major thrust fault (the Gibb Fault). Known mineralisation extends approximately 2.3 kilometres east-west, 1.1 kilometres north-south and 1.8 kilometres vertically. The deposit does not outcrop as it is overlain by between 80 and 200 metres of post mineralisation sandstones and shales. The mineralisation can be divided into two broad overlapping zones; an upper, copper-rich, disseminated zone and, a deeper gold-rich zone associated with sheeted veins.</p> <p>The Mineral Resource grades were estimated with Ordinary Kriging of 10 m composites for six elements: gold, copper, silver, molybdenum, sulphur, and fluorine. The grades were estimated directly into 20 m x 20 m x 20 m blocks.</p> <p>The Mineral Resource is classified based on geological confidence as a function of grade continuity and drill hole density, as well as geological and mineralisation continuity. Indicated Mineral Resources were constrained within a 'value' shell representing the limit to eventual economic extraction.</p> <p>The reported Cadia East Mineral Resources are inclusive of Ore Reserves.</p>
Site Visits	<p>The Competent Person for the Ore Reserve estimate is an employee of Newcrest and is based at Cadia.</p>
Study Status	<p>A Pre-Feasibility Study was completed in 2018 to provide a supporting basis for the Cadia East Ore Reserve estimate. Cadia East Panel Cave is an operating mine for the Cadia province and the Pre-Feasibility Study</p>

Criteria	Commentary												
	<p>incorporates learnings from operational execution to date. The Pre-Feasibility Study shows that the mine plan is technically achievable and economically viable taking into consideration all material Modifying Factors.</p> <p>A Feasibility Study for the PC2-3 mining block has been completed. This study provides an update for the mining plan for this specific area of the operation along with updates to the production plan, site cost and metallurgical parameters for the life of mine reserves plan. These updates did not result in any material change in the Reserve estimate.</p>												
Cut-off Parameters	<p>The Cadia East Ore Reserve employs a value based cut-off determined from the NSR value equal to the site operating cost included within the Pre-Feasibility Study and as updated in the PC2-3 Feasibility Study.</p> <p>The NSR calculation takes into account reserve revenue factors, metallurgical recovery assumptions, transport costs, refining charges, and royalty charges.</p> <p>The site operating costs include mining cost, processing cost, relevant site general & administration costs and relevant sustaining capital costs. This cost equates to a break even cut off value of approximately AUD18.50/t milled.</p>												
Mining factors or assumptions	<p>Estimation of the Cadia East Ore Reserve involved standard steps of mine optimisation, mine design, production scheduling and financial modelling. Factors and assumptions have been based on operating experience and performance in Cadia caving operations. The basis of the analysis is considered at Pre-Feasibility Study level or higher.</p> <p>The preceding Feasibility Study (2010) and current underground cave mining activities at Cadia East support the appropriateness of the selected mining methods as the basis of the forward Ore Reserve estimate.</p> <p>Ongoing geotechnical studies and monitoring utilising experience and data from the current underground operations provide ongoing key direction for stability, design and schedule sequence parameters.</p> <table border="1" data-bbox="384 954 1374 1615"> <thead> <tr> <th>Mine Design Parameter</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Undercutting Strategy</td> <td>Advanced Undercut</td> </tr> <tr> <td>Undercut Design</td> <td>High Post Undercut for PC2-3 block. W Cut with Apex level for all other blocks.</td> </tr> <tr> <td>Extraction Level Layout</td> <td>EI Teniente</td> </tr> <tr> <td>Extraction Spacing</td> <td>32m x 20m</td> </tr> <tr> <td>Draw Column Height</td> <td>Maximum PC1 – 1200 m PC2 – 1400 m PC2-3 – 1400 m PC1-2 – 1170 m PC1-4 – 1120 m PC5001 – 850 m PC3-1 – 460 m</td> </tr> </tbody> </table> <p>The following Modifying Factors have been applied:</p> <ul style="list-style-type: none"> All development has mining factors for dilution and recovery applied to accurately represent the expected mined tonnes; and PCBC™ software is used for cave production scheduling and estimation of grade for material drawn from the block caves. <p>Due to the approach adopted in the resource model where low grade material is included within all mining zones, no additional mining dilution or recovery factors have been applied to the Ore Reserve estimate. This assumption is supported by the grade control processes undertaken and the actual reconciliation between resource model and mill performance at the project to date being within an acceptable uncertainty range for the style of mineralisation under consideration.</p> <p>The resource model is comprised of Indicated Mineral Resources only. Mine plans are based on the extraction of caving blocks solely delineated on the basis of these Indicated Mineral Resources.</p>	Mine Design Parameter	Value	Undercutting Strategy	Advanced Undercut	Undercut Design	High Post Undercut for PC2-3 block. W Cut with Apex level for all other blocks.	Extraction Level Layout	EI Teniente	Extraction Spacing	32m x 20m	Draw Column Height	Maximum PC1 – 1200 m PC2 – 1400 m PC2-3 – 1400 m PC1-2 – 1170 m PC1-4 – 1120 m PC5001 – 850 m PC3-1 – 460 m
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Undercutting Strategy	Advanced Undercut												
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Criteria	Commentary
	<p>Ore Reserves estimates and statements are required to include estimates of dilution. The dilution included in the total Ore Reserve is approximately 75Mt which is comprised of unclassified material. This is a relatively small proportion (6% of the gold metal and 5% of the copper metal) of the tabled Ore Reserve and does not have a material impact upon the estimate. As this is dilution material associated with the block cave mining method, it has been incorporated into the Ore Reserve estimate. Even without consideration of the metal contained in the dilution incorporated in the Ore Reserve, the economic analysis indicates an economic Probable Ore Reserve.</p> <p>The remaining mining zones for Cadia East are brownfields projects and will require the following mining infrastructure to support the caves:</p> <ul style="list-style-type: none"> • Ventilation fans and refrigeration equipment; • Materials handling systems extensions; • Additional crushing and conveying equipment; and • Underground workshop, service and personnel facilities.
Metallurgical factors or assumptions	<p>Processing of the Cadia East underground ore stream will be through Cadia's Ore Treatment Plant concentrators 1 and 2. Metal recovery is through gravity and conventional flotation to a copper/gold concentrate. This circuit currently processes Cadia East Material with a similarly styled material to future ore sources. Cadia East is the sole source of feed for both Concentrator 1 and Concentrator 2. Production of 33mtpa is anticipated to be produced through the concentrators. While the scale of processing will position the operation among the world's largest gold mines, the technology associated with the ore processing is industry standard for this style of deposit and is already custom and practice at Cadia with many years of operational experience.</p> <p>An update to the process plant infrastructure and recovery assumptions were completed during the Cadia Expansion Feasibility Study (2019) including proposed upgrades to the circuit to boost throughput and recovery. These assumptions have been validated to at least a PFS level through detailed analysis, laboratory testwork and the baseline confirmed as representative by reconciliation of production parameters to date of Cadia East ore through the currently installed processing plant. Recoveries for gold are anticipated to range between approximately 70% and 85% and recoveries of copper are expected to range between approximately 80% and 87% through the life of the project.</p> <p>The construction of a molybdenum plant has been gated into execution, driven by the production schedule with grades of molybdenum expected to rise to economic levels. The molybdenum plant is planned to create a specific molybdenum concentrate sold as a separate saleable product with revenue from molybdenum included in the Ore Reserve estimation process.</p> <p>Fluorine is the key deleterious element for the gold/copper concentrate product with smelter penalties incurred on the basis of fluorine content. Newcrest has installed sufficient auxiliary processing facilities to remove fluorine from the final concentrate as a penalty element from sales of its concentrate.</p>
Environmental	<p>Cadia presently holds a Project Approval for the Cadia East Project under both NSW and Commonwealth legislation until 30 June 2031. Minor amounts of waste will be generated from the Cadia East mine and these will be stored within existing waste storage facilities.</p> <p>Modifications to this Project Approval under the NSW Environmental Planning and Assessment Act 1979 (EP&A Act) will be required over the life of the life of the Ore Reserves period with the storage of tailings a key consideration. Studies to determine the long term tailings storage beyond the current facilities are ongoing and will be submitted for modification as required over the life of the asset.</p>
Infrastructure	<p>A majority of the surface infrastructure is now complete for the Cadia East mine. Additional surface infrastructure planned for the future includes:</p> <ul style="list-style-type: none"> • Additional circuit crushing & grinding capacity; and • Molybdenum plant. <p>Underground infrastructure will continue to operate over the mine life as additional mining blocks are established to maintain the mill rate. Both surface and additional underground infrastructure requirements are dictated by the production schedule.</p> <p>Provision has been made in the Ore Reserves estimate for future capital expenditure requirements relating to infrastructure during the life of the mine based on most recent estimates.</p>
Costs	<p>Capital and operating costs have been determined as part of the Pre-Feasibility Study. Updates to these costs have been completed as part of the PC2-3 Feasibility Study but have not materially altered the Ore Reserve.</p> <p>Capital cost estimates are based on multiple market prices across all technical disciplines and include processing upgrade and mine development costs along with associated infrastructure, project establishment</p>

Criteria	Commentary
	<p>and sustaining capital costs. These provisions have been allowed for during the life of the mine based on most recent Pre-Feasibility plan estimates. Contingency has also been factored into the project capital cost estimate consistent with the level of accuracy of the study.</p> <p>The operating cost estimate is based on the current operating cost base modified for changing activity levels and reasonable cost base reductions over the life of the mine. The operating costs include the mining cost, processing cost, relevant site general and administration costs. Ore Reserve cost estimates have been reviewed as part of the study execution, are reviewed annually and are considered to be to a Pre-Feasibility Study level.</p> <p>Long term metal prices and exchange rate assumptions adopted in the Pre-Feasibility 2018 are USD\$1,200/oz for gold and USD\$3.00/lb for copper at a USD:AUD exchange rate of 0.75. These assumptions are consistent with Newcrest metal price guidelines for December 2018 Ore Reserve reporting. No cost impact is expected from deleterious elements.</p> <p>Transport and refining charges have been developed from first principles consistent with the application and input assumptions for these costs used by the current operation.</p> <p>Royalties are calculated as 4% of block revenue less all off site realisation costs (TCRC's), less ore treatments costs and less one third of site general and admin cost.</p>
Revenue factors	<p>Long term metal prices and exchange rate assumptions adopted in the Pre-Feasibility Study 2018 Ore Reserve estimation process are USD\$1,200/oz for gold and USD\$3.00/lb for copper at a USD:AUD exchange rate of 0.75. These assumptions are consistent with Newcrest metal price guideline for the December 2018 Ore Reserve reporting.</p> <p>The NSR calculation takes into account reserve revenue factors, metallurgical recovery assumptions, transport costs and refining charges and royalty charges.</p>
Market assessment	<p>Newcrest is a price taker and gold is sold on the open market and subject to price fluctuations. Supply and demand for gold from Cadia is not a constraint in the estimation of the Ore Reserve.</p> <p>Cadia has sold copper concentrate for its operational life into the world concentrate markets and this is assumed to continue under conditions similar to Newcrest's current market agreements over the life of the operational plan.</p> <p>Concentrate volume forecasts were derived from the Pre-Feasibility Study production schedule.</p>
Economic	<p>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 4.75% real was applied. This process demonstrated the Cadia East Ore Reserve to have a positive NPV.</p> <p>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.</p>
Social	<p>The Cadia East project builds on the agreements and social licence for operation as developed for Ridgeway SLC and Block Cave and the Cadia Hill open pit as part of the Cadia permits and licencing. Socio-economic evaluations of Cadia incorporating community and stakeholder surveys and engagement activities and regional economic impact assessments, have shown positive impacts on employment, income, business turnover and Gross Regional Product (GRP). Cadia regularly consults and this continued engagement with the community and developing and maintaining one-on-one relationships with key stakeholders, will be vital to the maintenance of a social licence to operate.</p>
Other	<p>Cadia Holdings Pty Ltd (CHPL) holds four current mining leases covering Cadia. Cadia has a number of legal and marketing arrangements related to its ongoing operational requirements. None of these arrangements are likely to materially impact upon the Cadia East Ore Reserve estimate. Cadia are in material compliance with all legal and regulatory requirements.</p> <p>The Cadia East deposit is located in an area which has been seismically active both prior to and subsequent to mining by Cadia. These events can produce seismic loading at the site and this risk is taken into account in the design of the infrastructure.</p> <p>The storage of tailings and the efficient recovery of water during tailings placement is a requirement for the Ore Reserve. Cadia has recently experienced a failure of one of its tailings storage facilities, the NTSF. Studies to determine the storage of tailings beyond the current facilities, including components that seek to improve the recovery of water are being progressed in line with the requirements identified in the Pre-Feasibility Study and the recommendations of the NTSF Independent Technical Review Board. Modifications to the current site operating permits and licence will be submitted once these studies are complete and as required over the life</p>

Criteria	Commentary
	of the asset. This element of the plan represents a risk to the Ore Reserves if a viable tailings storage solution cannot be found.
Classification	<p>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.</p> <p>Unclassified material has been included within the Probable Ore Reserve as mined dilution due to the non-selective nature of block cave mining. This is a relatively small proportion (1.3 Moz gold or 6% & 0.2Mt copper or 5%) of the tabled Ore Reserve. Even without consideration of unclassified material in the mining inventory, the proportion of Indicated material would still conclusively deliver a Probable Ore Reserve.</p> <p>It is the Competent Person's view that the classifications used for the Ore Reserves are appropriate.</p>
Audits or reviews	<p>SRK Consulting (Australasia) Pty Ltd (SRK) was commissioned to conduct an independent review of the mining section of the Pre-Feasibility Study, which included the Ore Reserve estimation processes and results.</p> <p>SRK concluded that the Ore Reserve estimate had been prepared appropriately and has been appropriately classified as a Probable Ore Reserve. SRK identified that final cave volumes have the potential to be a material issue over the life of the Ore Reserve however current estimates are appropriate at this time.</p>
Discussion of relative accuracy/ confidence	<p>The accuracy of the estimates within this Ore Reserve is mostly determined by the order of accuracy associated with the Mineral Resource model, the geotechnical input and the cost factors used.</p> <p>The Competent Person views the Cadia East Ore Reserve as a reasonable assessment of the global estimate. Some risk and opportunity is associated with the Ore Reserve process due to the prolonged operating life of the mine. Key opportunity and risk areas are associated with:</p> <ul style="list-style-type: none"> • Cost base assumptions rely on current technology and macroeconomic factors. Changes to these assumptions will have an impact on the Ore Reserve estimate. • The Modifying Factors (key inputs) for Ore Reserve estimation rely upon the geology and geotechnical data inherent to the orebody. This data, such as geological structures and rock mass properties, is to the appropriate definition and have been applied within Pre-Feasibility Study, however further orebody data is required to confirm the geological and geotechnical information and is planned as part of the Forward Works Programme. <p>Overall reconciled performance of the Cadia East Ore Reserve estimate for FY19 was 100% tonnes, 100% gold metal and 102% copper metal when reconciled to mill production.</p>

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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 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 Cadia Ore Reserves is based on information compiled by the Competent Person, Mr Geoffrey Newcombe, who is a member of The Australasian Institute of Mining and Metallurgy. Mr Geoffrey Newcombe, 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 2019 Remuneration Report. Mr Geoffrey Newcombe 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 Geoffrey Newcombe 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 Cadia Mineral Resources is based on information compiled by the Competent Person, Mr Vik Singh, who is a member of The Australasian Institute of Mining and Metallurgy. Mr Vik Singh, 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 2019 Remuneration Report. Mr Vik Singh 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 Vik Singh consents to the inclusion of material of the matters based on his information in the form and context in which it appears.