## **Market Release**

10 December 2020



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# Initial Inferred Mineral Resource estimate for Havieron of 3.4Moz of gold and 160Kt of copper

Newcrest Mining Limited (ASX, TSX, PNGX: NCM) is pleased to announce its Initial Inferred Mineral Resource estimate at the Havieron Project which is operated by Newcrest under a Joint Venture Agreement with Greatland Gold plc (Greatland Gold) and is located approximately 45km east of Telfer in the Paterson Province, Western Australia.

The Inferred Mineral Resource estimate, assumes mining by a bulk extractable underground operation and is reported at an A\$50/t net smelter return (NSR) shell as:

- 52Mt<sup>1</sup> @ 2.0g/t Au and 0.31% Cu for 3.4Moz Au and 160Kt Cu, including geological domains for:
  - Crescent Zone containing 18Mt @ 3.8g/t Au and 0.61% Cu for 2.2Moz Au and 110Kt Cu
  - Breccia Zone containing 34Mt @ 1.1g/t Au and 0.15% Cu for 1.2Moz Au and 50Kt Cu

The Inferred Mineral Resource is centred on the South East Crescent and adjacent Breccia Zone including a portion of the Northern Breccia. Outside of the estimated Inferred Mineral Resource, mineralisation remains open with results identified from the South East Crescent and Breccia Zone, North West Crescent, Northern Breccia, and the Eastern Breccia. This indicates the possibility that the resource could continue to grow over time with additional planned drilling activity.

Newcrest Managing Director and Chief Executive Officer, Sandeep Biswas, said "It is an incredible achievement that Newcrest and our joint venture partner, Greatland Gold, have been able to deliver an Inferred Mineral Resource estimate for Havieron in such a short timeframe. This is an important milestone in the journey to fully define the potential of the Havieron Project, with drilling results outside of the mineral resource supporting the potential of a larger mineral resource over time."

### **Project Details**

The Havieron Project is operated by Newcrest under a Joint Venture Agreement with Greatland Gold. As announced on 30 November 2020, Newcrest has now met the Stage 3 expenditure requirement (US\$45 million) and is entitled to earn an additional 20% joint venture interest, resulting in an overall joint venture interest of 60% (Greatland Gold 40%). Newcrest can earn up to a 70% joint venture interest through total expenditure of US\$65 million and the completion of a series of exploration and development milestones in a four-stage farm-in over a six year period that commenced in May 2019. Newcrest may acquire an additional 5% interest at the end of the farm-in period at fair market value. The Joint Venture Agreement includes tolling principles reflecting the intention of the parties that, subject to a successful exploration program and feasibility study and a positive decision to mine, the resulting joint venture mineralised material will be processed at Telfer.

The Havieron Project is centred on a deep magnetic anomaly located 45km east of Telfer in the Paterson Province. The target is overlain by more than 420m of post mineralisation Permian cover. Newcrest commenced drilling during the June 2019 quarter and has progressively increased its drilling activities such that up to eight drill rigs are now in operation. The Inferred Mineral Resource estimate is based on a total of 125 drillholes for a total of 126,643m of drilling.

<sup>&</sup>lt;sup>1</sup> The Inferred Mineral Resource estimate is presented on a 100% basis. As announced on 30 November 2020, Newcrest has now met the Stage 3 expenditure requirement (US\$45 million) and is entitled to earn an additional 20% joint venture interest, resulting in an overall joint venture interest of 60% (Greatland Gold 40%).



Figure 1. Location of the Havieron project, approximately 45km east of Telfer, Western Australia.

#### Inferred Mineral Resource estimate<sup>1</sup>

The Havieron Inferred Mineral Resource estimate is reported as an Inferred Mineral Resource in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 (JORC Code). Refer to details in Appendix 1 for information relating to data collection and resource estimation. There are no material differences between the definitions of Inferred Mineral Resources under the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves and the equivalent definitions in the JORC Code.

Drilling has outlined an ovoid shaped zone of variable brecciation, alteration and sulphide mineralisation with dimensions of approximately 650m x 350m x 1000m trending in a north west orientation below 420m of Permian cover. Breccia mineralisation was initially identified internal to the Crescent Sulphide Zone but most recently broad zones of mineralisation have been recognised external to the Crescent Sulphide Zone on the east, northwest and southeast.

Within this ovoid shaped zone, exploration drilling has identified four key target regions, which are:

- South East Crescent and Breccia
- North West Crescent
- Northern Breccia
- Eastern Breccia

Gold and copper mineralisation at Havieron consists of breccia, vein and massive sulphide replacement gold and copper mineralisation typical of intrusion-related styles of mineralisation. Mineralisation is hosted by metasedimentary rocks (meta-sandstones, meta-siltstones and meta-carbonate) and intrusive rocks of an undetermined age. The main mineral assemblage contains well developed pyrrhotite-chalcopyrite and pyrite sulphide mineral assemblages as breccia and vein infill, and massive sulphide lenses.

The Inferred Mineral Resource estimate is restricted to the South East Crescent and Breccia Zones, and a portion of the Northern Breccia Zones to an RL of 4060m (~750m below the unconformity) where drill data provides sufficient support to define an appropriate level of geological control and statistical confidence.

Table 1. Inferred Mineral Resource estimate tabulation for the Havieron Deposit.

#### **Gold Mineral Resource:**

	Inferred Mineral Resource		
	Dry Tonnes (million)	Gold Grade (g/t Au)	Insitu Gold (million ounces)
Crescent Zone	18	3.8	2.2
Breccia Zone	34	1.1	1.2
Total Inferred Gold Mineral Resource			3.4

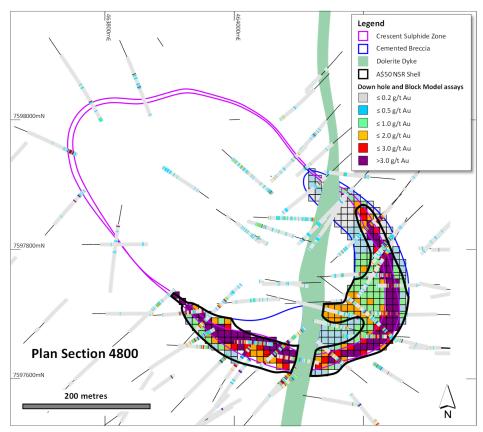
#### **Copper Mineral Resource:**

	Inferred Mineral Resource		
	Dry Tonnes (million)	Copper Grade (% Cu)	Insitu Copper (million tonnes)
Crescent Zone	18	0.61	0.11
Breccia Zone	34	0.15	0.05
Total Inferred Copper Mineral Resource			0.16

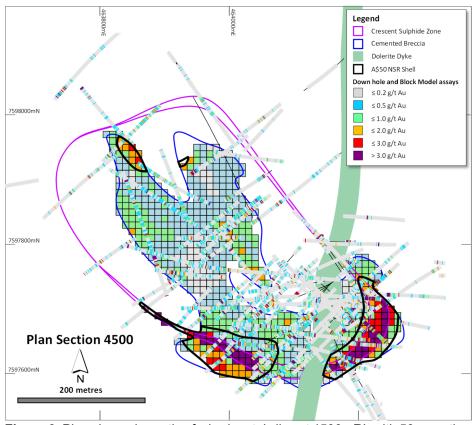
NOTE: Data is reported within an A\$50/t NSR shell to two significant figures to reflect appropriate precision in the estimate and this may cause some apparent discrepancies in totals. The NSR/t is based on a typical NSR formula that accounts for assumed metals prices of US\$1,400/oz Au and US\$3.40/lb Cu, domain-specific metallurgical recoveries of 84-94% for Au and 82-92% for Cu, a AUD:USD exchange rate of 0.75, as well as treatment and refining costs, payabilities and royalties, similar to those at Telfer.

Ordinary Kriging of 2m composites of gold and copper was undertaken into 10m x 10m x 10m x 10m blocks and re-blocked into 5m x 5m x 5m blocks. The resource model was domained utilising the geological unit of the Crescent zone, the Calcite Cemented Breccia and Actinolite Cemented Breccia. Hard boundaries were used between all three Zones. Kriging Neighbourhood Analysis was used to define the search neighbourhood for gold and copper. Gold and copper were estimated independently of each other. Composite Copper and gold grades were capped prior to estimation. The resource estimation is based entirely on interpolation. The resource model was validated via visual, statistical, and geostatistical methods.

Reasonable prospects for eventual economic extraction have been assessed through preliminary ongoing mining and processing studies which suggest that conventional bulk underground mining and processing would be appropriate for exploitation of the Havieron Project. The Inferred Mineral Resource estimate has been constrained using appropriate drill hole data spacing parameters and geological control. The Inferred Mineral Resource estimate is reported within an A\$50/t NSR value shell which assumes mass mining by sub-level caving with no internal selectivity, therefore includes internal waste. This includes shells of higher value which may be extracted through an appropriate selective mining technique in the future.



**Figure 2**. Plan view schematic of a horizontal slice at 4800mRL with 50m section width through the Crescent Sulphide Zone and breccia-hosted mineralisation, showing the block model and 2m downhole composites coloured by gold grade in relation to the A\$50/t NSR breakeven constraining shell. Also shown is the Crescent Zone, Cemented Breccia and Dolerite Dyke outlines.



**Figure 3**. Plan view schematic of a horizontal slice at 4500mRL with 50m section width through the Crescent Sulphide Zone and breccia-hosted mineralisation, showing the block model and 2m downhole composites coloured by gold grade in relation to the A\$50/t NSR breakeven constraining shell. Also shown is the Crescent Zone, Cemented Breccia and Dolerite Dyke outlines.

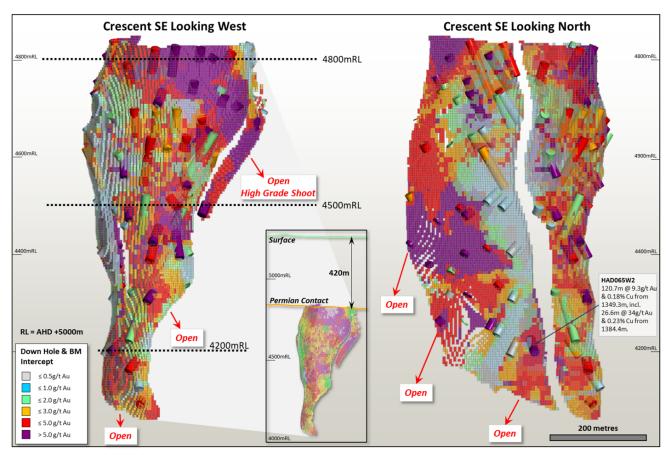


**Figure 4**. Plan view schematic of a horizontal slice at 4200mRL with 50m section width through the Crescent Sulphide Zone and breccia-hosted mineralisation, showing the block model and 2m downhole composites coloured by gold grade in relation to the A\$50/t NSR breakeven constraining shell. Also shown is the Crescent Zone, Cemented Breccia and Dolerite Dyke outlines.

### **Havieron Exploration Potential**

The Inferred Mineral Resource is centred on the South East Crescent and adjacent Breccia including a portion of the Northern Breccia and represents a lesser percentage of the currently identified mineral system footprint (approximately 650m x 350m), with the mineralisation open in the South East Crescent and Breccia, North West Crescent, Northern Breccia, and Eastern Breccia. The Inferred Mineral Resource is reported within an envelope of sufficient drill density and above the cut-off.

Within the **South East Crescent and Breccia** region, mineralisation remains open at depth in high grade shoots as demonstrated in previously reported HAD065W2^^ which included 120.7m @ 9.3g/t Au & 0.18% Cu from 1349.3m, including 26.6m @ 34g/t Au & 0.23% Cu from 1384.4m. Growth drilling in calendar year 2021 will focus on the extensions and definition of the identified zones external to the current Inferred Mineral Resource.



**Figure 5**. Schematic view of the South East Crescent sulphide zone, showing the block model and South East Crescent intercepts coloured by gold grade.

Outside of the Inferred Mineral Resource estimate, drilling of the **North West Crescent** target has identified significant mineralisation in three out of eight drill holes drilled to date including:

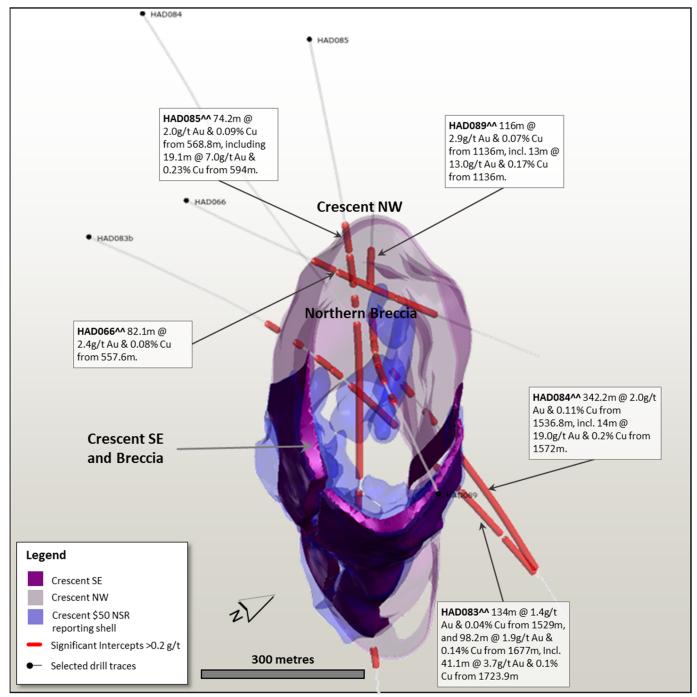
- HAD085<sup>^</sup> returned 74.2m @ 2.0g/t Au & 0.09% Cu from 568.8m, including 19.1m @ 7.0g/t Au & 0.23% Cu from 594m
- HAD089<sup>^</sup> returned 116m @ 2.9g/t Au & 0.07% Cu from 1136m, including 13m @ 13.0g/t Au & 0.17% Cu from 1136m
- o HAD066^^ returned 82.1m^^ @ 2.4g/t Au & 0.08% Cu from 557.6m

A portion of the **Northern Breccia** is included in the Inferred Mineral Resource estimate. Mineralisation remains open at depth and to the north west.

Highly encouraging early-stage drilling from the **Eastern Breccia** below the current Inferred Mineral Resource estimate previously returned:

- HAD083<sup>^</sup> returned 134m @ 1.4g/t Au & 0.04% Cu from 1529m, and 98.2m @ 1.9g/t Au & 0.14% Cu from 1677m Including 41.1m @ 3.7g/t Au & 0.1% Cu from 1723.9m; and
- HAD084<sup>^</sup> returned 342.2m @ 2.0g/t Au & 0.11% Cu from 1536.8m, including 14m @ 19.0g/t Au & 0.2% Cu from 1572m.

Growth drilling in calendar year 2021 will continue to focus on the above potential extensions and definition of the identified zones.



**Figure 6**. Isometric schematic view of the Havieron Deposit showing selected significant drill intersections external to the Inferred Mineral Resource Estimate. (View looking down with 420m cover sequence removed). NOTE: there is more, broad spacing mineralised drilling outside of the Crescent Zone and Breccia Zones shells that is not shown for visual clarity. This additional drilling is reported in previous public releases and is shown in Figures 2, 3 and 4 of this announcement.

<sup>\*</sup> partial results, assays pending \*\* partial intercept, assays pending; ^ updated intercept or ^^ previously reported.

# Appendix 1 Havieron Project (Greatland Gold plc - Joint Venture Agreement): JORC Table 1 Section 1: Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	Core samples are obtained from core drilling in Proterozoic basement lithologies. PQ-HQ and NQ diameter core was drilled on a 6m run. Core was cut using an automated core-cutter and half core sampled at 1m intervals with breaks for major geological changes. Sampling intervals range from 0.2 – 1.0m. Cover sequences were not sampled.
Drilling techniques	Permian Paterson Formation cover sequence was drilled using mud rotary drilling. Depths of cover typically observed to approximately 420m vertically below surface. Steel casing was emplaced to secure the pre-collar.
	Core drilling was advanced from the base of the cover sequence with PQ3, HQ3 and NQ2 diameter coring configuration.
	Core from inclined drill holes are oriented on 3m and 6m runs using an electronic core orientation tool (Reflex ACTIII). At the end of each run, the bottom of hole position is marked by the driller, which is later transferred to the whole drill core run length with a bottom of hole reference line.
Drill sample recovery	Core recovery is systematically recorded from the commencement of coring to end of hole, by reconciling against driller's depth blocks in each core tray with data recorded in the database. Drillers depth blocks provided the depth, interval of core recovered, and interval of core drilled.
	Core recoveries were typically 100%, with isolated zones of lower recovery.
	Cover sequence drilling by the mud-rotary drilling did not yield recoverable samples.
Logging	Geological logging recorded qualitative descriptions of lithology, alteration, mineralisation, veining, and structure (for all core drilled – 76,685m from 125 drillholes, all intersecting mineralisation), including orientation of key geological features.
	Geotechnical measurements were recorded including Rock Quality Designation (RQD) fracture frequency, solid core recovery and qualitative rock strength measurements.
	Magnetic susceptibility measurements were recorded every metre. The bulk density of selected drill core intervals was determined at site on whole core samples.
	All geological and geotechnical logging was conducted at Havieron site.
	Digital data logging was captured on diamond drill core intervals only, and all data validated and stored in an acQuire database.
	All drill cores were photographed, prior to cutting and/or sampling the core.
	The logging was of sufficient quality to support the Mineral Resource estimate.
Sub-sampling	Sampling, sample preparation and quality control protocols are considered appropriate for the material being sampled.
techniques and sample preparation	Core was cut and sampled at the Telfer and Havieron core processing facility. Half core samples were collected in prenumbered calico bags and grouped into bulk bags for dispatch to the laboratory. Sample weights typically varied from 0.5 to 4kg. Sample sizes are considered appropriate for the style of mineralisation. Drill core samples were freighted by air and road to the laboratory.
	Sample preparation was conducted at the independent ISO17025 accredited Intertek Laboratory, Perth (Intertek). Samples were dried at 105°C, and crushed to 95% passing 4.75mm, and the split to obtain up to 3kg sub-sample, which was pulverised (using LM5) to produce a pulped product with the minimum standard of 95% passing 106µm. Due to the complex mineralogy in the Breccia zones there were several instances where primary grinding could not achieve the standard. When screen tests detected <95% passing 106µm, the sample and 10 samples either side are re-ground or re-screened. There are very few instances of <95% passing the second grind. An assessment of the grind size verses Au grade has shown that rare mineralised assays are affected by grinding issues.
	Duplicate samples were collected from crush and pulp samples at a rate of 1:20. Duplicate results show an acceptable level of variability for the material sampled and style of mineralisation.
	Periodic size checks (1:20) for crush and pulp samples and sample weights are provided by the laboratory and recorded in the acQuire database.
Quality of assay data and laboratory tests	Assaying of drill core samples was conducted at Intertek. All samples were assayed for 48 elements using a 4-acid digestion followed by ICP-AES/ICP-MS determination (method 4A/MS907), which is considered to provide a total assay for copper. Gold analyses were determined by 50g fire assay with AAS finish (method FA50N/AA), which is considered to provide a total assay for gold.
	Sampling and assaying quality control procedures consisted of inclusion of certified reference material (CRMs), coarse residue and pulp duplicates with each batch (at least 1:20).

Criteria	Commentary
	Assays of quality control samples were compared with reference samples in acQuire database and verified as acceptable prior to use of data from analysed batches.
	Laboratory quality control data, including laboratory standards, blanks, duplicates, repeats and grind size results are captured in the acQuire database and assessed for accuracy and precision for recent data.
	Extended quality control programs including pulp samples submitted to an umpire laboratory and combined with more extensive re-submission programs have been completed.
	Analysis of the available quality control sample assay results indicates that an acceptable level of accuracy and precision has been achieved and the database contains no analytical data that has been numerically manipulated.
	The assaying techniques and quality control protocols used are considered appropriate for the data to be used for estimation of Mineral Resources.
Verification of sampling and assaying	Sampling intervals defined by the geologist are electronically assigned sample identification numbers prior to core cutting. Corresponding sample numbers matching pre-labelled calico bags are assigned to each interval.
	All sampling and assay information were stored in a secure AcQuire database with restricted access.
	Electronically generated sample submission forms providing the sample identification number accompany each submission to the laboratory. Assay results from the laboratory with corresponding sample identification are loaded directly into the AacQuire database.
	Assessment of reported significant assay intervals was verified by re-logging of diamond drill core intervals and assessment of high resolution core photography. The verification of significant intersections has been completed by company personnel and the Competent Person/Qualified Person.
	No adjustments are made to assay data, and no twinned holes have been completed.
	There are no currently known drilling, sampling, recovery, or other factors that could materially affect the accuracy or reliability of the data.
Location of data points	Drill collar locations were surveyed using a differential GPS with GNSS with a stated accuracy of +/- 0.5m for all drill holes used.
	Drill rig alignment was attained using an electronic azimuth aligner. Downhole survey was collected at 6-12m intervals in the cover sequence, and every 6 to 30m in diamond drill core segments of the drill hole using single shot (Axis Mining Champ Gyro). The single shot surveys have been validated using continuous survey to surface (Axis Mining Champ) along with a selection of drill holes re-surveyed by an external survey contactor using a DeviGyro tool - confirming sufficient accuracy for downhole spatial recording.
	A LIDAR survey was completed over the project area in November 2019 which was used to prepare a DEM / topographic model for the project with a spatial accuracy of +/- 0.1m vertical and +/- 0.3m horizontal. The topography is generally low relief to flat, elevation within the dune corridors in ranges between 250-265m Australian Height Datum (AHD) steepening to the southeast. All collar coordinates are provided in the Geocentric Datum of Australian (GDA20 Zone 51). All relative depth information is reported in AHD +5000m.
Data spacing and distribution	The drill hole spacing ranges from 50–100m within the south-eastern Crescent sulphide zone to 50-300m in lateral extent within the breccia zone over an area of ~2km². The data spacing is sufficient to establish the degree of geological and grade continuity for an Inferred Mineral Resource.
	Significant assay intercepts remain open. Further drilling is required to determine the extent of currently defined mineralisation. No sample compositing is applied to samples.
	Drilling intersects mineralisation at various angles.
Orientation of data in relation to geological structure	Drill holes exploring the extents of the Havieron mineral system intersect moderately dipping carbonate and siliclastic sedimentary facies, mineralised breccia and sub-vertical intrusive lithologies. Geological modelling has been interpreted from historic and Newcrest drill holes.
	Variable brecciation, alteration and sulphide mineralisation are observed with a footprint with dimensions of 650m x 350m trending in a north west orientation and 1000m in vertical extent below cover.
	The subvertical southeast high grade arcuate crescent sulphide zone has an average thickness of 20m and has been defined over a strike length of up to 550m, and over 600m in vertical extent below cover.
	Drilling direction is oriented to intersect the steeply dipping high-grade sulphide mineralisation zones at an intersection angle of greater than 40 degrees. The drilled length of reported intersections is typically greater than true width of mineralisation.
Sample security	The security of samples is controlled by tracking samples from drill rig to database.

Criteria	Commentary
	Drill core was delivered from the drill rig to the Havieron core yard every shift. On completion of geological and geotechnical logging, core processing was completed by Newcrest personnel at the Telfer facility but subsequently completed at the Havieron facility.
	High resolution core photography and cutting of drill core was undertaken at the Havieron or Telfer core processing facilities.
	Samples were freighted in sealed bags by air and road to the Laboratory, and in the custody of Newcrest representatives. Sample numbers are generated directly from the database. All samples are collected in pre-numbered calico bags.
	Verification of sample numbers and identification is conducted by the laboratory on receipt of samples, and sample receipt advice issued to Newcrest.
	Details of all sample movement are recorded in a database table. Dates, Hole ID sample ranges, and the analytical suite requested are recorded with the dispatch of samples to analytical services. Any discrepancies logged at the receipt of samples into the analytical services are validated.
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.
	In the Competent Person's 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 at the Havieron Project.

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

Criteria	Commentary
Mineral tenement and land tenure status	The Havieron Project is entirely contained within mining tenement M45/1287, which is jointly owned by Greatland Pty Ltd and Newcrest Operations Limited. Newcrest has entered into a Joint Venture Agreement (effective 30 November 2020) and Farm-In Agreement (effective 12 March 2019) with Greatland Pty Ltd and Greatland Gold plc. Newcrest is the Manager of the Havieron Project. Newcrest has now met the Stage 3 expenditure requirement (US\$45M) and is entitled to earn an additional 20% joint venture interest, resulting in an overall joint venture interest of 60%. Newcrest has the right to earn up to a 70% interest and acquire a further 5% at fair market value.
	Newcrest and the Western Desert Lands Aboriginal Corporation are parties to an Indigenous Land Use Agreement (ILUA) which relates to the use of native title land for Newcrest's current operations at Telfer and its activities within a 60-km radius around Telfer and includes its exploration activities at Havieron. The parties have agreed that the ILUA will apply to any future development activities by the Joint Venture Participants (Newcrest and Greatland Gold) at Havieron.
	The mining tenement M45/1287 wholly replaces the 12 sub-blocks of exploration tenement E45/4701 (former exploration tenement on which the Havieron Project is based) and was granted on 10 September 2020. All obligations with respect to legislative requirements including minimum expenditure are maintained in good standing for prior exploration tenement E45/4701.
Exploration done by other parties	Newcrest completed six core holes in the vicinity of the Havieron Project from 1991 to 2003. Greatland Gold completed drill targeting and drilling of nine Reverse Circulation (RC) drill holes with core tails for a total of approximately 6,800m in 2018. Results of drilling programs conducted by Greatland Gold have previously been reported on the Greatland Gold website.  Drilling has defined an intrusion-related mineral system with evidence of breccia and massive sulphide-hosted higher-
	grade gold-copper mineralisation.
Geology	The Havieron Project is located within the north-western exposure of the Palaeo-Proterozoic to Neoproterozoic Paterson Orogen (formerly Paterson Province), 45 km east of Telfer. The Yeneena Supergroup hosts the Havieron prospect and consists of a 9km thick sequence of marine sedimentary rocks and is entirely overlain by approximately 420m of Phanerozoic sediments of the Paterson Formation and Quaternary aeolian sediments.
	Gold and copper mineralisation at Havieron consist of breccia, vein and massive sulphide replacement gold and copper mineralisation typical of intrusion-related and skarn styles of mineralisation. Mineralisation is hosted by metasedimentary rocks (meta-sandstones, meta-siltstones and meta-carbonate) and intrusive rocks of an undetermined age. The main mineral assemblage contains well developed pyrrhotite-chalcopyrite and pyrite sulphide mineral assemblages as breccia and vein infill, and massive sulphide lenses. The main mineralisation event is associated with amphibole-carbonate-biotite-sericite-chlorite wall rock alteration. Drilling has partially defined the extents of mineralisation which are observed over 650m by 350m within an arcuate shaped mineralised zone, and to depths of up to 1400m below surface.
	The geological model has been reviewed and validated by GeoAqua Consultants.
Drill hole Information	No new exploration results are reported in this release.

Criteria	Commentary
Data aggregation methods	No new exploration results are reported in this release, therefore this section is not relevant.
Relationship between mineralisation widths and intercept lengths	No new exploration results are reported in this release, therefore this section is not relevant.
Diagrams	As provided above.
Balanced reporting	No new exploration results are reported in this release, therefore this section is not relevant.
Other substantive exploration data	No new exploration results are reported in this release, therefore this section is not relevant.
Further work	Infill drilling is underway on the top 350 vertical metres of the South Eastern Crescent within the existing resource outline, looking to upgrade a significant part of the resource to Indicated.  Growth drilling is planned to extend the limits of the mineralised system and infill drilling in the existing defined breccias looking to establish additional resources outside those stated in this announcement.

**Section 3: Estimation and Reporting of Mineral Resources** 

Criteria	Commentary
Database integrity	Data are stored in a 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. In-built validation tools are used in the acQuire™ database and data loggers are used to minimise keystroke errors, flag potential errors and validate against internal library codes. Regular reviews of data quality are conducted by site and corporate teams prior to resource estimation. Final surveyed collars are checked against the original collar GPS pickup and the Lidar topographic surface. Downhole surveys are checked visually and statistically for outliers. Assay data is checked for negative, extreme, missing and overlapping samples. Below detection assay values are set to half the lower detection limit for estimation. Geological domains are reviewed against core photography, geochemistry and Corescan data and checked for overlaps and missing intervals. Data that is found to be in error is investigated and corrected where possible. If the data cannot be corrected it is removed from the data set used for resource modelling and estimation.
Site visits	The Competent Person for the Inferred Mineral Resource estimate is an employee of Newcrest and is based in Melbourne. The Competent Person has remained closely linked with the project at all stages and has completed numerous site inspections on a regular basis with the last visit completed over a period of 14 weeks to 4 November 2020. The Competent Person has reviewed the drilling, sampling, sample security, drill logging, and data management and is satisfied with the quality of the measures undertaken.
Geological interpretation	The geology model is constructed on grouped primary logging domain codes interpreted entirely on the basis of drill cores. 3D solids were modelled in Leapfrog Geo 5.1.1 using vein, intrusive and erosional implicant models.
	The geology model for the Havieron deposit comprises a cover sequence and a basement sequence of variably mineralised and altered metasediments. The cover sequence consists of 7 sub horizontal units ascribed to the Permian whilst the basement sequence consists of the Crescent zone that typically comprises of the massive sulphides including locally banded pyrrhotite or chalcopyrite., Calcite Cemented Breccia, Actinolite Cemented Breccia, Crackle breccia and the post mineralisation Dolerite dyke.
	Mineralisation in Havieron is hosted in the Crescent and to a lesser extent within the cemented breccia's (Calcite cemented and Actinolite cemented Breccia). These units are therefore used as estimation domains. The confidence in the geological volumes that were used to define the estimation domains is reflected in the Inferred Mineral Resource classification.
Dimension	Variable brecciation, alteration and sulphide mineralisation are observed with a footprint with dimensions of 650m x 350m trending in a north west orientation and 1000m in vertical extent below ~420m of cover. The SE Crescent zone Resource extents are ~550m in unfolded plan section, between 5-40m true width and ~750m in vertical extent, mineralisation remains open at depth. The Breccia Resource extents occurs as a 50-100m sleeve around the SE Crescent Resource and also a ~250x50x300 NW trending zone in the north western half on the breccia complex "Northern Breccia" which remains open at depth and to the northwest.
Estimation and	Geostatistical testing of the gold and copper grade distributions showed that the Breccia Zones are moderately diffusive
modelling techniques	in nature, and the Crescent Zone is relatively weakly diffusive in nature. Even though the Crescent Zone is weakly

Criteria	Commentary
	diffusive in nature, the estimation method of OK is considered appropriate due to the consideration of the geological setting, geological observation from the logging data and the geometry of the domain.
	All drillhole samples were composited to 2 metre intervals downhole and honouring the domain boundary. Ordinary Kriging (OK) of gold, copper, , bismuth, arsenic, lead, zinc and nickel were undertaken into 10 m x 10 m x 10 m blocks in a single pass run using a discretisation of 4 x 4 x 4. Sulphur, iron and cobalt were estimated by Co-Kriging (CK). The minimum and maximum number of informing composites were 10 and 20 to 24 respectively, depending on the domain and variable being estimated. Due to highly skewed nature of the grade distribution, a grade capping strategy has been applied for all variables including Au, Cu, S, Fe, Co, Bi, As, Pb, Zn and Ni. Caps are typically around the value at a 99 <sup>th</sup> percentile of distributions. Restricted projection was also used in some domain / variable combinations to further reduce over projection of outlier grades. The model grades were estimated in Isatis software. Gold and copper were the only revenue generating elements, no recovery of by-products has been assumed. Variables were estimated independently. The block size was chosen on the basis of estimation quality and likely scale of mining.
	The block model used for interpolators was populated with local rotations for the Crescent Zone and the Calcite Breccia Zone based on the orientation of the mineralisation including the high grade (structurally control) zone with the hard boundary applied between domains. The entire resource is based on interpolation of grades.
	The model has been validated via visual, statistical and geostatistical method, including statistical comparison, metal at risk analysis, swath plots, Global Change of Support (Discrete Gaussian Modelling) comparison and visual comparison of the drillholes and the blocks by sections and plan views. A nearest neighbour estimate was also created to validate the estimate. The model assumes the likelihood of a largescale mining method, such as sub-level caving.
Moisture	All tonnages are calculated and reported on a dry tonnes basis.
Cut-off parameters	A value algorithm is used to calculate the NSR for each block using revenue and cost assumptions as of July 2020.
	The NSR calculation takes account revenue factors, metallurgical recovery assumptions (outlined below), transport costs and refining charges and royalty charges with the gold price of US\$1,400 per ounce, copper price of US\$3.40 per pound and a 0.75 AUD:USD exchange rate.
	A smoothed shell was generated based on a threshold of A\$50/t and includes internal below value cut-off blocks and excludes isolated above cut-off blocks. All Inferred Mineral Resources are constrained within the shell representing the limit of reasonable prospects of eventual economic extraction. The AUD\$50/t cut-off is based on Newcrest's experience at its nearby Telfer and other operations, its current understanding of the Havieron deposit and other benchmarking conducted.
Mining factors or assumptions	The Inferred Mineral Resource estimate is reported within a notional constraining shell based on an A\$50/t NSR value cut-off, based on mass mining by sub-level caving (SLC) with no internal selectivity. All internal materials are reported, including waste, which reflects the planned non-selective mining method. There is nothing to indicate at this stage that SLC is not an appropriate mining method.
	The current proposal is to potentially commence mining the higher grade Crescent Zone by underground sub-level open stope (SLOS) and then continue mass mining of the remaining Crescent Zone and Breccia Zones by SLC.
Metallurgical factors or assumptions	Metallurgical amenability is derived from preliminary testwork on 10 composite samples based around the current operating Telfer Plant process. Initial results suggest gold recoveries of 94% (Crescent Zone) and 84% (Breccia Zones), and copper recoveries of 92% (Crescent Zone) and 82% (Breccia Zones).
Environmental factors or assumptions	As Havieron is a greenfields project the potential environmental impact assessments are not well advanced; however, the assumption is that there will be no significant impediments to conventional waste management of rock and tailings as utilised at Newcrest's Telfer Operations based on the similarities between the Havieron and Telfer deposits.
Bulk Density	All bulk density measurements have been carried out in accordance with site standard procedure and used a standard water immersion method.
	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 based on 10 cm to 20 cm lengths generally taken at 10 metre to 50 metre intervals down hole.

Criteria	Commentary
	Bulk density from several thousand measurements was estimated into the block model by an inverse distance method on a domain-wise basis.
Classification	The Mineral Resource estimate has been classified as Inferred Mineral Resource only.
	The resource classification is based on drillhole spacing and geological and grade continuity including the assessment of average weighted distance of informing samples. The Inferred Mineral Resource estimate is classified within a nominal drill spacing less than 100m x 100m and the contiguous footprint of the reasonable prospect of eventual economic extraction. The Inferred Mineral Resource classification appropriately reflects the view of the Competent Person referred to below.
Audits or reviews	Derisk Geomining Consultants has conducted an independent review of the Havieron resource estimate and supporting documentation and concluded the work has been completed to a standard suitable for the level of study to date and Inferred Mineral Resource classification. Recommendations have been proposed for potential improvements to future resource updates as more drilling is completed.
Discussion of relative accuracy/ confidence	The Inferred Mineral Resource is a global estimate and reflects the wide spaced drilling where the geological evidence is sufficient to imply but not verify geological and grade continuity, thus it is considered deemed not necessary to assess the relative uncertainty in tonnage, grade and metal over a production volume. There is no production data for Havieron.

# Authorised by the Newcrest Disclosure Committee For further information please contact

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#### **Forward Looking Statements**

This document includes forward looking statements and forward looking information within the meaning of securities laws of applicable jurisdictions. Forward looking statements can generally be identified by the use of words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "believe", "continue", "objectives", "targets", "outlook" and "guidance", or other similar words and may include, without limitation, statements regarding estimated reserves and resources, certain plans, strategies, aspirations and objectives of management, anticipated production, study or construction dates, expected costs, cash flow or production outputs and anticipated productive lives of projects and mines. Newcrest 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.

These forward looking statements involve known and unknown risks, uncertainties and other factors that may cause Newcrest's actual results, performance and achievements or industry results to differ materially from any future results, performance or achievements, or industry results, expressed or implied by these forward-looking statements. 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 Newcrest operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation. For further information as to the risks which may impact on Newcrest's results and performance, please see the risk factors included in the Annual Information Form dated 13 October 2020 lodged with ASX and SEDAR.

Forward looking statements are based on Newcrest's good faith assumptions as to the financial, market, regulatory and other relevant environments that will exist and affect Newcrest's business and operations in the future. Newcrest 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 Newcrest. Readers are cautioned not to place undue reliance on forward looking statements, particularly in the current economic climate with the significant volatility, uncertainty and disruption caused by the COVID-19 pandemic. Forward looking statements in this document speak only at the date of issue. Except as required by applicable laws or regulations, Newcrest 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.

#### **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 is in accordance 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.

Newcrest is also subject to certain Canadian disclosure requirements and standards, as a result of its secondary listing on the Toronto Stock Exchange (TSX), including the requirements of National Instrument 43-101 (NI 43-101). Investors should note that it is a requirement of Canadian securities law that the reporting of Mineral Reserves and Mineral Resources in Canada and the disclosure of scientific and technical information concerning a mineral project on a property material to Newcrest comply with NI 43-101. Newcrest's material properties are currently Cadia, Lihir and Wafi-Golpu.

#### **Competent Person's Statement**

The information in this document that relates to Mineral Resources, Exploration Targets, Exploration Results, and related scientific and technical information, is based on and fairly represents information compiled by Mr C.K Switzer. Mr Switzer is the Regional Exploration Manager – Asia Pacific and a full-time employee of Newcrest Mining Limited. He is a shareholder 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 2020 Remuneration Report. He is a Member of the Australian Institute of Geoscientists and a Member of The Australasian Institute of Mining and Metallurgy. Mr Switzer has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code and as a Qualified Person under NI 43-101. Mr Switzer approves the disclosure of scientific and technical information contained in this document and consents to the inclusion of material of the matters based on his information in the form and context in which it appears.