



ASX ANNOUNCEMENT

ASX: NWM

8 April 2020

## **BULGERA GOLD RESOURCES INCREASE 43%, AIRCORE DRILLING UNDERWAY**

### **Highlights:**

- The Bulgera gold resource estimate increased by 43% to 2.92Mt @ 1.0g/t for 93,880 ounces.
- Indicated resources increased by 61% to 2.06Mt @ 1.0g/t for 66,230 ounces of gold being primarily softer near-surface material<sup>1</sup>.
- Bulgera Gold Project acquisition and exploration costs total A\$11 per resource ounce
- A 5,000 metre aircore drilling programme to test gold targets along the 5-kilometre Bulgera greenstone mine sequence is underway.
- The aircore drilling targets include an area where high-grade gold surface samples (86g/t & 4g/t) were recently collected by Norwest

**Norwest Minerals Limited** ("Norwest" or "the Company") (Australia ASX: NWM) is pleased to announce a **43 percent** increase to the JORC compliant Bulgera gold resource estimate which now stands at **2.92Mt @ 1.0g/t for 93,880 ounces**. The Company has also commenced a 5,000 metre aircore exploration drilling programme to test gold targets immediately along strike of the Bulgera Mining Centre.

### **Resource Upgrade**

The gold resource increase follows reverse circulation (RC) drilling undertaken late last year targeting mineralisation below and adjacent to the historic Mercuri and Bulgera open cut pits. The 46-hole, 5,860 metre programme was designed to: 1) confirm pre-2004 drilling results, 2) convert low-confidence Inferred Resources to higher-confidence Indicated resources and 3) test the down dip continuity of gold mineralisation beyond existing model limits.

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<sup>1</sup> New Indicated resources included in the new total Bulgera resource estimate of 2.92Mt @ 1.0g/t

## Bulgera Gold Resource Upgrade and Commencement of Aircore Drilling

Norwest twinned 10 historic (pre-2004) RC drill holes with results confirming geological features, gold tenor and intercept widths of the majority of holes duplicated. Infill drilling targeted zones containing low confidence Inferred resources, with the greater drill hole density resulting in a 61% increase to the higher confidence Indicated resource category.

The deeper RC step-out drilling produced a number of exciting gold intercepts including:

- 3m @ 10.5 g/t Au from 84m in BRC19041
- 4m @ 6.8 g/t Au from 71m in BRC19043
- 3m @ 4.3 g/t Au from 67m in BRC19014
- 2m @ 5.2 g/t Au from 96m in BRC19026

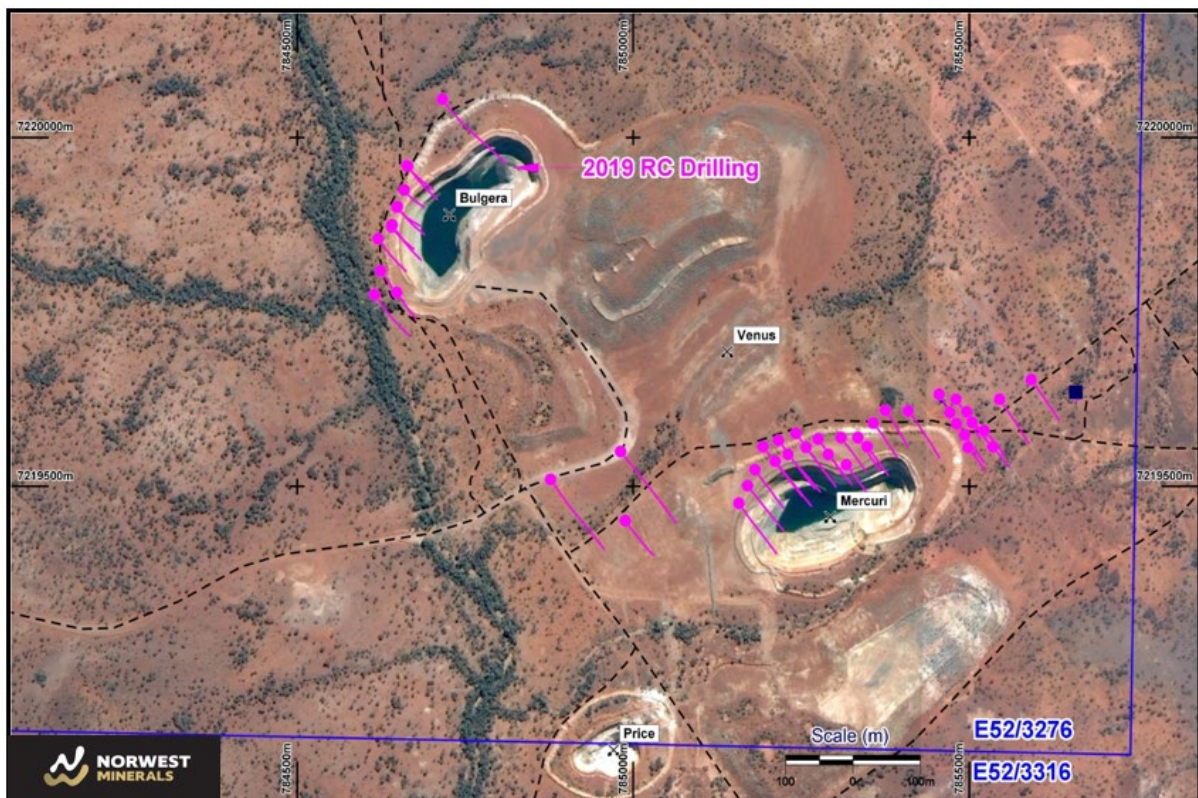


Figure 1 – Bulgera gold project reverse circulation drill collar locations for the 2019, 46-hole programme.

This latest RC drilling data was combined with Bulgera's extensive historical exploration, development and mining database. Modelling of the new drilling data was undertaken by independent resource experts Hyland Geological and Mining Consultants ("HGMC") using MineSight software which was utilised to construct the block models and run geostatistical and variography calculations. Kriging algorithms were applied to determine block gold grades and resource confidence levels. Details of the gold resource modelling and resource calculations are included in the JORC Table below.

The JORC 2012 compliant Mineral Resource for the Bulgera Gold project applying a 0.6g/t lower Au cut-off stands at:

Indicated Resources			Inferred Resources			Total Resources		
Mt	Au (g/t)	Au Ozs	Mt	Au (g/t)	Au Ozs	Mt	Au (g/t)	Au Ozs
2.06	1.0	66,230	0.86	1.0	27,650	<b>2.92</b>	<b>1.0</b>	<b>93,880</b>



## Bulgera Gold Resource Upgrade and Commencement of Aircore Drilling

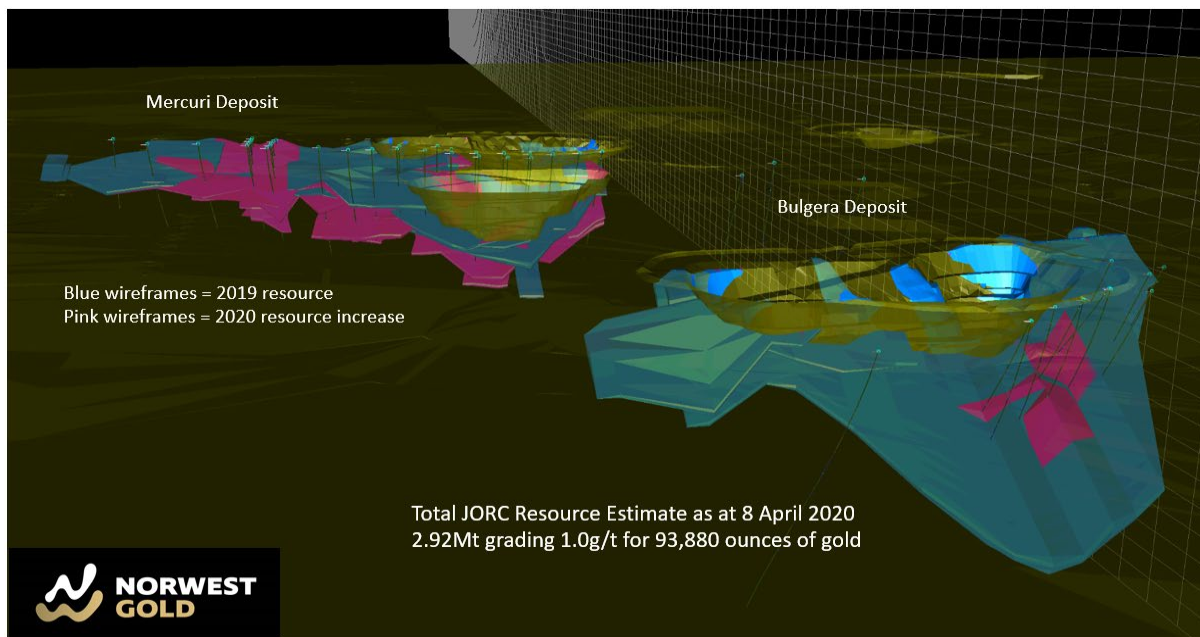


Figure 2 – 3D image of mineralisation envelopes below the Bulgera and Mercuri pit

The Bulgera acquisition cost of \$220,000 combined with the cost of the maiden RC drilling programme brings the average cost per JORC resource ounce to A\$11.

### Aircore Exploration Drilling

Aircore drilling at Bulgera is underway and designed to test several gold targets identified immediately along strike of the historic Bulgera Mining Centre. Figure 3.

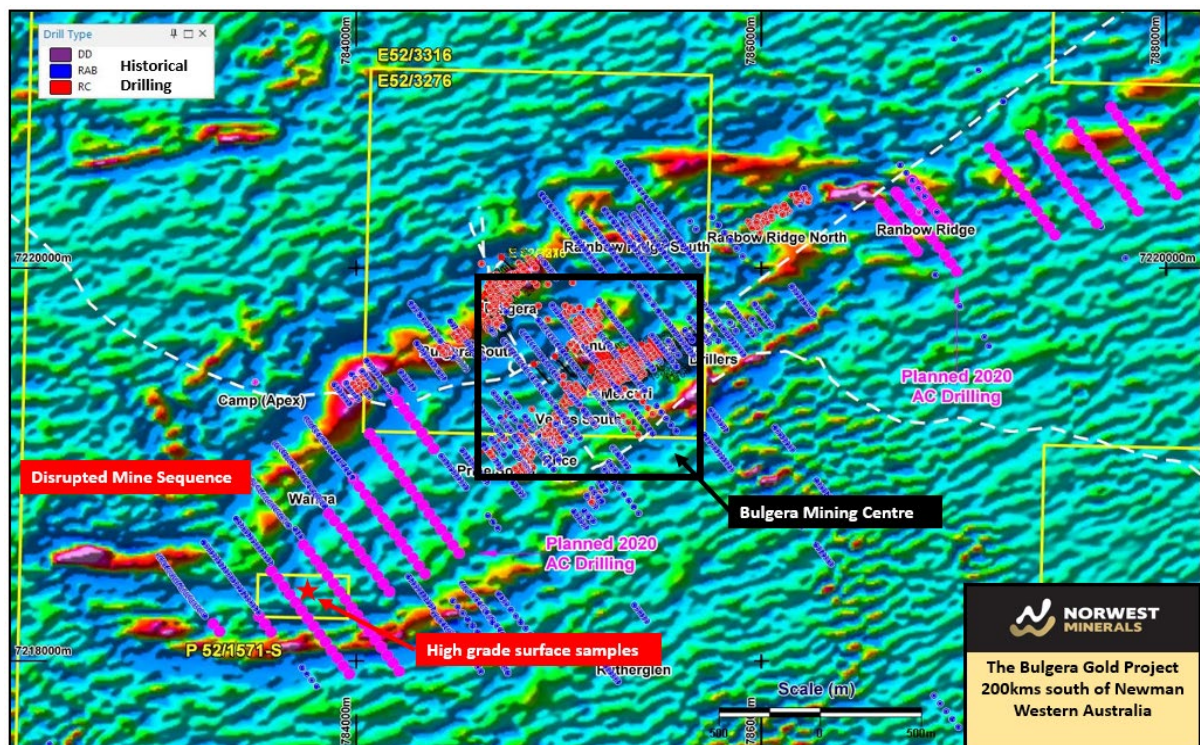


Figure 3 - Location of aircore drill collars (violet circles) across targets northeast and southwest of the Bulgera Mining Centre



## **Bulgera Gold Resource Upgrade and Commencement of Aircore Drilling**

The gold targets include geophysical features, anomalous gold-in-soil zones and areas where thick transport cover has likely masked anomalous gold in historical surface samples. The aircore drilling commence the 5<sup>th</sup> of April with completion expected before the month's end.

Of particular interest is a geophysical feature located southwest of the Bulgera Mining Centre showing a disruption of the greenstone mine sequence and coinciding with several high-grade gold surface samples collected last month by Norwest. Of the seven samples collected, one returned a gold assay of 86 g/t and another assayed 4 g/t gold.



Figure 4 - Aircore drilling underway at the Bulgera Gold Project

This ASX announcement has been authorised for release by Charles Schaus, Chief Executive Officer of Norwest Minerals Limited

For further information, visit [www.norwestminerals.com.au](http://www.norwestminerals.com.au) or contact:

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# **Bulgera Gold Resource Upgrade and Commencement of Aircore Drilling**

## **COMPETENT PERSON'S STATEMENTS**

### **Mineral Resource Estimate**

The information in this report that relates to mineral resource estimation is based on work completed by Mr. Stephen Hyland, a Competent Person and Fellow of the AusIMM. Mr. Hyland is Principal Consultant Geologist with Hyland Geological and Mining Consultants (HGMC) and holds relevant qualifications and experience as a qualified person for public reporting according to the JORC Code in Australia. Mr Hyland is also a Qualified Person under the rules and requirements of the Canadian Reporting Instrument NI 43-101 Mr Hyland consents to the inclusion in this report of the information in the form and context in which it appears.

### **Exploration**

The information in this report that relates to Exploration Results and Exploration Targets is based on and fairly represents information and supporting documentation prepared by Charles Schaus (CEO of Norwest Minerals Pty Ltd). Mr. Schaus is a member of the Australian Institute of Mining and Metallurgy and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to its activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Schaus consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.

### **About the Bulgera Gold Project**

*The Bulgera Gold Project comprises two granted exploration licences, E52/3316 and E52/3276, covering 36.8km<sup>2</sup> over the northeast end of the Plutonic Well Greenstone Belt, 200km northeast of Meekatharra. The project is located 20km northeast of the Marymia mining centre and 48km via existing haul road from the operating Plutonic gold mine which has produced over 5.5 million ounces of gold since 1990. The Plutonic mine is owned by Toronto listed Superior Gold Inc. (TSX-V:SGI).*

*The project contains four shallow open pits that have undergone two phases of mining between 1996 and 1998 and again between 2003 and 2004. Mining of the four pits being Bulgera, Mercuri, Venus and Price produced a reported 440,799 tonnes of ore @ 1.65 g/t Au for 23,398 ounces. The ore was treated at the Marymia mining centre during the first phase and the Plutonic processing facility during the second phase.*

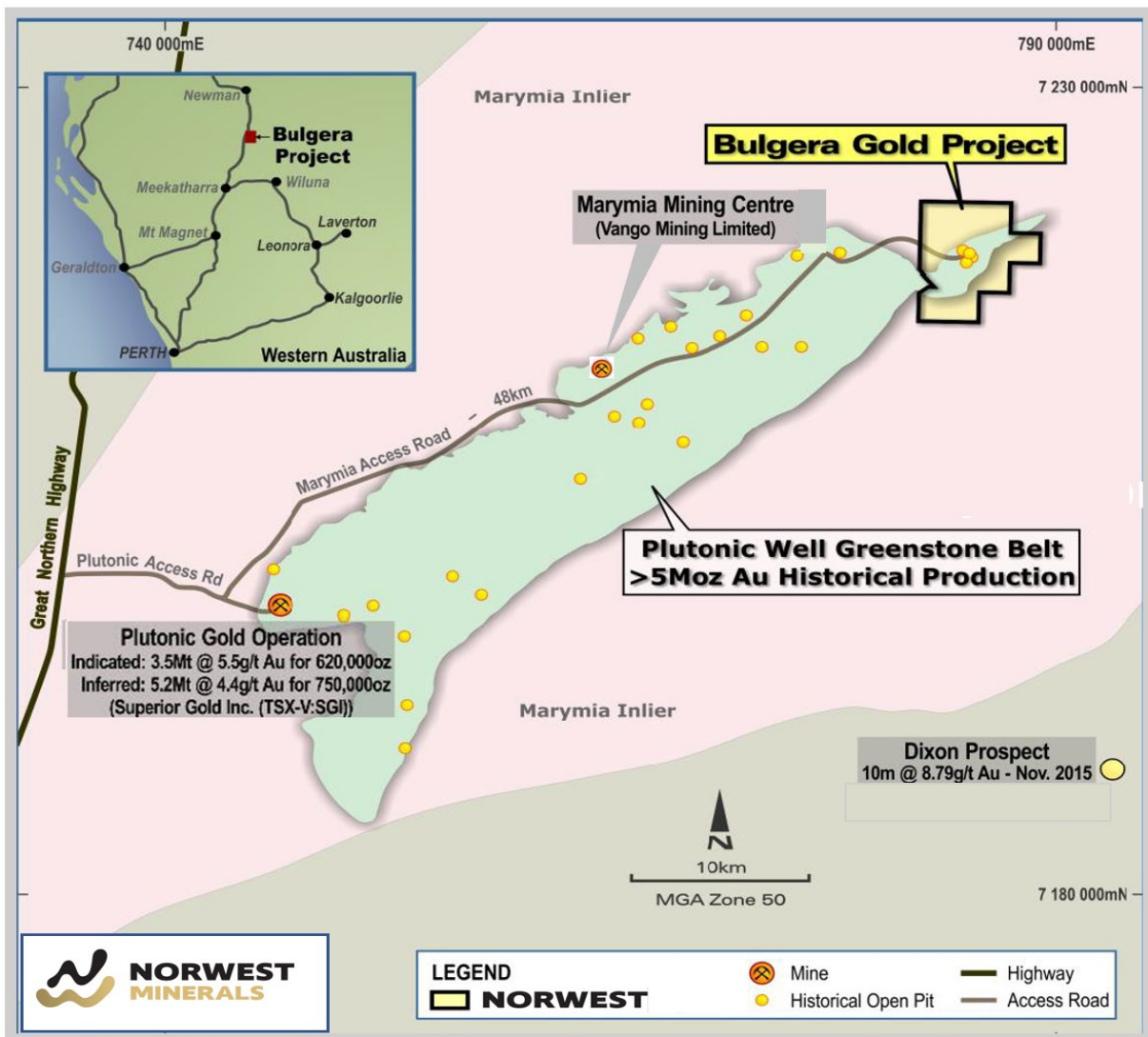
*The Bulgera greenstone package has been interpreted as a faulted extension of the Marymia mine sequence across a system of curved thrusts where Marymia and Bulgera are offset. This is supported by the similarity in lithologies between the deposits and the magnetics which show the drag of the Bulgera trends into the interpreted fault structures<sup>2</sup>.*

*Vango Mining Ltd (ASX: VAN) is aggressively exploring the Marymia tenements along the mafic-ultramafic mine sequence where they have made a number of high-grade gold discoveries including the Trident deposit being 1.59Mt @ 8g/t gold for 410,000 ounces.*

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<sup>2</sup> Richards, R., May 2016. Information Memorandum, Bulgera Gold Project, Plutonic Well Greenstone Belt, WA

## Bulgera Gold Resource Upgrade and Commencement of Aircore Drilling



Bulgera Gold Project location map.

The Bulgera Gold Project location is endowed with infrastructure including the large Plutonic Gold Mine operating nearby, 2 x gas-fired power stations, overhead transmission power lines, bore fields, airstrip and camp facilities.

Norwest acquired the Bulgera Gold Project for \$220,000 in July 2019 and in September 2019 reported a JORC resource totalling 2Mt @ 1.03g/t gold for 65,500 ounces.

The resource was upgraded in April 2020 to 2.92Mt grading 1.0 g/t for 93,880 ounces of gold following Norwest's maiden 46-hole, 5,840 metre RC resource drilling programme completed 17 December 2019.

# Appendix 1 JORC Code 2012 Table 1

## 1.1 Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<b>Historical Drilling (Resolute and Homestake)</b> <ul style="list-style-type: none"> <li>Not all of the aspects relating to the quality and retrospectivity of historical sampling can be confirmed. The details of drilling and sampling procedures employed by historical explorers to generate the resource is outlined in the appropriate sections below</li> <li>Historic Exploration In 1988 consisted of several phases of stream sediment, soil and rock chip sampling outlined high order gold anomalies at the Bulgera area.</li> <li>Subsequent RC drilling in was carried out during October-November 1989 which helped outline shear zone gold anomalies over a 260m long zone.</li> <li>RAB drilling conducted at Mercuri 1993 defined a strong mineralisation anomaly (at 23,800N). Several programs of RAB, RC and diamond drilling were continued between 1993 and 1996 to outline a mineral resource.</li> <li>All RC samples were collected through a cyclone at 1m intervals and passed through a riffle splitter to produce 2-4 kg assay samples.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<b>Historical Drilling (Resolute and Homestake)</b> <ul style="list-style-type: none"> <li>Some of the details relating to the early RAB drilling programs is not available.</li> <li>The early RC drilling conducted at Bulgera was with a down hole hammer in crossover-sub configuration. Later RC drilling used a face-sampling hammer. The majority of drilling at Mercuri (Including Price and Venus zones) used a face-sampling hammer.</li> <li>Three diamond holes were drilled in 1994 for geotechnical and metallurgical purposes. The core size was PQ and HQ.</li> </ul>



<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>• Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>• Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>• Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<b>Historical Drilling (Resolute and Homestake)</b> <ul style="list-style-type: none"> <li>• Details of sample recovery from RAB, RC and DD drilling has either not been recorded in historical reports or is not able to be located.</li> <li>• RC drilling with crossover-sub and face-sampling hammer are known to be good tending towards very good for the face sampling hammer used at Bulgera and Mercuri. The majority of drill-holes are relatively short, thus sampling problems related to ‘wet ground’ is unlikely to be a major concern. As such RC sampling and subsequent assaying for the Bulgera and Mercuri deposits are assumed to be relatively reliable.</li> <li>• Diamond Core recover has not been located from available records and reports.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>• The total length and percentage of the relevant intersections logged.</li> </ul>	<b>Historical Drilling (Resolute and Homestake)</b> <ul style="list-style-type: none"> <li>• The logging of RC, RAB drill chips and diamond core was completed on site. Lithological codes were entered into the Resolute geological database.</li> <li>• Logging recorded the weathering / oxidation and ‘top of fresh rock (TOFR) profile which was observed to be relatively shallow across the Mercuri deposit and slightly deeper at the Bulgera deposit.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>• Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>• Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<b>Historical Drilling (Resolute and Homestake)</b> <ul style="list-style-type: none"> <li>• RAB samples were collected through a cyclone at 1m intervals and placed on the ground from which 4m composite samples was were prepared using a PVC spear. Composite samples returned with grades &gt;0.25g/t were re-sampled at 1m intervals.</li> <li>• The samples from the early RC holes were composited into 2m and occasionally the 1m samples were re-assayed. Some RC sampling used 4m composites in zone where the likelihood of Au mineralization was low. Additional 1m samples were taken if the original composite assays returned &gt; 0.3g/t Au.</li> </ul>



<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>• For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc., Mo</li> <li>• Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<b>Historical Drilling (Resolute and Homestake)</b> <ul style="list-style-type: none"> <li>• Early RAB drilling samples for Bulgera and Mercuri were assayed by Classic Comlabs in Meekatharra. From the early 1990s onwards, all drilling samples were assayed at Minlabs, Perth.</li> <li>• RAB samples were assayed by aqua regia on a 50g charge, with an AAS finish, to a detection limit of 0.01g/t Au.</li> <li>• Most of the RC and all of the diamond core samples were fire assayed, with an AAS finish, to a detection limit of 0.01g/t Au. Some of the later RC samples were assayed by aqua regia.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• The verification of significant intersections by either independent or alternative company personnel.</li> <li>• The use of twinned holes.</li> <li>• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>• Discuss any adjustment to assay data.</li> </ul>	<b>Historical Drilling (Resolute and Homestake)</b> <ul style="list-style-type: none"> <li>• Records of check assaying including the use of blank, standard or duplicate samples were either not used or recorded and have not been subsequently located.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<b>Historical Drilling (Resolute and Homestake)</b> <ul style="list-style-type: none"> <li>• Historically a set of local grids was used at both Bulgera and Mercuri to define the different resource areas. Resolute consolidated the local grids according to the AMG with rotations 52.3602 and 102.4815 degrees at Bulgera and 52.3602 degrees at Mercuri.</li> <li>• The local RL used by Resolute at Bulgera and Mercuri was equal to the AHD. All of the data in the area has since been transformed to the Plutonic mine datum using the following: transformed datum = AHD - 78.76m.</li> <li>• Resolute reported that most of the RC collars were accurately surveyed. However, the RAB holes were not surveyed however a DTM topographic surface was created using RC and diamond collars. All RAB collars were then adjusted to this DTM.</li> </ul>

<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<b>Historical Drilling (Resolute and Homestake)</b> <ul style="list-style-type: none"> <li>• The RAB drilling at Bulgera and Mercuri was generally aligned according to a 100x20m grid. RAB drill-holes were typically angled at -60 degrees (towards grid East).</li> <li>• RC drilling at Bulgera was on a 25x20m grid with some section spacing on, 100m, 50m, 15m, and 20m.</li> <li>• At Mercuri RC drilling was also carried out on a 25x20m grid with some section spacing on, 100m, 50m, and 12.5m.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></li> </ul>	<b>Historical Drilling (Resolute and Homestake)</b> <ul style="list-style-type: none"> <li>• The RAB and RC drill-holes at both Bulgera and Mercuri were typically angled at -60 degrees (towards grid East) to optimally intersect majority of mineralized lodes observed to be dipping towards the West at approximately 30-40 degrees.</li> <li>• It is unlikely that any known bias has been introduced through historical RC sampling towards possible structures.</li> <li>• Downhole Surveys to determine the extent of downhole deviations at Bulgera and Mercuri were not conducted. Given most drill-holes are relatively short, it is expected and assumed that any problems related to the precise sample locations down-hole will be relatively small.</li> </ul>

<b>Sample security</b>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<b>Historical Drilling (Resolute and Homestake)</b> <ul style="list-style-type: none"> <li>No details of historical measures to ensure sample security are available in open file reports.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<b>Historical Drilling (Resolute and Homestake)</b> <ul style="list-style-type: none"> <li>No reported reviews of the drill chip sampling techniques and geochemical data were undertaken during exploration by Resolute or Homestake.</li> <li>Norwest Minerals is currently reviewing all historical data and sampling techniques to determine suitability for inclusion in a mineral resource.</li> </ul>



## 1.2 Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary			
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The information in this release relates to the Bulgera Gold Project, on exploration licenses E52/3316 and E52/3276.</li> <li>Tenement transfers from Accelerate Resources to Norwest Minerals have been submitted to the DMIRS and are being processed.</li> <li>There are no existing to impediments to E52/3316 and E52/3276.</li> </ul>			
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<b>Activity</b>	<b>Year conducted</b>	<b>Company</b>	<b>Result</b>
		Regional Exploration	Pre-1976	International Nickel and Dampier Mining	No economic nickel deposits were found and Ni exploration was not continued.
		Stream sediment, soil and rock chip sampling.	1988	, Resolute	Outlined high order gold anomalies at "203", East Bulgera and Bulgera Creek Shear prospects.
		Regional Exploration and development	1989-1990	Great Central Mines sold their Plutonic discovery to Pioneer Minerals which became Plutonic Resources	Plutonic Resources Limited commissioned the Plutonic Mine in June 1990

Soil Sampling	1990-1991	Resolute	Low order gold anomalies were found by soil sampling to the south-west of the Bulgera Creek Shear
Ground Magnetometer Survey	1991-1993	Resolute	Structural analyses highlighted the local mineralization flexure Bulgera along the granite/greenstone contact
Exploration Drilling	1993-1996	Resolute	RAB and RC drilling conducted at Mercuri defined strong mineralisation on and around section 23,800N.
Project Consolidation	2001	Homestake Mining Company becomes Barrick Gold of Australia by North American merger of parent companies	
Project Consolidation	2010	Barrick sell majority of Plutonic licences including Bulgera to Dampier Gold Limited	Barrick retained Plutonic underground mine and several tenements covering 100sq kms

	Data evaluation and exploration planning	2016	POZ Minerals acquires Bulgera tenements	Review and compilation of project data, field reconnaissance, target generation and programme planning
	Data evaluation and exploration planning	2018	Accelerate Minerals acquires Bulgera tenements from POZ Minerals	Project review, compilation, geological interpretation, database validation, structural interpretation, of airborne magnetics, drill programme planning



**Geology**

- *Deposit type, geological setting and style of mineralisation.*

- The Bulgera deposit consists of a shallow dipping sequence of amphibolites with narrow intercalated layers of ultramafic schist and metasediment. Ultramafic layers increase in frequency towards the south end of the deposit.
- The amphibolites are of tholeiitic and high magnesian parentage.
- Locally, the sequence strikes grid north-south and dips at 400 to the west.
- Outcrop is common in the area. A thin cover (<5m) of colluvium is present over the mineralised part of the deposit with some laterite appearing at the southern end.
- At Mercuri the deposit consists of a shallow dipping sequence of interlayered felsic volcanics, mafic volcanics, mafic sediments and minor felsic sediments underlain by an ultramafic unit. The mafic volcanics are altered high magnesian basalts.
- The sequence is intruded by minor semi-conformable quartz porphyries.
- Locally, the sequence strikes grid north-south and dips at 35-400 to the west.
- Outcrop is common in the area. However, a thin cover (<4m) of colluvium and some laterite occurs over the mineralised part of the deposit.

<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>○ easting and northing of the drill hole collar</li> <li>○ elevation or RL (Reduced Level - elevation above sea level in metres) of the drill hole collar</li> <li>○ dip and azimuth of the hole</li> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> </ul> </li> <li>• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>• Homestake reported in March 2001 that the consolidated drilling database for Bulgera consisted of: <ul style="list-style-type: none"> <li>RAB Holes = 242 - (Hole prefixes - BER, BUS, MHR and SW)</li> <li>RC Holes = 81 - (Hole prefixes - BC, BG and MRC)</li> <li>Diamond Core Holes = 3 (Hole prefixes - BD).</li> </ul> </li> <li>• The majority of all drillhole types (RAB and RC) at Bulgera are oriented towards grid East (90 degrees) with dip angles of -60 degrees.</li> <li>• Project coordinates for Bulgera area in Local Grid are: <ul style="list-style-type: none"> <li>14200-14800m E</li> <li>23700-24400m N</li> <li>425-555m RL</li> </ul> </li> <li>• Homestake also reported in March 2001 that the consolidated drilling database for Mercuri consisted of: <ul style="list-style-type: none"> <li>RAB Holes = 523 - (Hole prefixes -HGR)</li> <li>RC Holes = 149 - (Hole prefixes - HGA, HGB, HGRC, HGS, MRC and MHRC).</li> <li>Diamond Core Holes = 3 (Hole prefixes - HGD).</li> </ul> </li> <li>• The majority of all drillhole types (RAB and RC) at Mercuri are oriented towards grid East (90 degrees) with dip angles of -60 degrees.</li> <li>• Project coordinates for Mercuri area in Local Grid are: <ul style="list-style-type: none"> <li>14700-15350m E</li> <li>23500-24450m N</li> <li>410-565m RL</li> </ul> </li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>• Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• All reported drill assay results used in the estimation of this Mineral Resource are historical and are understood to have been previously reported and published in previous relevant releases or Mines Department Reports.</li> <li>• No metal equivalent values are used.</li> </ul>

<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>• Based on extensive drilling throughout the Bulgera and Mercuri deposits, mineralisation is interpreted to have an approximate north-south strike oriented. Within the Mercuri area the Price deposit has a strike of 10° and a westerly dip of approximately -25 degrees. Similarly, the Venus deposit has a strike of 340° and a dip of approximately -35 degrees towards the west. The Mercuri deposit has a strike of 15° and a westerly dip of approximately -40 degrees.</li> <li>• At Bulgera mineralization has a strike of approximately 340 degrees with a westerly dip of approximately -35 degrees.</li> <li>• Drilling was oriented approximately perpendicular to these trends. Holes have been drilled at a 60-degree angle to approximate (as close as practicably possible) a true width intercept through the moderately dipping mineralised zones.</li> <li>• Reported sample intervals are down-hole lengths; the true width is estimated to mostly approximate 80-90% of the down-hole widths, based on interpretation of mineralization with respect to drilling.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The majority significant intercepts have been described in previous reports announcements although many of these records may not be immediately available due to their historical nature. The available reports clearly show detailed information relating to and including representative drill hole cross sections and related maps showing the distribution of significant mineralization.</li> <li>• A 3D view of the mineralisation wireframes is given in Figures ??-??</li> <li>• The layout of the Bulgera and Mercuri site is shown in ?.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>• <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All drill assay results used in the estimation of this Mineral Resource have been sources from database compiled by the previous explores listed above, previous reports or from information published in previous releases.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples - size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<p><b>Metallurgical Testing Historic</b></p> <ul style="list-style-type: none"> <li>• Metallurgical test work on Bulgera ore samples by cyanidation indicated gold recoveries of 91% for oxide, 92% for transitional and 94% for primary ore types.</li> <li>• Oretest achieved gold recoveries of 93.5% using a combination of gravity separation and cyanide leach over 24 hours.</li> <li>• Test work on the bond ball work index for Bulgera samples gave a result of 17.6kWhr/tonne</li> <li>• Homestake (2001) report that records relating to gold recovery from historic mining and milling operations for both Bulgera and Mercuri could not be located.</li> <li>• Metallurgical test work on Mercuri ore samples by cyanidation indicated variable gold recoveries of between 57-97%.</li> </ul>



- The best result was obtained by using a combination of gravity separation followed by cyanidation of the gravity tails. The source or the ore type of the samples was not recorded
- Test work on the bond ball work index for the Mercuri test samples gave a result of 15.5kWhr/tonne.

#### Historic (Resolute) Specific Gravity Determinations

- No Bulk density [Specific gravity (SG)] measurements for the Bulgera deposits were carried out historically by Resolute.
- Resolute (1996) is reported to have carried out on diamond core samples at the Genalysis, Minlabs and Oretest laboratories.
- Principal results of the Bulk Density measurements for the Mercuri deposit area are:
  - Mineralization Oxide: 2.15
  - Mineralization Transition: 2.45
  - Mineralization Fresh: 2.70
  - Waste Oxide: 2.20
  - Waste Transition: 2.30
- The following Bulk Density values for the Bulgera deposit area are (based on the Mercuri data) are:
  - Mineralization Oxide: 2.15
  - Mineralization Transition: 2.45
  - Mineralization Fresh: 2.70
- Historic Bulk density [Specific gravity (SG)] measurements from previous mining and milling operations have not been located.?

#### Further work

- *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*
- *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*
- Further work will focus on assessing a viable mine plan and processing plant design as discussed in the announcement and additional resource drilling and exploration drilling to be undertaken on satellite resources.
- Additional Leach testing on 60-micron grind size material (utilising the same primary composite sample as for the reported work) was completed by AMML Laboratories and returned 93.1% Au recovery at 80% passing 60 microns.

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### 1.3 Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>The drill hole database is maintained by Norwest Minerals (In conjunction with Apex Geoscience).</li> <li>The Competent Person has verified the internal referential integrity of the database.</li> <li>Some RAB holes required elevation adjustment to the 'pre-mining' topographic surface.</li> <li>No other significant errors or concerns were encountered.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>The Competent Person consolidating the drilling and sampling data is a contractor to Norwest Minerals and has visited the site.</li> <li>To date no recent site visit has been undertaken by the Competent Person responsible for the resource estimation. The competent person has however visited Plutonic Mine and areas very close by to the project area in the past.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>Mineralisation envelopes were interpreted in section from drill hole data. A nominal 0.3 g/t edge cut off was used to define the mineralisation.</li> <li>The mineralisation envelope is contained within a specific geological and structurally controlled packages.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul style="list-style-type: none"> <li>The Bulgera and Mercuri mineralised zone has an approximate 2.5 km strike containing the identified deposits.</li> <li>The modelled areas have approximate strikes of 400m at Bulgera, 300m at Price, 300m at Venus and 550m at Mercuri.</li> <li>The mineralisation thicknesses in each deposit area range from approximately 2m to 20m, with average thickness being approximately 4-5m. Mineralization in the majority of deposit areas extends to approximately 70m below topographic surface. At the Bulgera and Mercuri areas mineralization extends to approximately 120m below topographic surface.</li> <li>Mineralisation has also been modelled between, along strike of and below the Price, Venus, Mercuri and Bulgera pre-existing pit</li> </ul>

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	<p>excavations.</p> <ul style="list-style-type: none"> <li>The approximate dimensions for the historic pits are: <ol style="list-style-type: none"> <li>Price - 120m long and 20m deep.</li> <li>Venus - 180m long and 50m deep.</li> <li>Mercuri - 270m long and 50m deep.</li> <li>Bulgera - 260m long and 45m deep.</li> </ol> </li> </ul>
<p><b>Estimation and modelling techniques</b></p> <ul style="list-style-type: none"> <li><i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></li> <li><i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></li> <li><i>The assumptions made regarding recovery of by-products.</i></li> <li><i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i></li> <li><i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li><i>Any assumptions behind modelling of selective mining units.</i></li> <li><i>Any assumptions about correlation between variables.</i></li> <li><i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li><i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li><i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></li> </ul>	<ul style="list-style-type: none"> <li>All of the available drilling data was used to define and model the mineralised domains for Au.</li> <li>All available Diamond, RC and RAB drilling data was used for mineralization interpretation and for guiding Mineral Resource estimation. Estimated resources have been suitable modified according to the lower level reliance on the quality of RAB drilling data.</li> <li>The majority of drilling has had all collar positions surveyed. Some of the Topographic data was inferred from the surveyed collar positions. Some historical un-surveyed drill hole collar elevations were draped onto a 'pre-mining' topographic DTM surface and were checked in order to match the known surveyed drilling. The survey control for collar positions was considered adequate for the estimation of resources as stated.</li> <li>The mineralised domains were interpreted from the drilling data provided by Norwest. Sets of cross- sectional 3D strings were generated throughout each deposit area. These were then linked to generate 3D wire-frames by HGMC. Mineralised wire-frame domains were used for statistical analysis and grade estimation. A set of wire-frame weathering surfaces were also modelled to highlight material type differences overprinting the mineralized zones. These codes are used to flag bulk density differences.</li> <li>Statistical and geostatistical analysis was carried out composited drilling data, composited to one metre down-hole intervals for gold.</li> <li>One (1) block model was constructed for the combined Price, Venus, Mercuri and Bulgera deposits using 2.5m x 5.0m x 2.0m (E-W, N-S, Bench) block cells covering the entire extents the mineralisation.</li> <li>The Block Model coordinate boundaries (Local Grid System) are; 14200-15450m E - (500 x 2.5m blocks)</li> </ul>

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		<p>23050-25600m N - (510 x 5.0m blocks)  380-580m RL - (100 x 2.0m benches)</p> <ul style="list-style-type: none"> <li>• The Ordinary Kriging (OK) interpolation method was used for the estimation of Au using variogram parameters defined from the geostatistical analysis. An outlier 'distance of restriction' approach was applied during the Au interpolation process in selected domains in order to reduce the influence of very high-grade outlier composite samples.</li> <li>• The kriging interpolated Au grades used different interpolation parameters as determined from an independent 'AREA' domain variographic analysis aligned to differences in mineralization geometry orientation.</li> <li>• Dry Bulk Density ("density") was assigned by material type 'oxidation state' designation with vales assigned representing the average bulk density derived from the available measured bulk density measurements from the historic drilling database or values used previously in historic block model assignment.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li>• <i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All tonnages are reported on a dry basis.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>• <i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• A 0.7 g/t Au cut off has been applied to reported tonnes and grade. This cut-off is considered in line with current gold price in conjunction with certain mineral processing considerations</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>• <i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li>• It is assumed the deposits will be mined using open pit mining methods.</li> <li>• Detailed grade control will refine resource and expected reserve detail prior to any mining activity.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>• <i>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not</i></li> </ul>	<ul style="list-style-type: none"> <li>• No metallurgical assumptions have been made in estimating the resource.</li> <li>• Historic metallurgical test work and successful mining and mineral processing supports assumptions relating to good recovery via heap or vat leach or a typical gold extraction plant commonly used in the</li> </ul>

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	<i>always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i>	goldfields of Western Australia.
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>The resource is located in an area of historic mining which included waste dump and tailings disposal it is assumed no environmental factors would prevent reactivation/extension of these disposal options.</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <li>Dry Bulk Density (DBD) has been determined from historical measurements taken from core samples, rock chip samples and bulk samples acquired through historical mining activity.</li> <li>Laboratory based Archimedes methods have been used to determine bulk density from diamond core samples. The bulk densities derived appear appropriate for the rock material types described and for the various weathering and oxidation states.</li> <li>The density measurements have been averaged in all deposit areas according to the geologically logged weathered or oxidized (or partially oxidized), transitional and fresh (sulphide) zones. Some bulk density values were retained from previous (historic) block models.</li> <li>The bulk density values applied in the Price, Venus, Mercuri and Bulgera deposits are: Weathered/Oxide = 1.80; Oxide = 2.00; Transition = 2.45; Fresh (Sulphide) = 2.70.</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>The classification was considered appropriate on the basis of drill hole spacing, sample interval, geological interpretation, history of mining, and representativeness of all available assay data.</li> <li>The classification criteria have employed multiple 'ancillary' interpolation parameters including 'distance of composite to model block' (DIST1), 'number of composite available within the search ellipsoid' (COMP1) for each block interpolation and the local kriging variance' (KERR1) for each block. The DIST1, COMP1 and KERR1 item values are 'condensed into a 'quality of estimate' (QLTY) which is the used a guide to refine a 'resource category' (RCAT) item used to assist with final resource reporting.</li> </ul>



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		<ul style="list-style-type: none"> <li>Classification of the resources has been assigned by the Competent Person and includes a series of project specific 'modifying factors' appropriate for the Resource estimation.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>The mineral Resource model and estimation has been reviewed in comparison with the previous historic estimation work on the project as acknowledged by Norwest resources. No major discrepancies or issues have been identified.</li> </ul>
<b>Discussion of relative accuracy/ confidence</b>	<ul style="list-style-type: none"> <li><i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i></li> <li><i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></li> <li><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Competent Person considers the mineral resource to be a robust and accurate global estimate of the contained metal as the estimation has been constrained within defined mineralization wire-frames.</li> <li>The Resource classification applied to the Resource reflects the Competent Person's confidence in the estimate.</li> </ul>