



## **Material Information Summary**

A Material Information Summary pursuant to ASX Listing Rules 5.8 and 5.9 is provided below for the Haile Gold Mine (HGM) resource and reserve estimates. The Assessment and Reporting Criteria in accordance with JORC Code 2012 is presented in Appendix 1.

### **1.1**

#### **1 Geology and Geological Interpretation**

The north central portion of South Carolina is geologically situated in the Carolina superterrane (Carolinia), which consists of the Carolina terrane, the Charlotte terrane, the Augusta-Dreher Shoals terrane and the Kings Mountain terrane. These volcanic arcs formed adjacent to the African continent and were accreted to the North American craton during the Late Paleozoic to Ordovician periods. The Haile Gold Mine is located within the Carolina terrane, also known as the Carolina Slate Belt. The Brewer gold mine is located 10 miles (16 km) northeast of Haile and the Ridgeway mine is located 30 miles (48 km) southwest of Haile. All of the gold deposits are hosted in a similar geologic setting within the Carolina terrane.

The Haile, Ridgeway, and Brewer gold mines occur along or within 1 km of the strongly deformed contact between metamorphosed volcanic and metamorphosed sedimentary rocks of Neoproterozoic to Early Cambrian age. The Haile and Ridgeway deposits are hosted within greenschist grade siltstones, shales and sandstones of the Richtex Formation. The overlying Persimmon Fork Formation is composed of felsic to intermediate flows and tuffaceous sediments. Carboniferous granite plutons of the Pageland Granite and Liberty Hill Granite outcrop within 5 miles (8 km) of Haile. Northwest-trending, steeply dipping Triassic diabase dikes conspicuously crosscut the Haile mine area. A southeast thickening wedge of Coastal Plain sands unconformably overlies the region. All rocks are intensely saprolitised within 50-100 feet (16-32m) of the surface due to intense weathering.

The Haile gold deposits occur within a large asymmetric ENE-trending antiform that plunges shallowly to the northeast. Regional stratigraphy and recent zircon ages indicate that the section has been overturned at Haile, however, further work is required to confirm this. Penetrative slaty cleavage is ubiquitous in the Richtex Formation metasediments. Isoclinal to tight folds are observed at the thin section, outcrop and map scale.

Disseminated gold mineralisation at Haile occurs as complexly folded, en echelon lenses of moderately to steeply dipping ore bodies. The mineralised corridor is up to 3,500 ft (1 km) wide (NNW to SSE) and over 2 miles (3.4 km) long (WSW to ENE). Mineralisation is hosted in laminated metasiltstone and metagreywacke of the Richtex Formation. Gold mineralisation occurs in silicified, pyrite-bearing metasediments with minor molybdenite. Alteration in the mineralised zones consists



of intense quartz-pyrite that grades outward to sericite-pyrrhotite-pyrite-calcite. Minor quartz veins are mostly barren, however, quartz-pyrite veins are occasionally gold-bearing. Scanning electron microscopy shows that the gold occurs as native gold, electrum, and within gold-bearing tellurides as inclusions and along fractures within fine-grained pyrite.

Minor molybdenite occurs primarily on foliation surfaces or as dispersed, fine-grained aggregates in silicified zones and has been dated by Re-Os isotope methods (Mobley et al., 2014). Seven recent Re-Os molybdenite ages yield ages ranging from 529 to 564 Ma. Four of these samples give a weighted age of 548.7+2 Ma, indicating that gold mineralisation is closely linked to Neoproterozoic volcanism and sedimentation.

### Exploration

Modern exploration, development, and mining activity on the Haile property began during the 1970s. Between 1973 and 1977, Cyprus Exploration Company ("Cyprus") carried out an extensive exploration program consisting of surface geophysical surveys, trenching, geologic mapping, auger drilling, core drilling, air-track drilling, and metallurgical testing. Cyprus calculated the Haile resources at 186,000 ounces (5,785 kg) of gold with an average grade of 0.062 opt (2.13 g/t).

During the late 1980s, Westmont/Nicor drilled out a small, low-grade oxide resource immediately west of the property.

Between 1981 and 1985, Piedmont explored the historic Haile mine and surrounding properties with various drilling methods (including core and reverse circulation), surface geophysics, soil sampling, trenching, and rock-chip sampling. Piedmont's total drilling footage was 228,500 ft (69,647 m), much of which was for mine development. Piedmont mined several Haile property deposits from 1985 to 1992, and produced about 86,000 ounces (2,675 kg) of gold.

In 1991, Amax performed an extensive exploration program on the Haile property under an exploration option with Piedmont. In 1992, Amax and Piedmont formed HMC as a joint venture, and from 1992 to 1994 HMC (the operating company) completed a program of exploration and development drilling (using core and reverse circulation), property evaluation, Mineral Resource estimation, and technical report preparation. The Ledbetter area was discovered and the Mill and Snake areas were expanded with this effort.

Kinross acquired Amax in 1998, assumed Amax's portion of the HMC joint venture, and later purchased Piedmont's interest. Kinross performed no exploration activities on the property and limited their operations to a highly successful reclamation program from 1998 to 2007.



Romarco completed the Haile acquisition on October 17, 2007 and by February 2008, confirmed the quality of historical drilling and assay data and turned their effort to exploration and aggressive resource expansion. In October 2014 Romarco reported an MII resource of 4.8 M oz Au averaging 2 g/t Au. Romarco increased the Haile resource six-fold in only six years. OceanaGold continues to expand on Romarco targets and is drilling resource expansions mostly at depths greater than 1,000 feet (328 m).

### **1.1.5 Drilling Techniques**

Drilling at Haile commenced in the 1970s and has continued intermittently to the present by numerous companies. The database that was used for the 2016 resource estimate was transferred to IMC on 17 November 2011. At that time, there were a total of 3,747 drill holes in the database totalling 1,511,912 ft (460,831 m) of drilling. However, not all of this drilling was used for estimation of the block model due to missing or incomplete data in older pre-Romarco holes. On December 31, 2016, there were 4,320 drill holes in the database totalling 2,008,931 feet (612,479 m) of drilling. Drill holes with fire assay values above a grade of zero totaled 2,039 drill holes containing 254,681 assay intervals from 1,372,473 ft (418,329 m) of drilling.

As of November 17, 2011, Romarco had drilled 1,001,594 ft (305,286 m) of the fire assayed drilling out of the total 1,372,473 ft (418,330 m) on the property. The historical 370,879 ft (113,044 m) of fire assayed drilling was completed by previous property holders including Cyprus, Gold Fields Mining Corp, Piedmont, Westmont Mining, and the joint venture HMC. A portion of the early drilling has been mined out and has little impact on the remaining in situ mineralisation. Some of the Piedmont and Cyprus drill holes were assayed by cyanide soluble methods to determine cyanide amenability of the mineralisation. That information has not been used in the determination of resources and only those intervals with fire assay from those previous property holders have been used.

IMC completed a comparison of historic drilling to Haile-Romarco drilling in 2011 and found that the old and new data can be comingled if it has been fire assayed. Within the fire assayed data, 28% of the holes are core and 72% are Reverse Circulation (RC). There are very few fire assays (301) that are from air track drilling and "doodle bug" as recorded in the database. They amount to 0.2% of the database and are not a significant sample set.

Drilling completed at Haile since RC hole number 1502 and all diamond drill holes since hole number 289 have received down hole surveys. A total of 32% of the RC holes, 100% of the core-tail holes, and 89% of the diamond drill holes in the database have down-hole surveys. Most holes are vertical or angled at -45 to -60 degrees to the southeast. Since all the surveyed drill holes deviate to the southwest (clockwise) perpendicular to foliation, an algorithm was developed as a function of depth to adjust the down-hole survey of the historical drill holes to reflect their likely deviation.



### **1.1.3 Sampling and Sub-Sampling**

Both RC and Diamond Drilling (“DDH”) have been done at Haile. This section will describe the sampling procedures applied to both drilling methods. The sample procedures applied to the historic drilling at Haile are not well known or documented. IMC has completed a statistical comparison between the historic information and the recent drilling to verify reliability of the historic drilling.

Romarco has been drilling at the Haile project since 2007. The techniques described in this section reflect the procedures applied by Romarco from 2007 to 2015. For drilling and sampling procedures used for the current resource statement, refer to the Haile Technical Report.

The reverse circulation sample bags from the truck are transferred to the Haile sample handling facility where they are prepared for shipment to a lab. RC samples are prepared at the Kershaw Mineral Lab (“KML”) in Kershaw, South Carolina.

At the core logging facility, the core is cleaned, measured, and photographed. Geotechnical and geologic logging is completed on the whole core. Rock Quality Data (“RQD”) and core recovery are recorded as part of the geotechnical suite of data.

The logging geologist assigns the sample intervals and sample numbers prior to core sawing. Core is either sawed or split with a putty knife if soft. The saw or knife is cleaned between each sample. A brick or barren rock sample is sawed with the diamond saw between intervals to minimize cross-contamination. The cooling water for the saw is not recycled. Split core is delivered to KML with blanks and standards for sample prep and analysis.

Once the samples arrived at KML, the following procedures are applied:

- Inventory and log samples into the laboratory LIMS tracking system
- Print worksheets and envelope labels
- Dry samples at 200 degrees Fahrenheit
- Jaw crush samples to 70% passing 10 mesh (2 mm)
- Clean the crusher between samples with barren rock and compressed air
- Split sample with a riffle splitter to prepare the sample for pulverizing
- Pulverize a 450 g sample (+/- 50 g) to 85% passing 140 mesh (0.106 mm)
- Clean the pulverizer between samples with sand and compressed air
- Approximately 225 g of pulp sample is sent for fire assay
- Coarse rejects and reserve pulps are returned to Haile for storage.

### **1.1.4 Sample Analysis methods**

Romarco drill samples were initially sent to either the Inspectorate Lab in Reno, Nevada, for preparation and assay, or to AHK Geochem in Spartanburg, South Carolina, for sample preparation



to be analysed at their Fairbanks, Alaska facility. Inspectorate is an ISO-9001 certified laboratory and AHK Geochem is 17025 accredited for all facilities that handled Haile samples.

Check assays were sent to ALS Chemex in Reno. ALS Chemex is also ISO-9001 certified and 17025 accredited. Coarse rejects and returned samples are stored and inventoried at Haile where they are under the control of OceanaGold personnel. During off-shift hours, a Deputy Sherriff is on site providing security for the site and sample storage facility.

The procedures applied at KML since August 2011 for assay are as follows:

- Inventory the samples and create worksheets
- Insert quality control (QC) samples of 1 duplicate, 1 lab standard, and 1 blank in each batch of 24 samples.
- Fire assay 30gm of pulp sample for gold, with atomic absorption finish.
- If the gold assay result from step 3 is greater than or equal to 0.09 opt, an additional 30gm of pulp sample is fire assayed for gold using gravimetric finish, and 0.50gm of pulp sample is analysed for silver using a 4-acid digestion with Atomic Absorption finish.
- Multi-element ICP analysis is performed as requested.
- Carbon and sulfur determinations are performed as requested.
- Review the internal QC results and perform check assays as required.
- Review and sign off on final values including the internal check assays.
- E mail the final report and certificate of assay.
- Deliver the certificate to the client.

KML is ISO/IEC 17025:2005 accredited for gold and silver assays through the Standards Council of Canada. Ore grade results produced by KML were not used in the current Mineral Resource calculations. Samples where KML reported above 0.015 oz/ton (0.5 g/t Au) were sent to a third party lab for verification, and the third party results were used in block model grade interpolation. Grades below 0.015 oz/ton (0.5 g/t Au) may be used from KML in the block model.

Coarse rejects and returned samples are stored and inventoried at Haile where they are under the control of OceanaGold personnel. During off-shift hours, a Deputy Sherriff is on site providing security for the site and sample storage facility.

#### **1.1.6 Data Verification**

The Haile drill hole database was verified by IMC in late 2011 and the results published in the Technical Report titled "Haile Gold Mine Project, NI43-101 Technical Report Feasibility Study" dated February 10, 2011. This section focuses on verification of the drilling, sampling, and assaying completed from October 2010 through to November 16, 2011. The verification of the late 2011 data when added to the historic database constitutes the complete database used in the assembly of the block model and corresponding Mineral Resource estimate.

The database verification at Haile utilized the following major steps:



- A check of the Haile database against assay certificates from the laboratory.
- A statistical analysis of the quality control data that is collected by Romarco and their assay laboratory.
- A comparison of Romarco drilling and assay information versus closely spaced historic information.
- A comparison of diamond drilling versus reverse circulation drilling (DDH vs RC).
- During the site visit in 2009, the qualified person observed and accepted the sample procedures and quality control data handling as described in this text.

John Marek of IMC acted as the qualified person for the data verification and determination of Mineral Resources. As a result of the data verification work that is summarized in this section, Mr. Marek and IMC find that the Haile database is reliable for the determination of Mineral Resources and Mineral Reserves.

The approach presented above is to verify that the Romarco data is reliable based on the quality assurance/quality control information that is collected with the data. Once that is established, the applicability of the historic information is established by a nearest neighbour statistical analysis of old versus Romarco drilling

## JORC Code, 2012 Edition – Table 1, Haile Gold Mine Project

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	Commentary
Sampling techniques	<p><u>Diamond Drilling</u></p> <ul style="list-style-type: none"> <li>• Diamond core drilling is by wireline methods and generally utilizes HQ and NQ size core 6.35cm and 4.8cm core. Core is transferred from the core barrels to plastic core boxes at the drill rig by the driller. Core orientation is not utilized other than for specific geotechnical programs. Core is broken as required to completely fill the boxes. Drill intervals are marked on the core boxes and interval marker blocks are labelled and placed in the core box. Whole core is transported to the sample preparation area by OceanaGold personnel.</li> </ul> <p><b>Sample Preparation &amp; Analysis</b></p> <p><u>Core Samples</u></p> <ul style="list-style-type: none"> <li>• At the core logging facility, the core is cleaned, measured and photographed. Geotechnical and geologic logging is completed on the whole core. Rock Quality Data (RQD) and core recovery are recorded as part of the geotechnical suite of data.</li> <li>• The logging geologist assigns the sample intervals and sample numbers prior to core sawing. Core is either sawed or split with a putty knife if soft. The saw or knife is cleaned between each sample. A brick or barren rock sample is sawed with the diamond saw between intervals to minimize cross-contamination. The cooling water for the saw is not recycled.</li> <li>• Split core is delivered to the sample preparation facilities at the Kershaw Mineral Lab (KML) in Kershaw, South Carolina. KML is wholly owned by OceanaGold Corp.</li> <li>• Sample preparation step include:</li> </ul>

Criteria	Commentary
	<ol style="list-style-type: none"> <li>1) Inventory and log samples into the laboratory LIMS tracking system</li> <li>2) Print worksheets and envelope labels</li> <li>3) Dry samples at 93 degrees C</li> <li>4) Jaw crush samples to 70% passing 10 mesh (2 mm)</li> <li>5) Clean the crusher between samples with barren rock and compressed air</li> <li>6) Split sample with a riffle splitter to prepare the sample for pulverizing</li> <li>7) Pulverize a 450 gm sample (+/- 50 gm) to 85% passing 140 mesh (0.106 mm)</li> <li>8) Clean the pulveriser between samples with sand and compressed air</li> <li>9) Approximately 225 gm of pulp sample is sent for fire assay</li> <li>10) Coarse rejects and reserve pulps are returned to Haile for storage.</li> </ol> <ul style="list-style-type: none"> <li>• Sample pulps from KML are analysed at KML. Check assays in for mineralized intervals were sent to ALS Minerals in Tucson for external verification.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>• Drilling at the Haile property commenced in the 1970's and has continued intermittently to the present by several different companies.</li> <li>• Diamond core drilling is by wireline methods and generally utilizes HQ and NQ size core 6.35cm and 4.8cm core.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>• Core recoveries were measured at the core shed by the logging geologist. Core recoveries average 97%. There is no observed relationship between core recovery and grade.</li> </ul>
Density	<ul style="list-style-type: none"> <li>• Density measurements for drill core are recorded every 6 to 9m feet using the water immersion method. Results are uploaded to the database and have been reviewed based on depth, grade, rock type, oxidation state, sulfide abundance and alteration. Density recommendations vary by rock type and have been coded into the block model.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>• All drilled intervals are logged. Core logging is completed on site by staff geologists at Haile Gold Mine. Geotechnical and geologic logging are completed on washed whole core.</li> <li>• Geologic logging includes rock type, structure, alteration and mineralogy, with comments.</li> <li>• Rock Quality Data (RQD), hardness, fracture frequency and joint condition rating and core recovery are recorded as part of the geotechnical suite of data.</li> <li>• All core intervals are photographed and stored on the Haile network.</li> <li>• All logging is recorded in Excel files with a separate file for each drill hole. The logged information is stored on site and backed up daily. Excel files are uploaded to the acquire database.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• Refer to sampling techniques section or the Quality of Assay data section for more detail.</li> <li>• Half core samples are cut by rotary diamond saw or, if too soft, are cut by knife. Half core is placed in a bar-coded, labelled sample bag and the other half is returned to the core box.</li> <li>• It is believed that preparation for both the diamond core and RC samples is appropriate.</li> <li>• It is believed that the sample sizes are adequate for the Haile deposits, which are primarily of the finely disseminated sediment-hosted style. Although coarse gold has been observed in drill core, it is rare and is not representative of the mineralization that will be mined.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>• The Mineral Resources and Ore Reserves at Haile are based on fire assay of a 30 gm aliquot for gold with Atomic Absorption finish &lt;3 g/t Au and gravity finish &gt;3 g/t Au. Blanks and standards, are inserted, and check assays are submitted to a second lab on a regular basis.</li> </ul>


Criteria	Commentary
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>• There are strong visual indicators for mineralisation observed in drill core based on intensity of silicification, pyrite abundance and hydrothermal brecciation.</li> <li>• All assay data is stored in a secure acQuire database in an as received basis with no adjustment made to the returned data.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>• Drill hole collars are surveyed with differential GPS with sub-centimetre accuracy. The historic Amax and early Romarco holes were surveyed by a South Carolina licensed surveyor using conventional ground methods. Frequent check surveys have been completed during the project.</li> <li>• The drill hole locations and the project coordinate system are UTM NAD83 zone 17N.</li> <li>• Topographic control has been established to a high level of precision. Resource estimation and mine planning relied on contour maps with 0.6m contour intervals.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>• Drill hole spacing is not a simple calculation at Haile because many holes are angle holes and down hole deflections occur during the drilling process. Several angle holes were often drilled from a single drill platform. Drill hole spacing is sufficient to enable grade distribution and geological controls to be established with a high degree of confidence for the Haile disseminated style of mineralisation.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>• The orientation of the mineralisation generally parallels the foliation of the host metasediments. The metasediments have variable dip that ranges between 20 degrees to the north-northwest to vertical. Mineralisation dips 30 to 60 degrees to the northwest. Drill holes are typically angled at -50° to -60° southeast in order to intercept mineralisation perpendicular to mineralised trends.</li> <li>• Drill holes deviate perpendicular to the northwest-dipping foliation and mineralisation. There is no evidence of orientation-related sample bias at Haile.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>• All drill hole samples are transported from the drill rigs to the OGC sample prep facility by OGC personnel. Access to the property is limited and controlled by manned security gates. When samples are shipped to the lab the sample manifests are checked by the lab and the receipt of all samples are confirmed.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>• Audits and reviews have been performed by independent consultants prior to previous resource estimations. Collar coordinates, downhole surveys and assay certificates have been confirmed.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	Commentary
Mineral tenement and land tenure status	<p><b>Property Location</b></p> <ul style="list-style-type: none"> <li>• The Haile property site is located 4.8km (3mi) northeast of the town of Kershaw in southern Lancaster County, South Carolina. Lancaster County lies in the north-central part of the state. The Haile Gold Mine is approximately 27.4 km (17 mi) southeast of the city of Lancaster, the county seat, which is approximately 48.3 km (30 mi) south of Charlotte, North Carolina. The approximate geographic centre of the property is at 34° 34' 46" N latitude and 80° 32' 37" W longitude. The mineralized zones at Haile lie within an area extending from 538000 E to 544000</li> </ul>



Criteria	Commentary
	<p>E, and from 3825000 N to 3828000N (UTM NAD83 zone 17N).</p>  <p>(Source: State-Maps.org and Google Maps, 2014)</p> <p><b>Figure 1: General Location Map of the Haile Gold Mine</b></p> <ul style="list-style-type: none"> <li>• Following a Plan of Arrangement completed on October 1st, 2015 between Romarco Minerals Inc and OceanaGold Corporation, Haile Gold Mine Inc. (HGM) is a wholly owned subsidiary of OceanaGold Corporation. References in this document to OceanaGold refer to the parent company together with its subsidiaries, including HGM and Romarco Minerals Inc.</li> <li>• HGM provided an inventory of property that is owned both within the project boundary and as buffer land outside the project boundary. After transferring approximately 4,388 acres of land into mitigation and conservancy projects, HGM owns 5,919 acres of land. HGM owns and leases additional land that part of the Haile mine.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>• Historic exploration was completed prior to acquisition of the Haile Gold Mine by Romarco. That work has been superseded by the drilling completed at Haile.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>• Several gold deposits are located along a northeasterly trend that extends from eastern Georgia to Virginia. Many of these deposits are located at or near the contact between felsic volcanics and sedimentary dominated sequences. Various metal associations and mineralisation styles indicate that this is a complex metallogenic province. Brewer has many features of an acid-sulphate mineralisation system such as the presence of aluminosilicates, topaz, and enargite. Gold mineralisation at Barite Hill contains the assemblage of pyrite-chalcopyrite-galena-sphalerite and is characteristic of a submarine, high-sulphidation volcanogenic massive sulphide deposit. Haile and Ridgeway are similar in that the mineralisation is hosted within silicified siltstones. Both deposits contain molybdenite and the mineralisation correlates with anomalous silver, arsenic, antimony, molybdenum, and tellurium.</li> <li>• The genesis of Haile and Ridgeway are quite controversial and both deposits have been proposed to have been formed by conflicting models. This controversy has been exacerbated by poor exposures, overprinting deformation, metamorphism, and intense weathering. Submarine hot springs have been suggested for the gold mineralisation by several geologists (Worthington and Kiff, 1970; Spence et al., 1980; and Kiff and Spence, 1987). Foley et al. (2001) and Ayuso et al. (2005) have presented additional evidence in support of this model which include geochemistry of sulphide phases and geochronology. The exhalative model stipulates that gold deposition occurred when “black smokers” on the sea floor fumed out silica, gold, and sulphide bearing fluids and the minerals precipitated in a wide area over a uniform seafloor. The</li> </ul>

Criteria	Commentary
	<p>precipitated minerals were buried by later sedimentation. The gold deposits are disseminated, stratiform and lenticular in shape and dominantly sediment-hosted.</p> <ul style="list-style-type: none"> <li>• Alternatively, several workers have proposed the mineralisation is structurally controlled and was caused by deformation. Tomkinson (1990) proposed that shearing was responsible for the mineralisation at Haile and Ridgeway. This model invokes shears as the conduit for focusing gold bearing fluids into the metasilstones. Drops in pressure during faulting are speculated to be responsible for gold precipitation. Nick Hayward (1992) proposed that folding of the phyllites controlled the gold mineralisation. This genetic model proposes that gold was emplaced within the dilational zones of fold hinges during deformation.</li> <li>• Gillon et al. (1995) proposed a model which invoked both early mineralisation and remobilization during deformation. O'Brien et al. (1998) proposed that the deposits were generated during the Neoproterozoic by the arc related volcanic activity in a hydrothermal system. This is supported by the close spatial associations between Haile and the felsic volcanic rocks. Pressure shadows around pyrite grains within the mineralized zones, folded mineralized zones, and flattened hydrothermal breccias indicate that the mineralisation is pre-tectonic and rules out that the mineralisation is related to deformation as proposed by Tomkinson and Hayward. Hydrothermal breccias containing well bedded clasts, silicification fronts cross-cutting bedding, and multiple phases of silicification indicate that the mineralisation is post depositional and invalidate the submarine hot springs or exhalative model.</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>• See Table 1 in the announcement, which lists for each hole with a significant intercept, the hole ID, easting, northing, collar RL, azimuth, dip, interception depth and downhole length.</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>• Exploration results are reported within distinct geological boundaries. The grades are compiled using length weighting with no top cutting.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>• Drill intercepts are reported in down hole length from the drill collar. Most are 1.5m (5 ft) long assay intervals. The intercept lengths may not correspond to true widths due to holes that do not cross perpendicular to the mineralisation. True widths are typically 60-80% of the reported drill widths, and vary according to drill hole intersection angles with foliation and bedding.</li> </ul>

Diagrams

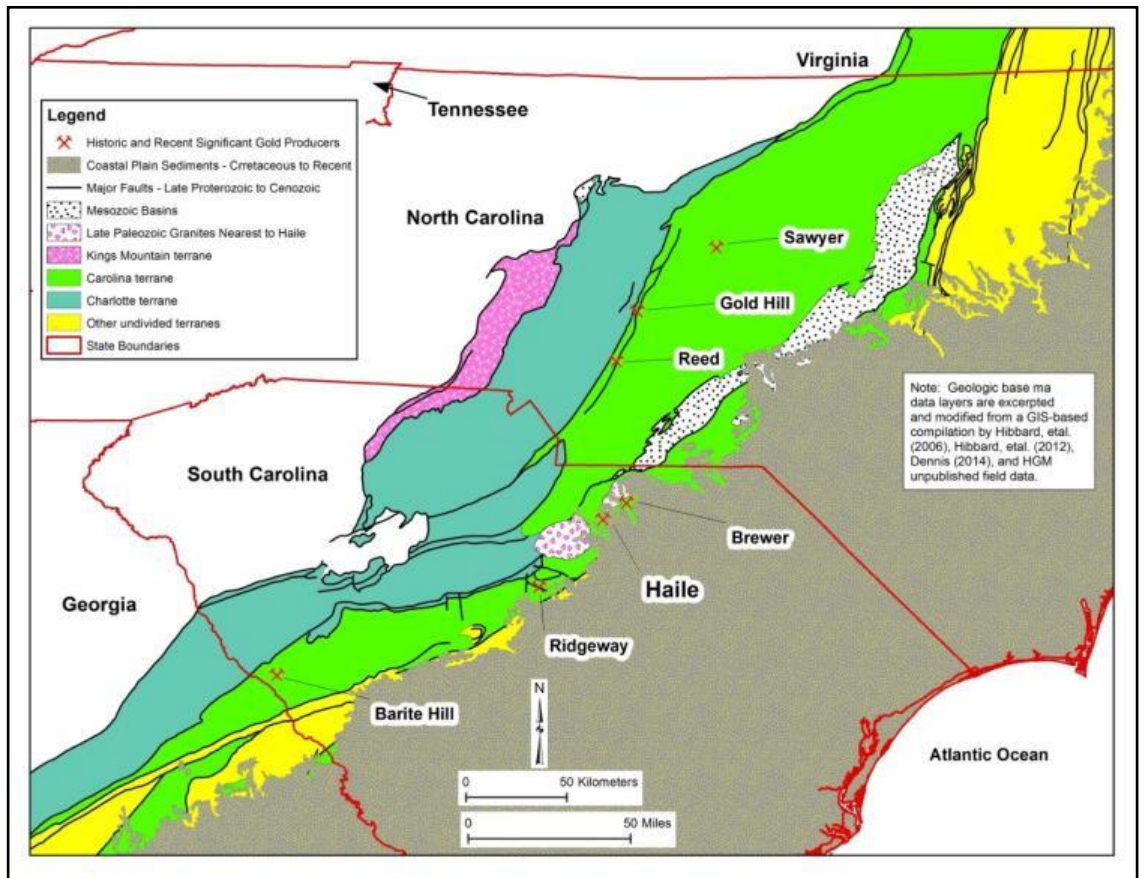


Figure 2: Gold Deposit Locations within the Carolina Terrane

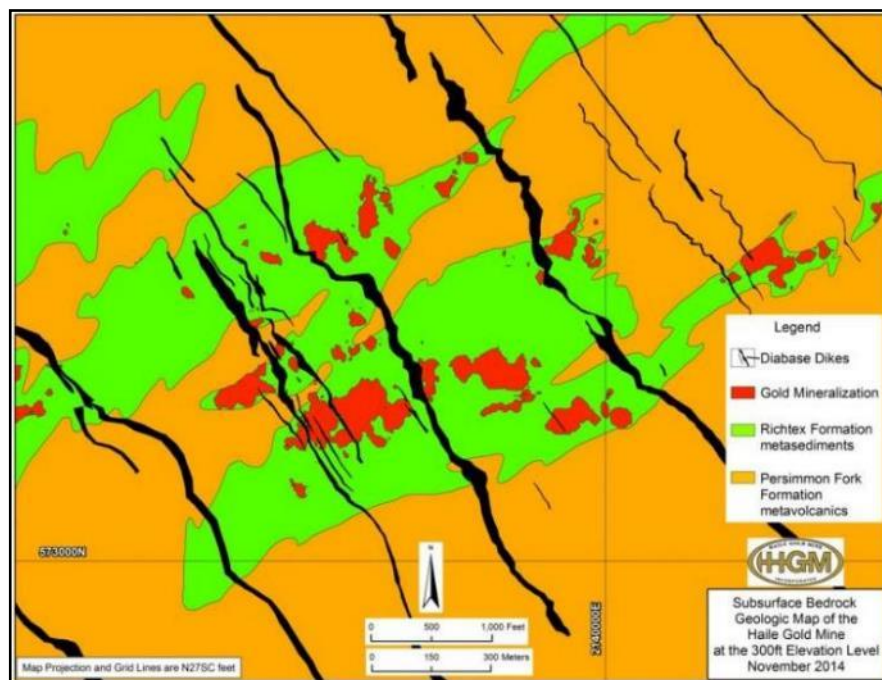
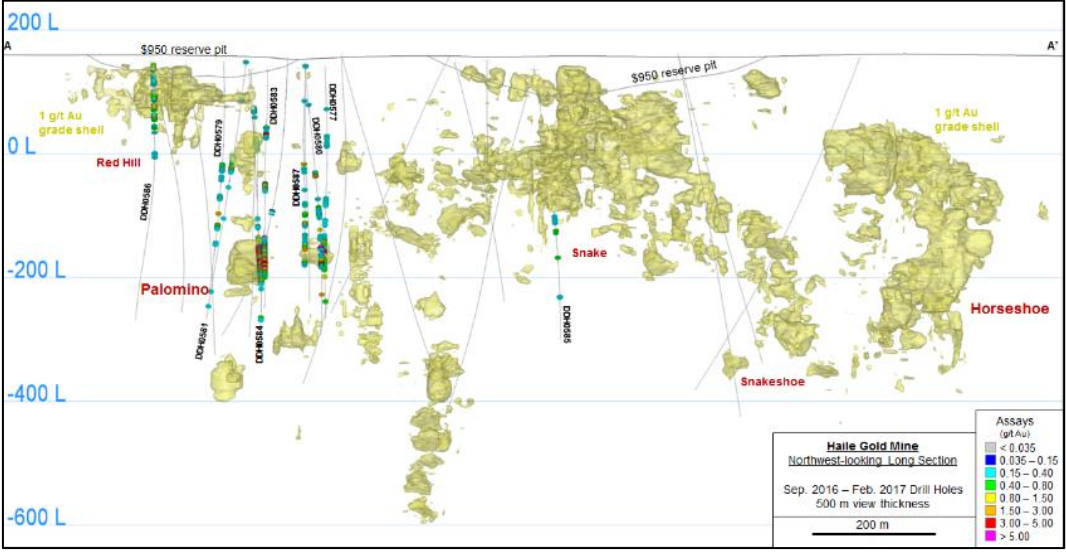


Figure 3: Schematic Geologic Map of Haile Mine area

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Criteria	Commentary
	 <p data-bbox="375 974 941 1008"><b>Figure 4: Palomino Section with recent drill holes</b></p>
Balanced reporting	<ul style="list-style-type: none"> <li>The recent Haile Palomino drilling is displayed in long section in Fig 4 with maps and comprehensive drill tables including results available at <a href="http://www.oceanagold.com/investors-and-media/filings">http://www.oceanagold.com/investors-and-media/filings</a> accessed.</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>The mineralisation is described in the Geology section. No geochemical or metallurgical test work has been conducted on these exploration results.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>OGC continues to drill at the Haile Gold Mine. Pending results from ongoing core drilling at the Palomino target will be utilised in the Haile optimisation study.</li> </ul>

### Material Information Summary for Waihi

A Material Information Summary pursuant to ASX Listing Rules 5.8 and 5.9 is provided below for the Waihi Gold Mine (WGM) resource and reserve estimates. The Assessment and Reporting Criteria in accordance with Table 1 of the JORC Code 2012 is presented in Appendix 1.

#### 1.1 Waihi

The Waihi Gold operation is located 142 km southeast of Auckland, New Zealand. Waihi is a town in the Hauraki District of the North Island of New Zealand, especially notable for its long history of gold mining. Modern open pit mining commenced at the site in 1988 and underground mining commenced in 2004, with the extraction of ore from underground commencing in late 2006. The Waihi Gold operation holds the necessary permits, consents, certificates, licenses and agreements required to operate the Martha open pit and Correnso underground mine.



### 1.1.1 Geology

The Project comprises several areas of mineralization, which are at different stages of development. The Correnso project is comprised of the main Correnso underground mine, which is in the mature phase of production, and the Correnso Extensions. These include the areas up dip and down dip of the main Correnso mine and the adjacent Daybreak and Empire vein systems, all of which are in the development phase. The Martha Open Pit is in the final stages of production<sup>1</sup>.

Exploration activity undertaken in proximity to the Martha Open pit and a scoping level mining study have enabled the delineation of a maiden Martha Underground gold resource of 20 koz Indicated and 137 koz Inferred Resource. The resource is associated with the historically mined Martha, Edward and Welcome veins located beneath the existing Martha Pit.

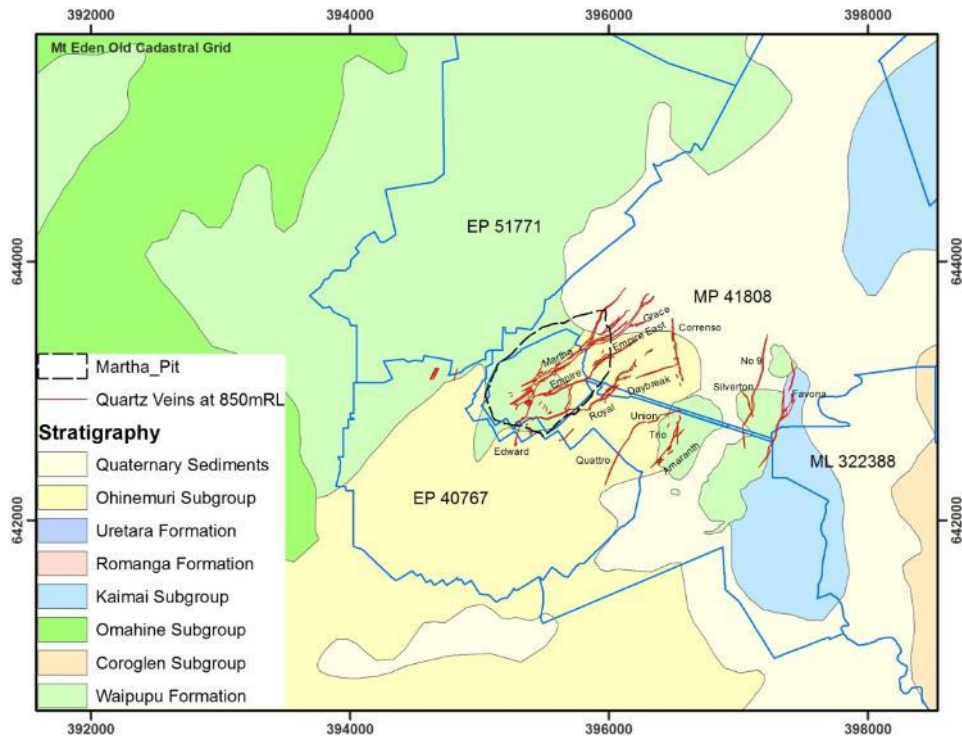
The Gladstone underground resource is a small vein hosted resource located in close proximity to the Favona decline beneath Gladstone hill.

The major gold - silver deposits of the Waihi District are classical low sulphidation adularia-sericite epithermal quartz vein systems associated with north to northeast trending faults. Larger veins have characteristically developed in dilational sites in the steepened upper profile of extensional faults with narrower splay veins developed in the hanging wall of major vein structures. Figure 1 shows a general geology plan of the Project, including the major vein locations. The Waihi epithermal gold-silver mineralised veins are hosted in Miocene andesite lavas beneath the Waihi township area.

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<sup>1</sup> A localised failure of the north wall occurred in April 2015 which undercut the main access ramp and operations were suspended in April 2015. A 1 million tonne failure of this wall occurred during April 2016 and studies are in progress to regain access to the bottom of the pit.

**Figure 1-1: Project Geology Plan**



Approximately 475,000m has been drilled in 3,150 core and RC drill holes on the Project since 1980. All drill core was routinely oriented below the base of the post-mineral stratigraphy.

The main ore minerals are electrum and silver sulphides with ubiquitous pyrite and variable, though usually minor, sphalerite, galena and chalcopyrite in a gangue consisting of quartz, locally with calcite, chlorite, rhodochrosite and adularia. Base metal sulphides increase with depth.

### 1.1.1 Drilling, Sampling and Sub-Sampling

Underground resources are defined by diamond core and face sampling. Open pit resources are defined by diamond core and RC drill hole sampling.

Diamond core sample intervals are geologically defined from logging. RC grade control drilling in the open pit is sampled over 1.5m intervals. Face sample mark-ups are determined by mine geologists according to changes in lithology, vein texture and/or alteration. Samples are collected by chipping along marked sample lines.

The quantity and quality of the lithological, geotechnical, geochemical, collar and down hole survey data collected in the exploration, delineation, underground, and grade control drill programs are sufficient to support the Mineral Resource and Ore Reserve estimation.

### 1.1.1 Sample Preparation and Analysis

Sample preparation and assaying is carried out at the independent Waihi SGS Laboratory. Sample preparation techniques for diamond core, RC and face samples are considered to be appropriate for

the ore types present at Waihi.

Assaying for gold is by fire assay with AAS finish, while silver is by acid digest and AAS. Blanks and certified reference materials are inserted, monitored and acted upon where necessary.

### 1.1.1 Estimation

Resource estimates are constrained within wireframe interpretations of vein volumes. Gold grade is modelled via ordinary kriging or inverse distance methods dependent on data density.

Dry bulk densities ranging between 1.8 and 2.5 t/m<sup>3</sup> are modelled by rock type for the conversion of volumes to tonnage. These are based on 2,302 density determinations.

#### 1.1.1.1 Cut-Off grades

Inputs to the calculation of cut-off grades for the Waihi Gold open pit and underground mine include mining costs, metallurgical recoveries, treatment and refining costs, general and administration costs, royalties, and commodity prices.

Cut-off grades used in the Correnso Extensions study are shown in the table below:

**Table 4: Cut-offs Used in Correnso Extension study**

Area	Stoping	Ore Development
Correnso Upper Extensions	2.5g/t	N/A
Correnso Lower Extensions	4.0g/t	3.5g/t
Daybreak	3.5g/t	3.5g/t
Empire	3.5g/t	3.5g/t

The cut-off grade for the open pit is 0.5 g/t Au.

#### 1.1.1.1 Resource Classification

To classify the Mineral Resource appropriate account was taken of geology, drill hole spacing, search criteria, reliability of input data as well as the Competent Person's confidence in the continuity of geology and metal values.

Classification is based on the requirement for the average distance to the closest three holes to be within specific ranges determined from drill spacing studies as detailed in Table 6 below.



**Table 6: Classification Criteria**

Resource Classification	Vein Zones Average distance to 3 holes	Stockwork Average distance to 3 holes	Stope backfill	2 <sup>nd</sup> estimation pass stockwork domain
Measured	0 to 10 m			
Indicated	10 to 30 m	0 to 22.5 m		
Inferred	30 to 60 m	22.5 to 45 m	All material	
Mineral inventory I	>60m	>45 m		
Mineral inventory II				All material

Measured material is classified on the basis of proximity to drilling and sill drive development. Blocks are classified as Measured if they are within an average distance of 10 meters of three separate sampled locations, either drill holes or lateral ore drive development channel samples.

The resource estimate outlined in this document appropriately reflects the Competent Person's view of the deposit.

### 1.1.1 Mining, Metallurgy and Modifying Factors

Inputs to the calculation of the reserve cut-off grades for the Waihi Gold open pit and underground mine include mining costs, metallurgical recoveries, treatment and refining costs, general and administration costs, royalties, and commodity prices.

Open pit mining was undertaken by a contractor from 1997 to 2015 under a schedule of rates, and production rates and mining costs are therefore well understood.

Long hole bench stoping with rock backfill is the current mining method for extraction of underground Ore Reserves. Stope dilution has been estimated based on expected geotechnical conditions, stope spans and mine reconciliations. Recovery of ore requires the use of remote loaders, and allowances have been made for loss of Ore Reserves and also for dilution from backfill.

Recovery of gold at Waihi Gold Mine is achieved through the use of a CIP plant and a conventional SABC grinding circuit. The plant has an established skilled workforce and management team in place. Recent cost estimates and processing recoveries support the reporting of the stated Ore Reserves.



The technical and economic viability of the reported Ore Reserves is supported by studies which meet the definition of a Feasibility Study. All permits and consents are in place for the extraction of the Ore Reserve.

### **Competent Persons**

Information relating to Exploration Results and Mineral Resources in this document was prepared by or under the supervision of Mr Peter Church, information relating to Underground Ore Reserves was prepared by or under the supervision of Mr David Townsend, and Open Pit Ore Reserves are prepared under the supervision of Mr Trevor Maton. Messrs Church, Maton and Townsend are members and Chartered Professionals of the Australasian Institute of Mining and Metallurgy. Mr Church is the Principal Resource Geologist at Waihi Gold Mine and is a full-time employee of Oceana Gold (New Zealand) Limited. Mr Townsend is the Underground Technical Services Superintendent at Waihi Gold Mine and is also a full-time employee of Oceana Gold (New Zealand) Limited. Mr Maton is the OceanaGold Projects Team Studies Manager and is also a full-time employee of Oceana Gold (New Zealand) Limited. Messrs Church, Maton and Townsend have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Messrs Church, Maton and Townsend consent to the inclusion in the report of the matters based on the information in the form and context in which it appears.

For further scientific and technical information relating to the Waihi Gold mine, please refer to the NI 43-101 technical report available on SEDAR.

### **SUMMARY OF TABLE 1 - 2012 JORC: Waihi Gold Mine**

The Waihi Gold operation is located 142 km southeast of Auckland, New Zealand. It is a town in Hauraki District in the North Island of New Zealand, especially notable for its history as a gold mine town. Open pit mining commenced at the site in 1988 and underground mining commenced in 2004 with the extraction of ore commencing in late 2006. The Waihi Gold operation holds the necessary permits, consents, certificates, licenses and agreements required to operate the Martha open pit and Correnso underground mine.

### **Resources**

The Waihi Gold resource estimates, as at 31 December 2016, are presented in Table 1-1, Table 1-2, Table 1-3, and Table 1-4 and are classified in accordance with CIM and JORC 2012.

The resource estimate is sub-divided for reporting purposes: an open-cut resource that includes material within the limits of the Martha pit; and underground resources within the Correnso Extended

Permit Area and beneath the Martha Pit and Gladstone Hill. The resources are depleted for mining as at 31 December, 2016.

**Table 1-1: Open Cut Resource Estimate**

Class	Tonnes (Mt)	Au(g/t)	Ag(g/t)	Au(Moz)	Ag(Moz)
Measured	0.155	3.050	30.500	0.015	0.152
Indicated	0.656	2.910	29.100	0.061	0.614
<b>Measured &amp; Indicated</b>	<b>0.811</b>	<b>2.937</b>	<b>29.368</b>	<b>0.077</b>	<b>0.766</b>
Inferred	-	-	-	-	-

**Table 1-2: Stockpiles Resource Estimate**

Class	Tonnes (Mt)	Au(g/t)	Ag(g/t)	Au(Moz)	Ag(Moz)
Measured	0.001	4.810	18.850	0.000	0.001
Indicated	-	-	-	-	-
<b>Measured &amp; Indicated</b>	<b>0.001</b>	<b>4.810</b>	<b>18.850</b>	<b>0.000</b>	<b>0.001</b>
Inferred	-	-	-	-	-

**Table 1-3: Underground Resource Estimate**

Class	Tonnes (Mt)	Au(g/t)	Ag(g/t)	Au(Moz)	Ag(Moz)
Measured	0.365	9.170	18.080	0.108	0.212
Indicated	0.888	6.580	13.000	0.188	0.371
<b>Measured &amp; Indicated</b>	<b>1.253</b>	<b>7.334</b>	<b>14.480</b>	<b>0.295</b>	<b>0.583</b>
Inferred	0.702	6.930	13.550	0.156	0.306

**Table 1-4: Combined Resource Estimate**

Class	Tonnes (Mt)	Au(g/t)	Ag(g/t)	Au(Moz)	Ag(Moz)
Measured	0.521	7.300	21.780	0.123	0.365
Indicated	1.544	5.020	19.850	0.249	0.985
<b>Measured &amp; Indicated</b>	<b>2.065</b>	<b>5.606</b>	<b>20.329</b>	<b>0.372</b>	<b>1.350</b>
Inferred	0.702	6.930	13.550	0.156	0.306

Notes to Accompany Mineral Resource Table:

1. Mineral Resources are inclusive of Ore reserves;
2. Mineral Resources are reported on a 100% basis;
3. Mineral Resources are reported to a gold price of NZD\$1,857/oz, with the exception of the Martha Underground resource which is reported at a nominal 3.5 gram per tonne cut-off grade; Tonnages include allowances for losses resulting from mining methods with the exception of the Martha Underground resource which is reported at a nominal 3.5 gram per tonne cut-off grade. Tonnages are rounded to the nearest 1,000 tonnes;
4. Ounces are estimates of metal contained in the Mineral Resource and do not include allowances for processing losses. Ounces are rounded to the nearest thousand ounces;



5. Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content;
6. Tonnage and grade measurements are in metric units. Gold ounces are reported as troy ounces.

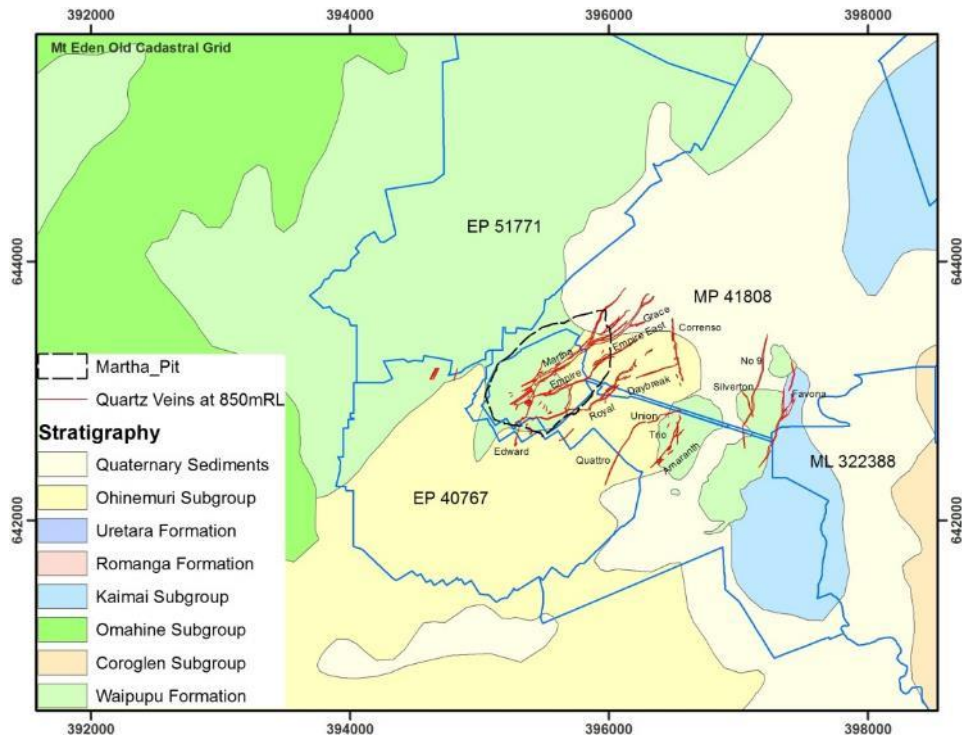
The Project comprises several areas of mineralization, which are at different stages of development. The Martha Open Pit is in the final stages of production. The Correnso project is in the mature production phase with the associated Empire and Daybreak projects in the development phase. The Correnso project is comprised of the main Correnso underground mine and the up dip and down dip extensions of the Correnso underground mine and the addition of the Daybreak and Empire veins referred to collectively as the Correnso Extensions.

Exploration activity undertaken in proximity to the Martha open pit has enabled the delineation of a maiden Martha Underground resource of 157k ounce. The resource is associated with Martha, Edward and Welcome veins located beneath the existing Martha Pit. A scoping level study into the mining of the Martha Underground mineralisation has been completed and provides the basis for reporting this maiden resource.

The Gladstone underground resource is a small vein hosted resource located in close proximity to the Favona decline beneath Gladstone hill.

The major gold - silver deposits of the Waihi District are classical low sulphidation adularia-sericite epithermal quartz vein systems associated with north to northeast trending faults. Larger veins have characteristically developed in dilational sites in the steepened upper profile of extensional faults with narrower splay veins developed in the hanging wall of major vein structures. Figure 1 shows a general geology plan of the Project, including the major vein locations. The Waihi epithermal gold-silver mineralised veins are hosted in Miocene andesite lavas beneath the Waihi township area.

Figure 1-1: Project Geology Plan



Approximately 475,000m has been drilled in 3,150 core and RC drill holes on the Project since 1980. All drill core was routinely oriented below the base of the post-mineral stratigraphy, either by plasticine imprint or using the Ezimark or Reflex core orientation tool.

The main ore minerals are electrum and silver sulphides with ubiquitous pyrite and variable though usually minor sphalerite, galena and chalcopyrite in a gangue consisting of quartz, locally with calcite, chlorite, rhodochrosite and adularia. Base metal sulphides increase with depth.

Gold is modelled via ordinary kriging or inverse distance methods dependent on data density. Dry bulk densities ranging between 1.8 and 2.5 t/m<sup>3</sup> are modelled by rock type for the conversion of volumes to tonnage. These are based on 2,302 density determinations.

The quantity and quality of the lithological, geotechnical, collar and down hole survey data collected in the exploration, delineation, underground, and grade control drill programs are sufficient to support the Mineral Resource and Ore Reserve estimation.

To classify the Mineral Resource, appropriate account was taken of geology, drill hole spacing, search criteria, reliability of input data, and the Competent Person's confidence in the continuity of geology and metal values.

### Reserves

The Ore Reserve estimate for the Waihi Gold operation as at 31 December 2016 is shown in Table 1-5:



**Table 1-5: Waihi Gold Reserve Estimate**

Source`	Reserve Class	Tonnes (Mt)	Au (g/t)	Ag(g/t)	Contained Au (Moz)	Contained Ag (Moz)
Open Pit	Proved	0.155	3.05	30.50	0.015	0.152
	Probable	0.656	2.91	29.10	0.061	0.614
Underground	Proved	0.367	9.14	18.10	0.108	0.214
	Probable	0.765	6.56	13.10	0.161	0.322
Stockpile	Proved	0.001	4.81	18.85	0.000	0.001
	Probable					
Total Proved		0.523	7.32	21.77	0.123	0.366
Total Probable		1.421	4.87	20.49	0.223	0.936
Total (June 30, 2015)		1.944	5.53	20.83	0.346	1.302

**Notes to Accompany Mineral Reserve Table:**

1. Ore reserves are reported on a 100% basis;
2. Ore reserves are reported to a gold price of NZD\$1,857/oz;
3. Tonnages include allowances for losses and dilution resulting from mining methods. Tonnages are rounded to the nearest 1,000 tonnes;
4. Ounces are estimates of metal contained in the Ore reserves and do not include allowances for processing losses. Ounces are rounded to the nearest thousand ounces;
5. Rounding of tonnes as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content;
6. Tonnage and grade measurements are in metric units. Gold ounces are reported as troy ounces.

The change in Ore reserves reported at December 31, 2016 compared with those previously reported at December 31, 2015 is reported in Table 1-6.

**Table 1-6: December 2015 Reserve Estimates vs. Dec 2016 Reserve Estimates**

Reserve Area	Tonnes (Mt)	Au (g/t)	Ag(g/t)	Contained Au (Moz)	Contained Ag (Moz)
<b>December 31, 2015 Reserve</b>					
Open Pit	0.811	2.937	29.368	0.077	0.766
Underground	1.309	7.154	12.299	0.3010	0.517
Stockpile	0.001	8.975	15.993	0.003	0.001
Total (Dec 31, 2015)	2.121	5.581	18.828	0.381	1.284
<b>Changes to Reserve, Dec 15 vs. Dec 16</b>					
Open Pit	0.000	0.000	0.000	0.000	0.000
Underground	-0.177	5.599	-3.217	-0.032	0.018
Stockpile	0.000	0.000	0.000	-0.003	0.000
Total (Dec 31, 2014)	-0.177	6.093	-3.252	-0.035	0.018
<b>December 31 2016 Reserve</b>					
Open Pit	0.811	2.937	29.368	0.077	0.766
Underground	1.132	7.396	14.721	0.269	0.536



Stockpile	0.001	4.810	18.850	0.000	0.001
Total (December, 2016)	1.944	5.534	20.833	0.346	1.302

Changes between the December 30, 2015 Reserve and the December 31, 2016 Reserve estimate primarily reflect the depletion of ore from the underground mine as well as additions to the lower levels of the Correnso orebody and upper levels of the Daybreak orebody.

Inputs to the calculation of cut-off grades for the Waihi Gold open pit and underground mine include mining costs, metallurgical recoveries, treatment and refining costs, general and administration costs, royalties, and commodity prices.

Open pit mining was undertaken by a contractor from 1997 to 2015 under a schedule of rates, and production rates and mining costs are therefore well understood.

Long hole bench stoping with rock backfill is the current mining method for extraction of underground Ore Reserves. Stope dilution has been estimated based on expected geotechnical conditions, stope spans and industry experience for similar mining operations. Recovery of ore requires the use of remote loaders, and allowances have been made for loss of Ore Reserves and also for dilution from back fill.

Recovery of gold at Waihi Gold is achieved through the use of a CIP plant and a conventional SABC grinding circuit. The plant has an established skilled workforce and management team in place. Recent cost estimates and processing recoveries support the reporting of the stated Ore Reserves.

The technical and economic viability of the reported Ore Reserves is supported by studies which meet the definition of a Feasibility Study. All permits and consents are in place for the extraction of the Ore Reserve.

#### **Competent Persons**

Information relating to Exploration Results and Mineral Resources in this document was prepared by or under the supervision of Mr Peter Church, information relating to Underground Ore Reserves was prepared by or under the supervision of Mr David Townsend, and Open Pit Ore Reserves are prepared under the supervision of Mr Trevor Maton. Messrs Church, Maton and Townsend are members and Chartered Professionals of the Australasian Institute of Mining and Metallurgy. Mr Church is the Principal Resource Geologist and is a full-time employee of OceanaGold (New Zealand) Limited, whilst Mr Townsend is the Underground Technical Services Superintendent and is also a full-time employee of OceanaGold (New Zealand) Limited, whilst Mr Maton is the Studies Manager and is also a full-time employee of OceanaGold (New Zealand) Limited. Messrs Church, Maton and Townsend have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results,



Mineral Resources and Ore Reserves'. Messrs Church, Maton and Townsend consent to the inclusion in the report of the matters based on the information in the form and context in which it appears.



JORC Code, 2012 Edition – Table 1 report template

**Section 1 Sampling Techniques and Data**

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>• <i>Nature and quality of sampling (e.g. 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.</i></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>In cases where 'industry standard' work has been done this would be relatively simple (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<p><b>Core Drilling</b></p> <ul style="list-style-type: none"> <li>• Since mid-2006, sample preparation has been carried out at the SGS Waihi laboratory. Prior to then the sample preparation facility was located at the Martha mine site and operated by Waihi Gold personnel. SGS has continued to use the same methods and protocols that were established by the Martha Mine geologists. Standardised sample preparation procedures are based on nomograms that were developed using Gy's Estimation of the Fundamental Sampling Error. Gold particle liberation size for the Waihi gold deposits is based on petrographic studies, which indicate that gold mostly occurs as electrum in the Waihi epithermal vein deposits and has a particle size between &lt;5 to 10µm. Current standardised sample preparation procedures are:             <ul style="list-style-type: none"> <li>○ Wet and dry weighing before and after oven drying at 90°C overnight;</li> <li>○ Jaw crushing to 95% passing 5mm to 24th September 2004 (UW212 &amp; UW222); to 95% passing 7mm from 24th September 2004 to May 2013 (all other drill hole samples); to 80% passing 3.3mm from May 2013 (844 series holes).</li> <li>○ Rotary split to produce 800g crushed product;</li> <li>○ Ring milled to a nominal 80% finer than 75µm;</li> <li>○ Approximately 300g of pulverized sample placed by scoop into paper sachets to which the original sample tag is affixed.</li> </ul> </li> <li>• Sample preparation has been monitored through sieve checks on samples selected at random in each batch and through insertion of duplicate samples at the crushing step. Sample size for resource holes drilled from surface is optimised through initial collection of large-diameter diamond drill core samples, generally PQ3 or HQ3. Subsequent splits include sawing the core in half to approximately 3.8kg, followed by a split from the jaw crusher producing no less than 800gm of jaw crushed material going to the ring mill. Current drilling from underground utilises a HQ3 diameter core size for advanced exploration and resource conversion drilling, this core is then split using a core saw to produce an initial sample size of 3.5-4kg whereas grade control utilises a HQ3 or NQ3 diameter core size which is whole core sampled to produce an initial sample size of 7-8kg or 3.5-4kg respectively.</li> </ul>

		<p><b>RC Drilling</b></p> <ul style="list-style-type: none"> <li>• Sample preparation is carried out as follows:</li> <li>• Samples are dried at &gt;100°C overnight at minimum, longer when sample moisture is high.</li> <li>• The sample is crushed using a Boyd crusher to nominal 95% passing 7 mm.</li> <li>• Crushed product is passed to a rotary sample divider (RSD) via a vibrating feeder; an 800 g minimum in the fraction is retained for pulveriser, the remainder is bagged as crush reject material.</li> <li>• Retained material (approximately 900g) is ground in an LM2 mill for a minimum of 3 minutes to 80% passing 75µm.</li> <li>• 200 g of pulp is removed by scoop and sealed in a Kraft envelope with the sample tag attached.</li> <li>• From 28th May 2007 until 20th September 2014 pulps are assayed by SGS for Gold and Silver by 30 g Aqua Regia Digest. From 20<sup>th</sup> September 2014 Fire Assay analysis was conducted on Au only.</li> </ul> <p><b>Underground Face Sampling</b></p> <ul style="list-style-type: none"> <li>• The face sample mark-ups are determined by the Geologist according to changes in lithology, vein texture and/or alteration; e.g. sample breaks positioned at the vein/andesite contacts. Mark these on the face with a single vertical line of blue paint.</li> <li>• Minimum sample interval size is 0.3m with a maximum interval of 2.0m. Intervals greater than 2.0m should be sub-sampled.</li> <li>• The Geologist will assign three QAQC samples per face; a blank sample (to be positioned directly after what is thought to be the highest grade sample), a crush duplicate (a duplicate of what is thought to be the highest grade sample positioned after all the samples) and a standard (positioned after the crush duplicate). (Please see below under Blanks, Standards and Crush Duplicates for more information).</li> <li>• The Sampling Technician then measures the intervals and writes the width to the nearest tenth of a metre on the wall within the marked interval.</li> <li>• The sample is taken by chipping rock into the collection hoop on a continuous line across the interval, starting with the first interval on the left-hand side of the face, and then working left to right across the face.</li> <li>• All samples taken during face sampling are placed into pre-labelled calico bags. One label is</li> </ul>
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Criteria	JORC Code explanation	Commentary
		stapled onto the lip of the bag and the other is placed loosely inside the bag.
Drilling techniques	<ul style="list-style-type: none"> <li>• <i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).</i></li> </ul>	<ul style="list-style-type: none"> <li>• Approximately 475,000m have been drilled in 3,150 core and exploration RC drill holes on the Project since 1980. All surface diamond drill holes were drilled by triple tube wireline methods. Surface holes are collared using large-diameter PQ core, both as a means of improving core recovery and to provide greater opportunity to case off and reduce diameter when drilling through broken ground and historic stopes. Drill hole diameter is usually reduced to HQ at the base of the post-mineral stratigraphy. All drill core was routinely oriented below the base of the post-mineral stratigraphy, either by plasticine imprint or using the Ezimark or Reflex core orientation tool.</li> <li>• Additionally, 88,000m have been drilled in 4,445 reverse circulation grade control holes during the open pit Southern Stability Cut (SSC) and Eastern Layback (ELB) projects between May 2007 and May 2015, using a 114mm hole diameter and rig-mounted cyclone sampler.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Core recoveries were measured after each drill run, comparing length of core recovered vs. drill depth.</li> <li>• Core recoveries were generally better than 95%. There is no relationship between core recovery and grade.</li> <li>• RC sample recoveries were assessed by weight for representivity by the sampling technician and dispatching geologist, and samples discarded where the recovered sample weight did not correlate well with drilled interval. Expected sample weight was calculated using drilled rock volume, SG, and cyclone sample splitter configuration, with review occurring as part of monthly inspections. There is no observed relationship between sample recovery and grade.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation.</li> <li>• Electronic Geological logs are now created using Microsoft Excel. As of June 2015 the geological logging data has been migrated to an AcQuire database. Newmont's Visual Logger software was utilised for logging. From Visual logger the logging data was imported directly into an AcQuire database for all logging prior to April 2011. Between April 2011 and June 2015 Newmont implemented the proprietary (GED) database package and all drill data was migrated to a web-based GED and subsequent drill log data imported directly to the GED via a Visual Logger interface.</li> <li>• Log intervals are based on geological boundaries or assigned a nominal length of one or two metres. RC grade control drilling in the open pit is sampled over 1.5m intervals. The geological</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>log incorporates geotechnical parameters, lithology, weathering, alteration and veining. Logging has been validated using inbuilt validation tables for all recent drilling and has been checked for consistency throughout the project. A complete digital photographic record is maintained for all drill core. Drill collar and survey information are uploaded directly to the log from the GED database prior to beginning each drill log, along with inbuilt validation for each of the data fields. There are additional fields in the template for entering sample details, QAQC samples such as blanks and reference standards and a display for gold and silver values.</p> <ul style="list-style-type: none"> <li>• All drill core is photographed and stored digitally on the Waihi server.</li> <li>• Qualitative logging of sieved RC grade control chips was undertaken at sample interval lengths using Newmont's Visual Logger software between May 2007 and May 2015. This assisted in the identification of lithology, alteration, mineralogy, vein continuity and historic workings.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Refer to sampling techniques section.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument</i></li> </ul>	<ul style="list-style-type: none"> <li>• Quality control of drill core has been monitored in the following areas: <ul style="list-style-type: none"> <li>○ Sample preparation at the SGS Waihi lab through sieving of jaw crush and pulp products, routine generation of duplicate samples from a second split of the jaw crush and calculation of the fundamental error.</li> <li>○ Assaying at primary lab SGS through insertion of 1 or 2 standards and a blank for every 20 samples.</li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>make and model, reading times, calibrations factors applied and their derivation, etc.</i></p> <ul style="list-style-type: none"> <li>• <i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>○ QAQC checks in the database for standards, blanks and duplicates.</li> <li>• All assay data is managed in SMP_RESULT table of the GED_DRILLHOLES database. WinAssayImport is a tool to load the assay result to the database, and has the capability to view a QAQC report for each lab job prior loading the assay result to the database. Blanks and standards are reviewed on a weekly basis using SQL Server Reporting Services. The Waihi protocol requires Certified Reference Material (CRMs) to be reported to within 2 Standard Deviations of the Certified Value. The criterion for preparation duplicates is that they have a relative difference (R-R1/mean RR1) of no greater than 10%. The criterion for blanks is that they do not exceed more than 4 times the lower detection method of the assay method.</li> <li>• In addition to routine quality control procedures, umpire assay has been carried out on 248 samples (Correnso Project) at Ultratrace Laboratories in Perth. Results for gold were consistent with original SGS assay results and showed no effective bias, apart from 3 umpire samples that returned significantly higher gold values than the original assays. Those three samples were repeat assayed by SGS, the re-assay producing results consistent with the Ultratrace umpire assays; the second set of SGS assays have therefore replaced the initial assays in the database.</li> <li>• Multi-element data is obtained routinely from the Waihi SGS Laboratory for all exploration assay samples for the elements silver, copper, arsenic, lead, zinc and antimony, which are potential pathfinders for epithermal mineralisation. Comparison of the Ultratrace data with routine multi-element data produced by SGS Laboratory in Waihi showed good correlation between the parent (SGS) and umpire (Ultratrace) data sets for silver, lead, zinc and arsenic, which gives confidence in the accuracy of SGS data for these elements. For samples with over-range silver and lead, these elements are found to be extracted more efficiently by using a more dilute Aqua Regia digest (1 gram sample weight rather than the standard 10 gram per 50 ml. Antimony is not efficiently extracted by the current Aqua Digest method at SGS and consideration should be given to using the Peroxide Fusion extraction if more accurate antimony results are required.</li> </ul> <p><b>Underground Face Samples</b></p> <ul style="list-style-type: none"> <li>• Every face must include a blank, standard and crush duplicate as per the QAQC guidelines.</li> <li>• Blank samples (samples that have been certified as containing zero Au values) are entered into the sample sequence preferably after what is thought to be the highest grade sample in the face. A crush duplicate of the sample preceding the blank, is to be entered in after the sample sequence is completed. The final sample in the sequence is the standard.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p><b>Open Pit RC Grade Control Data</b></p> <ul style="list-style-type: none"> <li>Assay quality control procedures for grade control data is set out in “Martha Grade Control Procedures Manual V2 2008”. Quality control procedures are designed to detect any poor sampling and sample preparation practices and ensure that results are within acceptable ranges of accuracy and precision.</li> <li>All QAQC data is managed in AcQuire via the CheckAssay and CheckChemistry compound definitions. Blanks and standards are reviewed on a weekly basis using AcQuire QAQC objects. Any sample preparation or assay issues are discussed directly with SGS.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>A limited number of twinned holes were completed during the initial investigations for the Correnso project. These indicated that there is some short range variability in gold mineralisation. There are strong visual indicators for high grade mineralisation observed both in drill core and in underground development</li> <li>All assay data is stored in the database in an as received basis with no adjustment to the returned data</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>All historic mine data was recorded in terms of Mt Eden Old Cadastral grid. This is the grid utilised for all underground and exploration activity.</li> <li>A local mine grid –Martha Mine Grid, oriented perpendicular to the main veins and derived from Mt Eden Old Cadastral is used within the Open pit operations. The Mine Grid origin is based at No.7 Shaft (1700mE, 1600mN). The grid is rotated 23.98 west of Mt Eden Old Cadastral North. Relative level (RL) calculated as Sea Level + 1000m.</li> <li>The origin for topographic control is provided by Old Cadastral Mt Eden Coordinates available from cadastral survey marks in Seddon Street near the entrance to the old underground mine. The original underground Martha mine was mapped in terms of these coordinates. All mine reference survey points are established by a Registered Professional Land Surveyor from Government Trig Stations or geodetic marks.</li> <li>For the underground mine, a transformation is used to convert all data to NZGD2000 as per the regulations for the purpose of all statutory underground plans. Checks show that all underground coordinates are within the allowed 1:5000.</li> </ul>

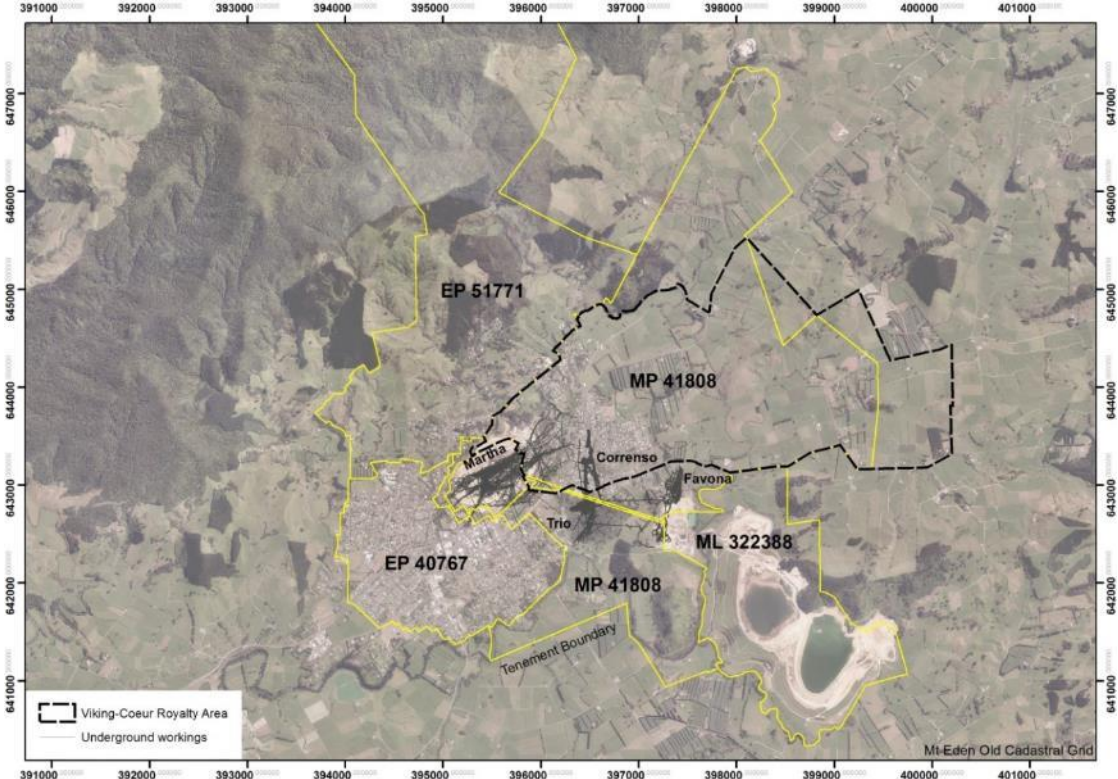
Criteria	JORC Code explanation	Commentary
Data spacing and distribution	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate 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>	<ul style="list-style-type: none"> <li>• The drill spacing required to support classification of Indicated Mineral Resources is different for each project area and has gradually lessened over time as the nature of the veins have changed. A review of the Correnso drill spacing was completed in 2013. Available data was insufficient to use conditional simulation to determine the likely spacing so reconciliation data from the mined out Favona area was utilised. The result was a recommendation to use 30 m for Correnso, instead of the previously used 40 m. Drill spacing within the stockwork zones for the open pit resource areas has been reviewed recently with a move to a 45meter average drillhole spacing required to achieve an inferred resource classification in areas of stockwork mineralisation.</li> <li>• For Martha the composite length is based on the nominal sample interval for each dataset (1.5m for drill (RC / diamond) data, 1m for grade control channels. Compositing was by fixed-length, honouring the domain boundaries.</li> <li>• Composite weighting by length was applied during estimation to avoid bias from small, high grade composites. There has been no change to the compositing method used since May 2010. For Correnso and Daybreak the raw assays are composited to one metre fixed lengths and “distributed” (1MD) across the vein width to eliminate very small remnant composites. For the Grace/Empire estimate two metre distributed (2MD) composites were used. The distributed method divides the vein interval into a number of equal length samples as close to the desired sample composite length as possible given the intercept width, this is an option available in the Vulcan® software.</li> </ul>
Orientation of data in relation to geological structure	<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>	<ul style="list-style-type: none"> <li>• Drill holes are designed to intersect known mineralised features in a nominally perpendicular orientation is much as practicable given the availability of underground drilling platforms. Samples intervals are selected based upon observed geological features.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Access to site is controlled; Drill core is stored with secure facilities on site. Site employees transport samples to the analytical lab. The laboratory compound is secured.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No audits or reviews of sampling techniques and data have been performed.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Martha Mine open pit operation commenced in 1988 in accordance with Mining License 32 2388 which is an existing privilege, as defined by section 106 of the Crown Minerals Act 1991 (CMA). The License was granted in July 1987 and covers an area of approximately 400 hectares comprising two main elements; the open pit (approximately 40 ha) located in the middle of Waihi, and the processing and waste disposal areas located approximately 2 km away to the south east. These two areas are linked by a conveyor which is also within the boundary of ML 32 2388.</li> <li>The Martha Mine Extended Project commenced in 1999 and increased the life of the mine by an additional seven years. The consenting process for the Extended Project was partly by way of applications for new resource consents, including Land Use Consent 97/98-105 granted by Environment Court decision A114/99, and partly by way of applications for variations to the existing Mining License. These consents cover the layback to the east wall of the pit which is current underway. ML 32 2388 and/or the conditions of Land Use Consent 97/98-105 includes activities within the Mining License and Extended Project areas such as stockpiling, the processing of ore and the disposal of tailings to existing tailings storage facilities. While ML 32 2388 expires in July 2017 and Land Use Consent 97/98-105 expires in June 2019, the regime set out in these existing authorizations is continued after their respective expiry dates through the permitted activity rule framework set out in the Proposed District Plan.</li> <li>Resource consents for the Favona exploration decline were granted in 2003 and work began on the decline in 2004. The Favona Mine consents were granted in 2004 with the extraction of ore commencing in late 2006. The Favona Mining Permit 41 808 (MP 41 808) was granted in March 2004, under the provisions of the Crown Minerals Act 1991, for a duration of 25 years. An Extension of Land to Favona MP 41 808 was granted in March 2006. The permit covers an area of approximately 121.4 hectares and covers the Correnso Underground Mine. Resource consents for the Trio development were granted in September 2010 and for the Trio underground mine in December 2010. Resource consents for the Correnso development (which includes the Correnso Extensions Projects) were granted in October 2013 and for the Slevin Underground Project in October 2016 which allows for extensions of the Correnso stopping panels towards the Martha open pit. Consents comprised discharge from ventilation shafts, discharge of groundwater for flooding the mine, placing rock underground for backfill and undertaking dewatering as well as community compensation schemes.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>Waihi Gold Company has held exploration and mining licences and permits over the Open Pit portion of the Martha deposit and the Favona and Trio deposits since the early 1980's. The</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>Waihi East area covering the Correnso deposit and easterly extensions of the Martha system was historically held and explored by Amoco Minerals, Cyprus Minerals and a Coeur Gold-Viking Mining JV from whom Waihi Gold Company purchased the tenement area, EP40428, in 1998. These companies drilled approximately 18km in 60 holes in the Waihi East area by which they identified some remnant resources on the eastern end of the Martha vein system on which they undertook scoping studies.</p> <p><b>Figure 1: Waihi Tenement Map</b></p> 
Geology	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Waihi deposits display that are typical of epithermal gold deposits include:</li> <li>• Host lithology's for veins are andesite flows and volcaniclastics.</li> </ul>

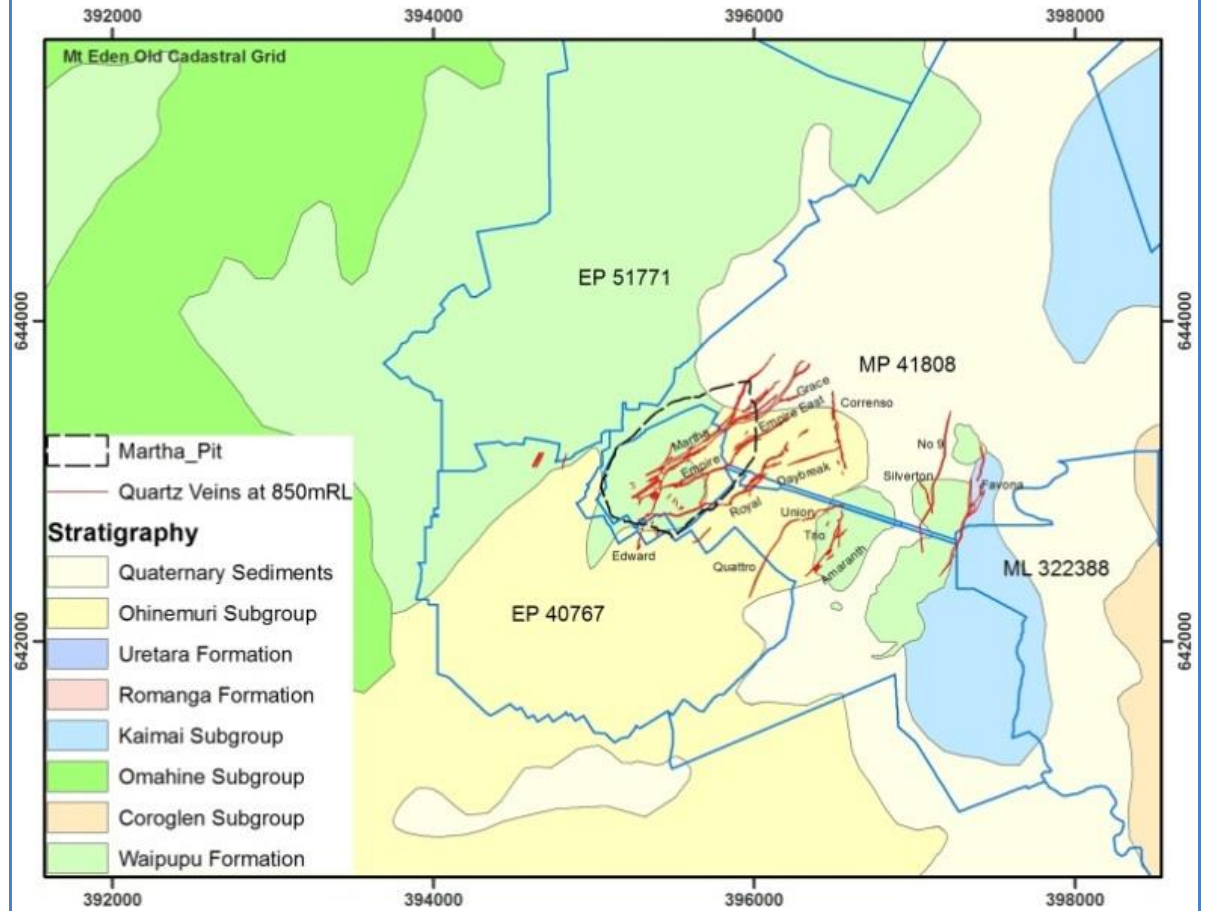
Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>• Gold-silver mineralisation is hosted in localized bands within multiphase quartz veins. There is an association of sphalerite, galena and chalcopyrite with gold-silver mineralisation throughout the deposit. Parts of the deposit towards the base are base metal rich with galena (up to +3% Pb) and sphalerite (up to +1% Zn);</li> <li>• Host andesitic volcanics have undergone pervasive hydrothermal alteration, often with complete replacement of primary mineralogy. Characteristic alteration assemblages include quartz, albite, adularia, carbonate, pyrite, illite, chlorite, interlayered illite-smectite and chlorite-smectite clays extending over tens of metres laterally from major veins. There is also an association of quartz + interlayered chlorite-smectite (corrensite) + chlorite, producing a distinctive pale green colouration. Mineralization is structurally controlled.</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>• <i>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:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> </li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Tabulation of drilling data to be provided electronically</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>• <i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li>• <i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the</i></li> </ul>	<ul style="list-style-type: none"> <li>• Exploration results are reported within distinct geological boundaries, typically within veins. The grades are compiled using length weighting. Grades are not cut within the database however appropriate statistically derived top-cuts are assigned by domain</li> <li>• No Exploration Results are being presented in this report, rather this report is focused on advanced projects that have well defined geological models and associated resources estimates completed.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></p> <ul style="list-style-type: none"> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	
<p>Relationship between mineralisation widths and intercept lengths</p>	<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 (e.g. 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>Drill intercepts are typically reported in true length where reliable orientation data is available, alternately down hole length are reported when orientation data is not available, holes are designed to intersect veins at more than 60 degrees to the vein as much as practicable.</li> <li>No Exploration Results are being presented in this report, rather this report is focused on advanced projects that have well defined geological models and associated resources estimates completed.</li> </ul>

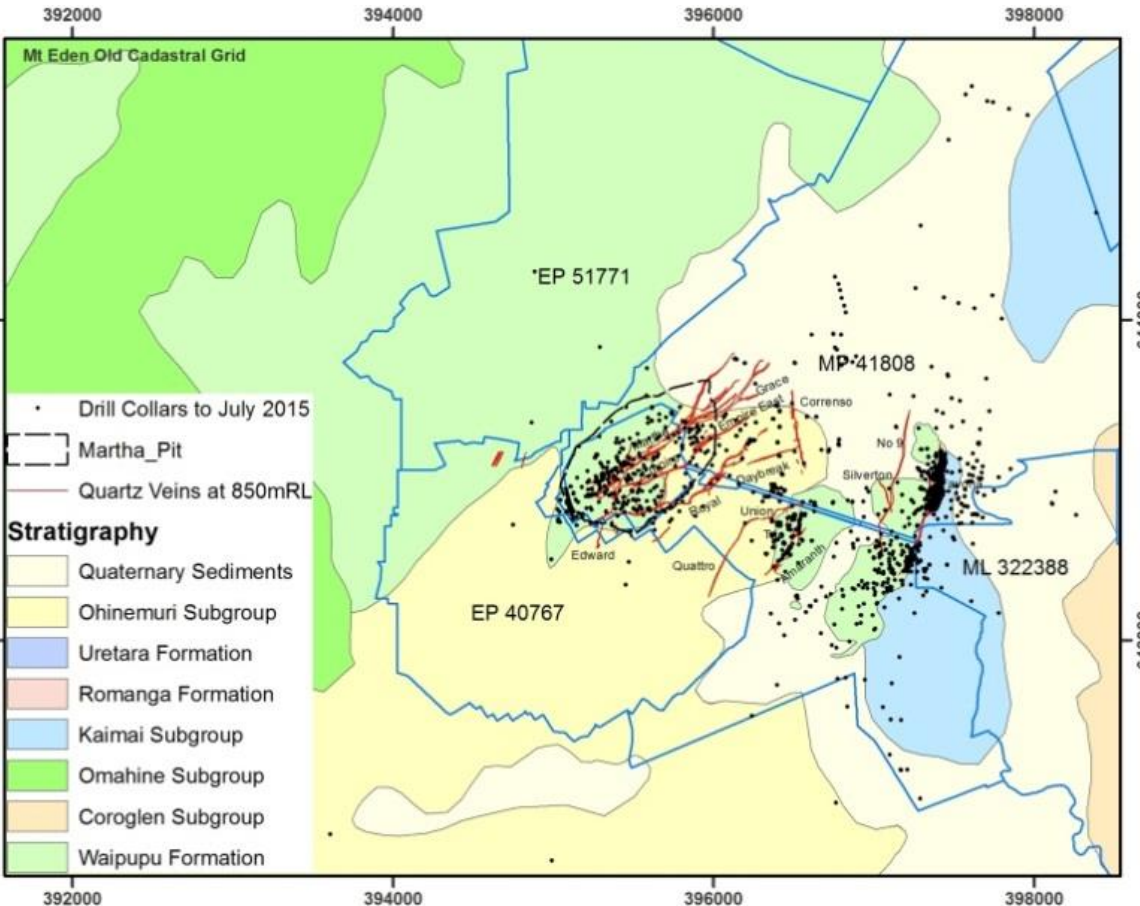
Diagrams

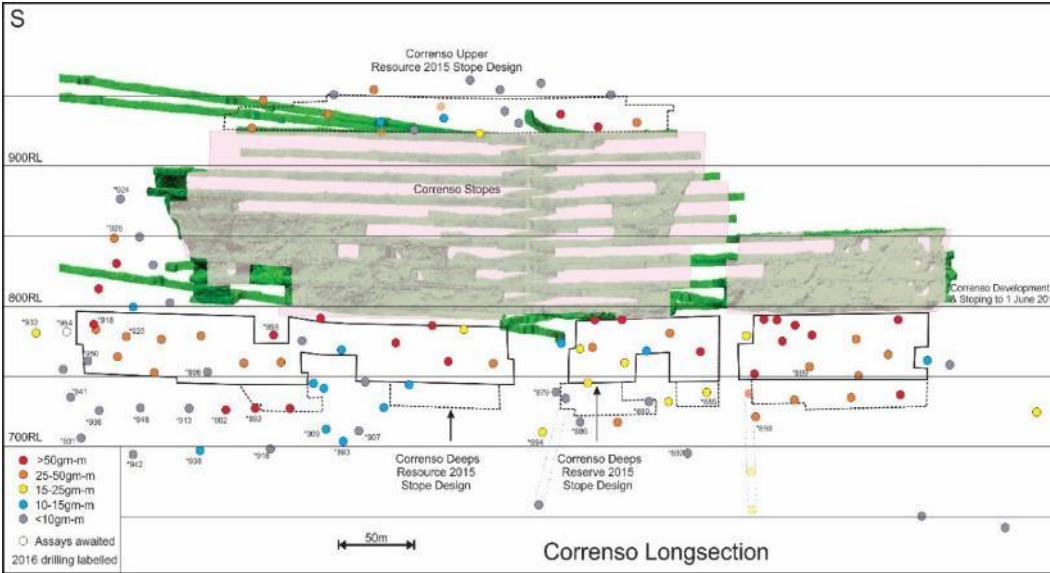
- *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*

**Figure 2: Geology Map of the Waihi Epithermal Vein Camp**

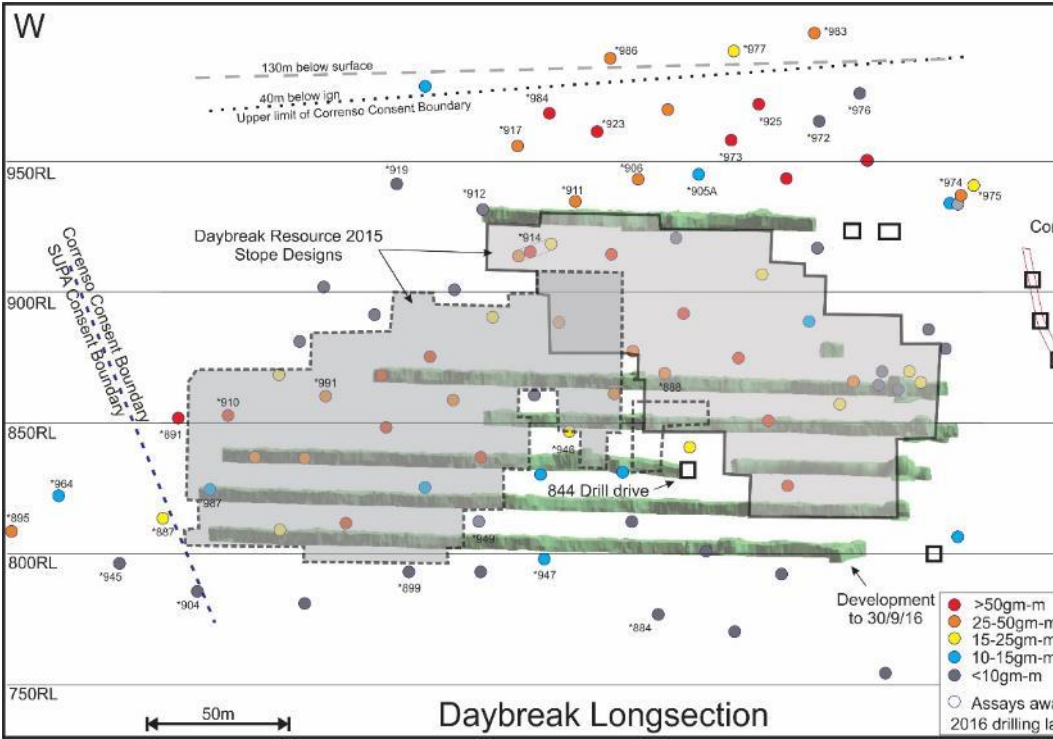


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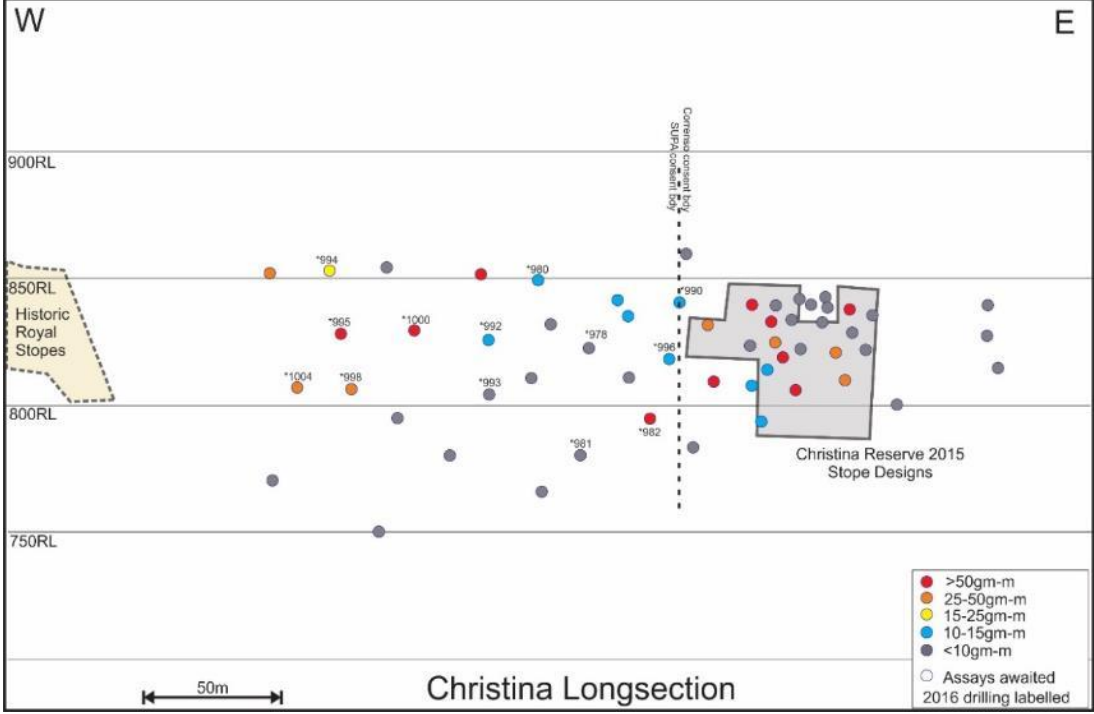
Criteria	JORC Code explanation	Commentary
		<p style="text-align: center;"><b>Figure 3: Drill Hole Location Plan</b></p>  <p style="text-align: center;"><b>Figure 4: Geological Long Section, Correnso Vein, Correnso Project</b></p>

Criteria	JORC Code explanation	Commentary
		 <p style="text-align: center;"><b>Correnso Longsection</b></p>

**Figure 5: Geological Long Section, Daybreak Vein, Correnso Project**

Criteria	JORC Code explanation	Commentary
		 <p style="text-align: center;"><b>Daybreak Longsection</b></p> <p style="text-align: center;"><b>Figure 6: Geological Long Section, Christina Vein, Correnso Project</b></p>



Criteria	JORC Code explanation	Commentary
		 <p style="text-align: center;"><b>Christina Longsection</b></p>
Balanced reporting	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No Exploration Results are being presented in this report, rather this report is focused on advanced projects that have well defined geological models and associated resources estimates completed.</li> </ul>

**Figure 7: Geological Long Section, Gladstone Project**

Criteria	JORC Code explanation	Commentary
Other substantive exploration data	<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>	<ul style="list-style-type: none"> <li>Exploration drilling is continuing throughout the Waihi Epithermal Vein camp on ML 322388, MP 41808, EP 51771 and EP 40767.</li> </ul>
Further work	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Current drill programmes are planned to complete ~50km's of diamond drilling for the calendar year 2017. This drilling is comprised of infill on known veins (~50%), step out on known veins (~30%) and exploration in areas adjacent to known mineralisation (~20%). Exploration drilling proposed for 2017 is designed to test extensions of known mineralisation and untested margins of the gravity high associated with the Waihi Vein Deposits where there is potential for the discovery of significant new mineralised vein deposits.</li> </ul>

### 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
Database integrity	<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>Drill hole data is entered via an Acquire database interface which includes validation protocols.</li> <li>Personnel are well trained and routinely check source versus input data during the entry process.</li> </ul>
Site visits	<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>Peter Church has been employed at the operating mine since 2011. He is employed in the role of Principal Resource Geologist with responsibility for resource estimation.</li> </ul>
Geological interpretation	<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>Open pit and underground mining since 1988 has provided a large database of mapping and grade control sampling, which has confirmed the geological interpretation to date.</li> <li>The geologic interpretation utilises log data, assay data, underground face and backs mapping – where available, digital core photos and oriented core measurements, all of which are systematically collected and validated. The dip and dip direction of significant veins, faults, bedding and geological contacts are estimated from oriented core measurements and imported into an ISIS geotechnical database in Vulcan®. A 3-D display of the orientation data is then created in Vulcan® and used to guide the geological interpretation. Vein intercept points are snapped to drillholes in Vulcan® and additional control points are added, as required, to inform the geological interpretation. The point data sets are then exported to Leapfrog™, where vein and fault contact iso-surfaces - and solids - are created. The solids are then imported back to Vulcan®, where they are validated against drilling and known geological features and undergo final processing; this involves booleaning (truncating) against / merging with adjacent features – where applicable – and checking for consistency. Gold mineralisation is confined to quartz veins and is not disseminated in wall rock; therefore the main vein boundaries are usually coincident with assay intervals, which attempt to honour the geology. There are a small number of instances where high grade assay results located immediately outside the main vein boundary have been included within the vein wireframe; such as where the grade is interpreted as belonging</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>to small-scale, localized, parallel or sub-parallel veins / stringers rather than being attributed to contamination or a cross-cutting structure.</p> <ul style="list-style-type: none"> <li>The digital core photographic record is used extensively during the modelling process. Identifiable characteristics of particular veins can be recognised, such as mineralogical and textural characteristics, the nature of particular contacts, and the existence and relative timing of mineral phases within the vein zones. The mineralized veins have a distinctive appearance, and common textures and mineralogy - consisting of chlorite-smectite clays and base-metal sulphides, along with quartz, and which are commonly complex due to internal multi-phase syn- and post-mineralisation deformation - quite different to barren veins such as the 5995 (calcite-quartz lode). Another reference used to guide the geological interpretation is the mapped geometry of veins that have been mined previously, Waihi veins are characterised by sinuous deflections that tend to be continuous over a considerable vertical extent. Where the orientation data varies along the length of a given vein, or down dip, it is considered in context of the overall geometry of the deflections.</li> <li>Geological models are integrated with regional geology and with detailed surface topographic models, which are routinely updated by mine surveyors. Geological models and geological concepts have been routinely reviewed by internal and external reviewers.</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Correnso Model was split into the Upper, Main, and Deeps – block definition is as follows: <ul style="list-style-type: none"> <li><b>corr_res_20161031_Upper.bdf</b> <ul style="list-style-type: none"> <li>Parent cell size 1.0m X, 5.0m Y, and 5.0m Z</li> <li>Sub block size 0.5m X, 1.0m Y, and 1.0m Z</li> <li>Offset in X direction 150m</li> <li>Offset in Y direction 500m</li> <li>Offset in Z direction 100m</li> <li>Origin: X 396500; Y 642900; Z 900</li> <li>Rotation: Bearing 080; Plunge 0; Dip 0</li> </ul> </li> <li><b>corr_res_20161031_Main.bdf</b> <ul style="list-style-type: none"> <li>Parent cell size 2.0m X, 10.0m Y, and 10.0m Z</li> </ul> </li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>• Sub block size 0.5m X, 2.0m Y, and 2.0m Z</li> <li>• Offset in X direction 350m</li> <li>• Offset in Y direction 950m</li> <li>• Offset in Z direction 200m</li> <li>• Origin: X 396400; Y 642700; Z 750</li> <li>• Rotation: Bearing 085; Plunge 0; Dip 0</li> </ul> <p><b>corr_res_20161031_Deeps_2MD.bdf</b></p> <ul style="list-style-type: none"> <li>• Parent cell size 2.0m X, 10.0m Y, and 10.0m Z</li> <li>• Sub block size 1.0m X, 2.5m Y, and 2.5m Z</li> <li>• Offset in X direction 300m</li> <li>• Offset in Y direction 900m</li> <li>• Offset in Z direction 300m</li> <li>• Origin: X 396450; Y 642750; Z 500</li> <li>• Rotation: Bearing 085; Plunge 0; Dip 0</li> </ul> <ul style="list-style-type: none"> <li>• Block definition for the Daybreak Model is as follows:           <p><b>DB_res_20161201.bdf</b></p> <ul style="list-style-type: none"> <li>• Parent cell size 5.0m X, 2.0m Y, and 5.0m Z</li> <li>• Sub block size 1.0m X, 0.25m Y, and 1.0m Z</li> <li>• Offset in X direction 500m</li> <li>• Offset in Y direction 300m</li> <li>• Offset in Z direction 250m</li> <li>• Origin: X 396100; Y 642900; Z 750</li> <li>• Rotation: Bearing 070; Plunge 0; Dip 0</li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Block definition for the Empire / Christina Model is as follows: <ul style="list-style-type: none"> <li><b>gem_20161223_res.bdf</b> <ul style="list-style-type: none"> <li>Parent cell size 5.0m X, 2.5m Y, and 5.0m Z</li> <li>Sub block size 1.0m X, 0.5m Y, and 1.0m Z</li> <li>Offset in X direction 900m</li> <li>Offset in Y direction 500m</li> <li>Offset in Z direction 400m</li> <li>Origin: X 396200; Y 643000; Z 600</li> <li>Rotation: Bearing 060; Plunge 0; Dip 0</li> </ul> </li> </ul> </li> <li>The small sub-block size provides better definition of the veins, particularly across the width of the typically narrow veins. <ul style="list-style-type: none"> <li><b>Martha Underground– r1116_martha_ph5_UG.bdf</b>; The block model was constructed in mine grid. <ul style="list-style-type: none"> <li>Parent cell size 5.0m X, 5.0m Y, and 5m Z</li> <li>Offset in X direction 1600m</li> <li>Offset in Y direction 900m</li> <li>Offset in Z direction 700m</li> <li>Origin: X 1000; Y 1000; Z 850</li> <li>Rotation: Bearing 090; Plunge 0; Dip 0</li> </ul> </li> </ul> </li> </ul>
Estimation and modelling techniques	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>Vulcan® software version 10.0.2 has been used to construct the Correnso, Daybreak, and Grace/Empire models. The estimation techniques discussed below are considered to be appropriate.</li> <li>MineSight® software version 9.10-01 is used to construct the Martha model. The estimation technique discussed is considered to be appropriate.</li> </ul> <p><b>Grade Capping</b> Historically top cuts for Waihi veins have been selected from inflections in the data above the 98<sup>th</sup> percentile – particularly in the log probability. The use of this method in determining top cuts has resulted in good reconciliation historically. On this basis the top cut limit was selected from the cumulative probability plot for each domain and data type. Typically different data types are assessed independently in the capping analysis process</p> <p>The metal removed analysis includes tabulation of the following:</p>

Criteria	JORC Code explanation	Commentary
	<p><i>include a description of computer software and parameters used.</i></p> <ul style="list-style-type: none"> <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 (e.g. 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</i></li> </ul>	<ul style="list-style-type: none"> <li>Number of samples above the cap</li> <li>Percentage of samples above the cap</li> <li>Minimum, maximum, mean, and variance of samples above the cap</li> <li>Mean and variance of uncapped data</li> <li>Mean and variance of capped data</li> <li>Capped % difference: <ul style="list-style-type: none"> <li><math display="block">\frac{(\text{uncapped mean} - \text{capped mean})}{\text{uncapped mean}} \times 100\%</math></li> </ul> </li> <li>Contribution of the samples above the cap to the uncapped variance: <ul style="list-style-type: none"> <li><math display="block">(\text{mean above the cap} - \text{uncapped mean})^2 \times \frac{\% \text{ of data above the cap}}{\text{uncapped variance}}</math></li> </ul> </li> <li>Contribution of the samples above the cap to the total metal: <ul style="list-style-type: none"> <li><math display="block">(\% \text{ of data above the cap}) \times \frac{\text{mean of data above cap}}{\text{uncapped mean}}</math></li> </ul> </li> </ul> <ul style="list-style-type: none"> <li>Increased drilling density in the Eastern Layback resource between May 2014 and April 2015 allowed for increased geological domain resolution and a review of top cut strategy. This was undertaken using a disintegration approach, whereby log-scale probability plots are used to determine the grade at which sample support for a high-grade tail diminishes. Open pit production records, reconciliation data and grade control modelling were used for estimation validation, as well as comparisons to previous resource models and their retrospective performance.</li> <li>Grade capping for underground domains is applied on a domain by domain basis, based on site experience and analysis of previous reconciliation data.</li> </ul> <p><b>Variography</b></p> <ul style="list-style-type: none"> <li>Down hole and directional variography are typically run using Snowden Supervisor v7 software. Variograms are run as a means to test spatial continuity within the selected geological domains. Variograms are modelled for defined veins, Due to the planar nature of the vein data, variogram models often are not easily obtained so in this instance anisotropic ratios are based on geological observation rather than on fitting data to the variogram models. Dominant mineral continuity is set along the strike of the modelled veins. While Ordinary Kriged estimates have been run for comparison, the estimates selected as final have used standard Inverse Distance methodology (either ID2 or ID3).</li> </ul> <p><b>Estimation / Interpolation Methods</b></p> <ul style="list-style-type: none"> <li>Sub-blocking with inverse distance weighting to the second power (ID2) or third power (ID3) methods are used for all underground models. With the data density which exists in Correnso, Daybreak, the Empire –</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>comparison of model data to drill hole data, and use of reconciliation data if available.</i></p>	<p>Christina system, and surrounds - ordinary kriging, and tetra-unfolding using ID2 or ID3 estimates both achieve comparable results. The method of unfolding was adopted for the Correnso, Daybreak, and Empire-Christina models as a way of dealing with the sinuous character of the veins.</p> <ul style="list-style-type: none"> <li>• The Martha Open Pit model is run using MineSight® software and is a non-sub-blocked model. Estimation is completed using either ordinary kriging (OK) or inverse distance weighting to the second or third power (ID2/ID3), as deemed suitable by the density of data in each domain.</li> <li>• The underground block models are rotated in bearing to align with the dominant strike of the veins and they are run using Vulcan® software. Sub-blocking is used to define narrow veins and to maintain volume integrity with the geology solids. The grade estimation for all models is strictly controlled by the geology, with both sample selection and estimation of blocks limited to domains defined by the geological interpretation solids. Gold is estimated using one of the following methods; either - a single pass with a combined channel and drilling dataset; OR - two-pass estimation using a combined dataset with short search range first, then followed by a second pass using drillhole data only with longer search ranges to estimate blocks not estimated in the first pass.</li> </ul>
Moisture	<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>• Estimates of tonnage are prepared on a dry basis.</li> </ul>



Criteria	JORC Code explanation	Commentary															
Cut-off parameters	<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>Underground mining cut-offs were based on a gold price NZ\$1714, mining costs of NZ\$145 / ore tonne and processing costs of NZ\$43 / tonne.</li> <li>A higher cut-off grade was selected in the Gladstone mining area due to poorer ground conditions and lower mill recovery.</li> <li>Cut-off grades applied to the underground mine are shown in the table below:           <p style="text-align: center;"><b>Table 4: Cut-offs Used in Correnso Extension study</b></p> <table border="1" data-bbox="864 478 1973 719"> <thead> <tr> <th>Area</th> <th>Stoping</th> <th>Ore Development</th> </tr> </thead> <tbody> <tr> <td>Correnso, Daybreak, Empire, Correnso Deeps</td> <td>3.7g/t</td> <td>3.6g/t</td> </tr> <tr> <td>Gladstone</td> <td>4.3g/t</td> <td>4.3g/t</td> </tr> <tr> <td>Martha Underground</td> <td>3.5g/t</td> <td>3.5g/t</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table> </li> </ul>	Area	Stoping	Ore Development	Correnso, Daybreak, Empire, Correnso Deeps	3.7g/t	3.6g/t	Gladstone	4.3g/t	4.3g/t	Martha Underground	3.5g/t	3.5g/t			
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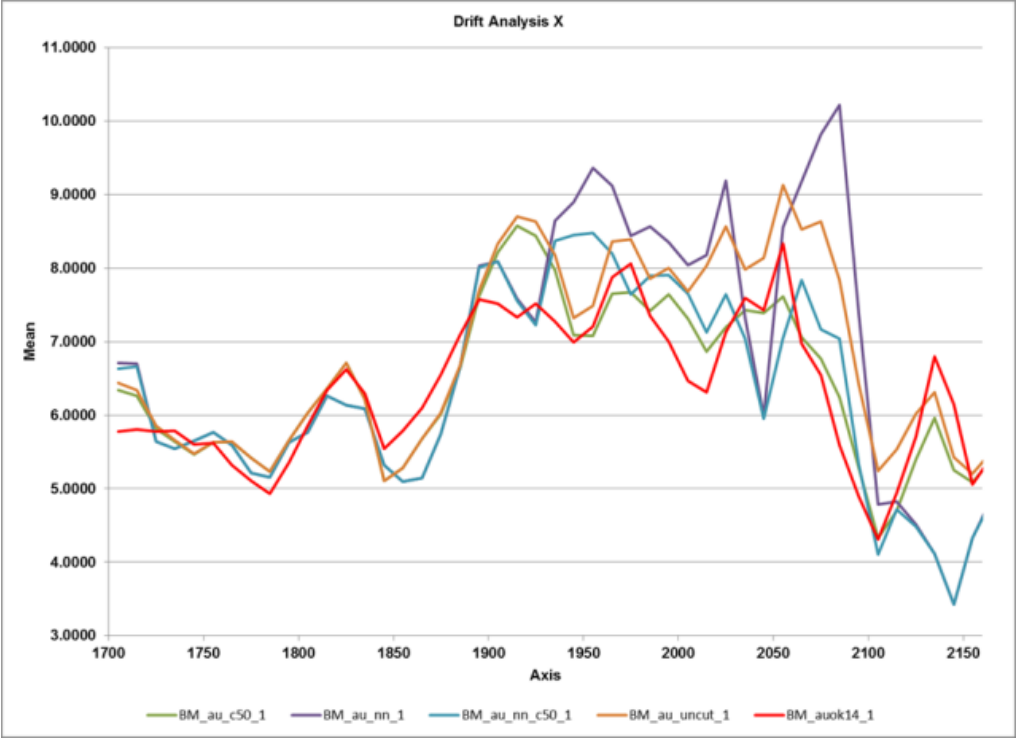
Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	<ul style="list-style-type: none"> <li><i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of 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>There are no Inferred Resources in the Open Pit. The majority of the Inferred Resource lies within the Martha Underground Project.</li> <li>Mining options available for the Correnso Extensions are limited because of the consent conditions, specifically relating to blasting vibration limits and backfill constraints. Longhole bench mining with waste rock backfill was selected as the preferred mining method for extraction of Correnso Extensions with overhand cut and fill in areas particularly sensitive to vibration. Other supplementary methods involve floor benching.</li> <li>Correnso has been designed with a 15m to 18m level spacing, floor to floor, primarily to limit blast vibration but this also assists hanging wall and footwall stability. Conventional cross cut accesses are designed for Avoca stoping levels. More detail can be found in Section 4 of this table.</li> </ul> <p><b>Hydrogeology</b></p> <ul style="list-style-type: none"> <li>GWS Limited Consulting (GWS) have modelled the groundwater system in Waihi since the late 1980's. Regular monitoring is compared to the modelled predictions and is discussed in the annual settlement and dewatering monitoring report submitted to the Regulators.</li> <li>GWS report that a shallow groundwater system associated with volcanic ash, alluvium and completely weathered rhyolite tephra is present at shallow depth. Monitoring data shows that it is unaffected by mine dewatering except immediately adjacent to the Martha Pit. Shallow groundwater levels are controlled principally by rainfall infiltration, low surface soil permeability and natural and assisted drainage to surface water systems.</li> <li>GWS report that the higher volumes of water in the deeper aquifer are contained primarily in the quartz vein, the historic underground workings and infiltrated through the open pit which is more permeable than the surrounding andesite country rock. Water levels are maintained at the lowest underground mine level (790mRL) by the current underground pumping system. Further drawdown of the water table is required at a rate of 10,000 to 12,000m<sup>3</sup>/d to extract the Correnso Extensions Mineral Resource.</li> <li>Consents are in place for the drawdown of the water table. The preferred option is of developing sumps at intervals as the mine develops downwards. These sumps are then pumped to the permanent staging pump station. Water can be drained ahead of the work with short wells or water that drains and accumulates behind the face can be pumped using portable submersible drainage pumps back to the last stage sump. A slurry pump system has been installed capable of handling the high level of entrained solids for the permanent pump stations.</li> </ul> <p><b>Geotechnical</b></p> <ul style="list-style-type: none"> <li>Geotechnical studies were completed by various external consultants (SRK, Engineering Geology Ltd, Laurie</li> </ul>

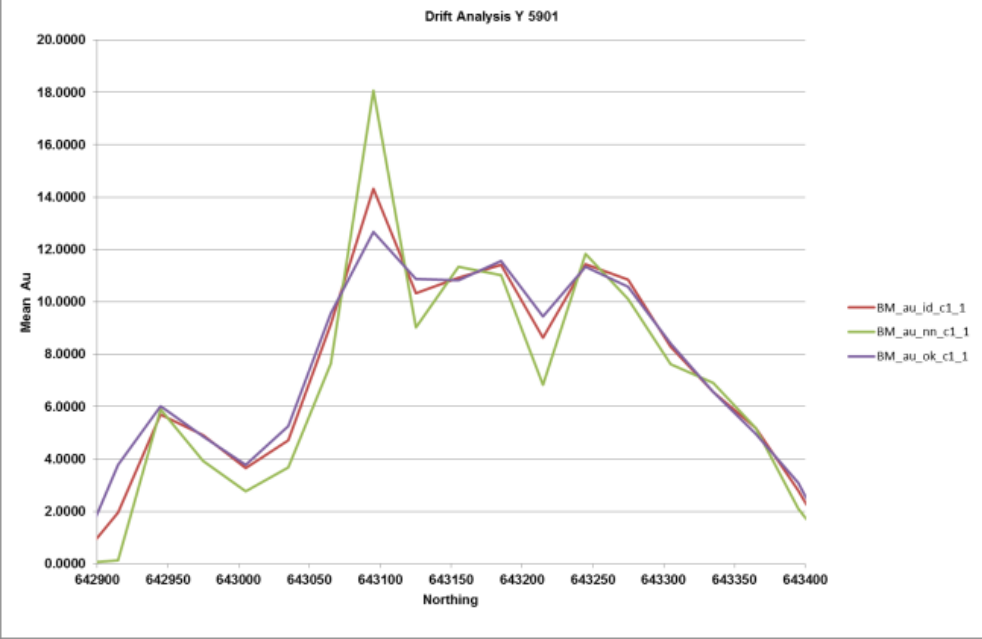
Criteria	JORC Code explanation	Commentary
		<p>Richards and Beck Engineering) during the Waihi Correnso study which included the Correnso Extensions.</p> <ul style="list-style-type: none"> <li>• The extensions of the Correnso vein above 915mRL are for the most part hosted within the Lower Andesite unit with the upper extents of the mineralization persisting through the transition to the upper andesite. Host rock conditions are mostly favourable although the rock mass appears to become slightly less competent than at greater depth. Visual estimates suggest Fair to Good classifications.</li> <li>• Lower Correnso ground conditions appear to be simply an extension to those already exposed by developments along the Correnso Vein on 795 and 810 levels. The ore zone as exposed on 795 and 810 is heavily structured and sugary quartz /calcite veins could create zones of weakness but overall ground conditions are classed as Good.</li> <li>• Overall both the host rock and ore zone of the Daybreak vein appears relatively competent. Daybreak is now intersected on most levels with no apparent adverse impact on ground conditions and no additional ground support was necessary.</li> <li>• The Empire host rock characteristics in the immediate vicinity of the ore-bodies are mostly favourable. Ore body conditions are variable. A zone of broken veining occurs at the northern end of the ore-body which may restrict stope spans to 15m.</li> <li>• Ground conditions within the Martha Underground Project will be impacted due to proximity to historic mining voids. Mechanisms for mitigating the associated risks will be considered as part of the project scoping study to be undertaken in the coming year</li> <li>• Ground conditions in the Gladstone underground area are generally poor, the higher ground support costs have been accounted for through the higher mining cutoff.</li> </ul> <p><b>Mining Recovery and Dilution</b></p> <ul style="list-style-type: none"> <li>• The mining recovery factors applied for Correnso Extensions underground are summarized in the table below. Over-break is included in the capital and operating lateral waste development dimensions so that no additional over-break is assigned. No over-break is assumed for operating lateral ore development as the over-break tonnes are generally ore which are included in the stope tonnes. Assuming zero over-break in the ore drives removes the risk of either double counting or under calling ore tonnes and metal.</li> <li>• Stopes are designed with 0.7m dilution applied on both the footwall and the hangingwall. This is based on experience gained when stoping Favona and Trio orebodies.</li> <li>• Tonnage recovery factors shown in the table following for stoping include in-situ ore, plus dilution material. Metal recovery factors take into account the difficulties associated with recovering all ore from a stope, particularly under remote control operations. Additionally, it allows for the potential loss of metal due to excess dilution burying ore and not recovering all of the ore.</li> </ul>

Criteria	JORC Code explanation	Commentary																		
		<p style="text-align: center;"><b>Table 5: Tonnage Recovery Factors</b></p> <table border="1" data-bbox="891 300 1921 635"> <thead> <tr> <th data-bbox="891 300 1541 384">Activity</th> <th data-bbox="1541 300 1720 384">Tonnage recovered</th> <th data-bbox="1720 300 1921 384">Metal recovered</th> </tr> </thead> <tbody> <tr> <td data-bbox="891 384 1541 435">Lateral Development — Capital Waste</td> <td data-bbox="1541 384 1720 435">100%</td> <td data-bbox="1720 384 1921 435">-</td> </tr> <tr> <td data-bbox="891 435 1541 486">Lateral Development — Operating Waste</td> <td data-bbox="1541 435 1720 486">100%</td> <td data-bbox="1720 435 1921 486">-</td> </tr> <tr> <td data-bbox="891 486 1541 537">Lateral Development — Operating Ore</td> <td data-bbox="1541 486 1720 537">100%</td> <td data-bbox="1720 486 1921 537">100%</td> </tr> <tr> <td data-bbox="891 537 1541 588">Vertical Development — Capital Waste</td> <td data-bbox="1541 537 1720 588">100%</td> <td data-bbox="1720 537 1921 588">-</td> </tr> <tr> <td data-bbox="891 588 1541 635">15m high Long hole Stope (includes 5% fill dilution at zero grade)</td> <td data-bbox="1541 588 1720 635">95%</td> <td data-bbox="1720 588 1921 635">90%</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>• Underground ore is trucked to the ROM Pad and underground waste will be directly hauled to stope fill or to the surface waste dump as required and subsequently returned to the underground as backfill.</li> <li>• Martha underground resource is reported on an insitu basis at a cut-off grade of 3.5 g/t at this time. Scoping level mining studies have been completed on the Martha Underground Project and further drilling and mining studies will be undertaken in 2017.</li> </ul>	Activity	Tonnage recovered	Metal recovered	Lateral Development — Capital Waste	100%	-	Lateral Development — Operating Waste	100%	-	Lateral Development — Operating Ore	100%	100%	Vertical Development — Capital Waste	100%	-	15m high Long hole Stope (includes 5% fill dilution at zero grade)	95%	90%
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Vertical Development — Capital Waste	100%	-																		
15m high Long hole Stope (includes 5% fill dilution at zero grade)	95%	90%																		
<p><i>Metallurgical factors or assumptions</i></p>	<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 always be rigorous. Where this is the case, this should be reported with an explanation of the basis</i></li> </ul>	<ul style="list-style-type: none"> <li>• Laboratory scale test work has been conducted on drill hole samples obtained between 2010 and 2012 for the Correnso upper and lower extensions and Empire. No test work has been conducted on Daybreak drill hole samples but the mineralogy is expected to be similar. The key focus of the metallurgical work has been to derive gold recovery, throughput rates, reagent consumption and to confirm the suitability of current Plant configuration. This test work has shown the Correnso Extensions ores to be amenable for processing via the existing Waihi gold treatment plant flow-sheet.</li> <li>• A grind size P<sub>80</sub> of 53 microns has been selected for the estimated throughput rates, as plant operating experience has shown that an equivalent laboratory gold recovery at a P<sub>80</sub> of 38 microns is achieved. This relationship is due to the laboratory grind test work being in open circuit, whereas in the plant the grinding circuit is in closed circuit. This results in the higher density sulphides being preferentially ground finer and hence liberating more gold particles that are disseminated within the sulphides.</li> <li>• It is determined that a grind size P<sub>80</sub> of 53 microns is the optimum that maximizes value for the Correnso Extensions resource.</li> <li>• Recovery is estimated from test work. Recovery is calculated based on the arsenic relationship with gold grade. Recovery at 88tph throughput is estimated at:</li> </ul>																		

Criteria	JORC Code explanation	Commentary
	<p><i>of the metallurgical assumptions made.</i></p>	<p><math>Recovery \% = [Au\ Head\ grade - (0.09 * Au\ Head\ grade + 0.25 + 0.02)] / Au\ Head\ grade * 100\%</math>.</p> <ul style="list-style-type: none"> <li>This relationship predicts an average recovery for the Correnso Extensions of 87.4% based on the average project head grade of 7.47g/t Au.</li> <li>Both gold and arsenic have been identified as the statistically significant predictors for estimating residue grade for the Correnso Extensions resource.</li> </ul>
<p><i>Environmental factors or assumptions</i></p>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Waihi Gold operation holds the necessary permits, consents, certificates, licences and agreements required to conduct its current operations, and to construct and operate the Correnso Extensions underground mine and the Slevin extensions.</li> <li>Environmental studies conducted by independent consultants as part of the Correnso underground project included the Correnso Extensions project. The environment effects based reports are all independently reviewed by consultants employed by the Council regulators.</li> <li>Studies have included air quality, water quality and ecology, noise, blast vibration effects, traffic, potential for subsidence, ground settlement in response to dewatering, property values, de-watering, and geochemistry of tailings, waste and groundwater.</li> <li>All waste produced from the underground mine is classified as potentially acid forming (PAF) and is returned underground as stope backfill. The Correnso consent requires material to be classified according to acid forming potential, and PAF material requires lime dosing.</li> <li>Vibration modelling has been completed for the Correnso Extensions by John Heilig and Partners. Modelling of the likely scale of blasting has been based upon vibration relationships developed from the underground blasting at Waihi over the last six years. Vibration modelling shows that the Correnso Extensions project and Slevin extensions can comply with the consent conditions.</li> </ul>
<p><i>Bulk density</i></p>	<ul style="list-style-type: none"> <li><i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the</i></li> </ul>	<ul style="list-style-type: none"> <li>Oxidation and rock hardness wireframe surfaces / solids based on sectional interpretation of diamond drilling data, with modification based on the current geology model, are used as the basis for assigning density within the Martha Open Pit.</li> <li>Dry bulk densities have been estimated for the Correnso resource using a water displacement method modified from NZS 4402: 1986, which is considered appropriate for competent half-core (Lipton, 2001). The</li> </ul>

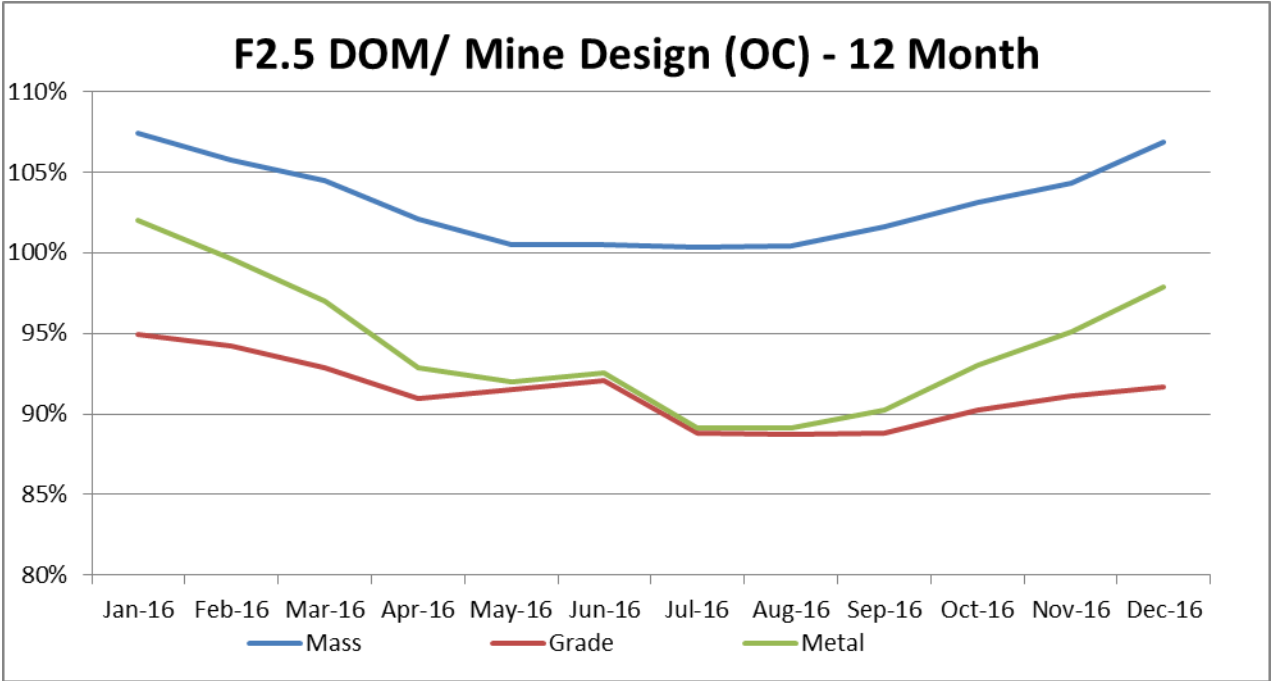
Criteria	JORC Code explanation	Commentary																														
	<p><i>frequency of the measurements, the nature, size and representativeness of the samples.</i></p> <ul style="list-style-type: none"> <li><i>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.</i></li> <li><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	<p>method involves weighing the sample before and after a series of steps, which include oven-drying a drillcore sample, filling surface pores with modelling clay, coating the entire sample with wax and immersing it in water. Ore intercepts were relogged and assigned to several identified geological classes based on the physical properties that are considered most likely to affect density, including porosity, clay content, oxidation, sulphide content, vein percent and vein texture. Analysis of the data shows a relatively uniform range of density values within each geological class. Porosity, clay content and oxidation contribute to lower density values, while sulphide content contributes to higher density values. Dry bulk densities were determined for 247 samples of Correnso drill core, including representative vein and wall rock material from mineralized intercepts over a downhole depth range of 182.2m to 519.35m, corresponding to approximately 1000mRL to 750mRL. Geological classes were identified on the basis of logged physical characteristics and each main geological class is represented by SG measurements from at least 30 drill core samples. An overall mean value of 2.52g/cm<sup>3</sup> was obtained for all 247 density values. There is a slight increase in density with depth which corresponds to increasing base metal sulphide content. There is no relationship between the density and the Au grade. The higher SG value obtained for Correnso (2.52g/cm<sup>3</sup>) over Edward and Martha ore (2.44-2.47g/cm<sup>3</sup>) is attributed to higher sulphide content in Correnso. The default density used for the Correnso Resource model is 2.5 g/cm<sup>3</sup></p>																														
Classification	<ul style="list-style-type: none"> <li><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li><i>Whether appropriate account has been taken of all relevant factors (i.e. 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).</i></li> <li><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>The resource classification is based on drill hole spacing; ranges for classification in the vein style mineralisation are greater than the ranges chosen for the stockwork style domains. Classification is based on the requirement for the average distance to the closest three holes to be within specific ranges determined from drill spacing studies.</li> </ul> <table border="1" data-bbox="748 890 1928 1238"> <thead> <tr> <th>Resource Classification</th> <th>Vein Zones Average distance to 3 holes</th> <th>Stockwork Average distance to 3 holes</th> <th>Stope backfill</th> <th>2<sup>nd</sup> estimation pass stockwork domain</th> </tr> </thead> <tbody> <tr> <td>Measured</td> <td>0 to 10 m</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Indicated</td> <td>10 to 30 m</td> <td>0 to 22.5 m</td> <td></td> <td></td> </tr> <tr> <td>Inferred</td> <td>30 to 60 m</td> <td>22.5 to 45 m</td> <td>All material</td> <td></td> </tr> <tr> <td>Mineral inventory I</td> <td>&gt;60m</td> <td>&gt;45 m</td> <td></td> <td></td> </tr> <tr> <td>Mineral inventory II</td> <td></td> <td></td> <td></td> <td>All material</td> </tr> </tbody> </table> <p><b>Table 1: Average Drill hole spacing required for resource classification</b></p> <ul style="list-style-type: none"> <li>Two drill spacing studies using conditional simulation were completed during 2014 which validated the spacing of 30m for Indicated for the Correnso deposit.</li> </ul>	Resource Classification	Vein Zones Average distance to 3 holes	Stockwork Average distance to 3 holes	Stope backfill	2 <sup>nd</sup> estimation pass stockwork domain	Measured	0 to 10 m				Indicated	10 to 30 m	0 to 22.5 m			Inferred	30 to 60 m	22.5 to 45 m	All material		Mineral inventory I	>60m	>45 m			Mineral inventory II				All material
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		<ul style="list-style-type: none"> <li>The resource estimate outlined in this document appropriately reflects the Competent Person's view of the deposit.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>The models are regularly cross checked by OceanaGold Corporation employees that are familiar with the resource estimation practices employed on site.</li> </ul>
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>These statements of relative accuracy and confidence of the</li> </ul>	<p><b>Model Validation</b></p> <ul style="list-style-type: none"> <li>Swath plots by elevation, northing and / or easting are constructed for each of the veins. A Nearest Neighbour estimate is compared to the Inverse Distance estimate and Ordinary Kriging estimate (where it was used). Examples of the comparisons undertaken are included as Figure 6 (Martha) and Figure 7 (Correnso).</li> </ul> <p style="text-align: center;"><b>Figure 6: Example swath plot Easting Domain 1100 Martha Model.</b></p> 

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	<p><i>estimate should be compared with production data, where available.</i></p>	<p style="text-align: center;"><b>Figure 7: Example swath plot Northing Domain 5901 Correnso Model.</b></p>  <p>The figure is a line graph titled "Drift Analysis Y 5901". The y-axis is labeled "Mean Au" and ranges from 0.0000 to 20.0000 in increments of 2.0000. The x-axis is labeled "Northing" and ranges from 642900 to 643400 in increments of 500. Three data series are plotted: a red line (BM_au_ld_ct_1), a green line (BM_au_nn_ct_1), and a purple line (BM_au_ok_ct_1). All three lines show a similar trend, starting at approximately 2.0000 at Northing 642900, rising to a peak of about 14.0000 at Northing 643100, and then declining to about 2.0000 at Northing 643400. The green line shows a significant spike to 18.0000 at Northing 643100, which is higher than the other two lines at that point.</p> <ul style="list-style-type: none"> <li>• Reconciliation of actual production to the Martha Mineral Resource model since the commencement of operations indicates that the estimate is representative of the deposit. Comparison of model estimates against the significant known production history of the Martha Pit is used as a calibration check during the reserve estimation process.</li> <li>• The Ore Reserve estimate has been updated to reflect the issuance of recent block modelling, built to include current-state drill sampling density, corresponding refinement of the geological model, and depletion.</li> <li>• Model performance is formally reviewed monthly. Investigation of variance between Ore control vs. Reserve model (F1), Received at mill vs. Claimed delivered to mill (F2) and Mill vs. Reserve (F3) is undertaken at monthly, 3 month rolling and 12 month rolling resolutions. Mitigating actions are identified to minimise sources of variance where practicable.</li> </ul>



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		<p>Figure 8 shows 12-month reconciliation between the mill and ore reserve model which indicates that over the 12 months, ore tonnes were 18% higher, with grade 3% and the corresponding ounces 21% higher than prediction. Several of areas were mined for 2016 outside of the reserve after extra drill data was added to the grade control models this represents the conversion of Resource to Reserve within the reporting period with the additional 21% metal being comprised of inferred resource at the start of the reporting period or inferred resource added to the inventory during the period. Particularly extensions to Correnso in the south and Daybreak western extensions.</p> <p>Reserve data in the F3 comparison does not include any inferred resource, the increasing variance observed in the latter portion of the year highlights the increasing influence of inferred resource being introduced into the mine plan as the mine plan evolves during the course of the year. This reconciliation pattern over the year is typical for the Waihi operation with the updated Reserve release resulting in a marked decrease in variance at the beginning of each year</p> <p style="text-align: center;"><b>Figure 8: Mill vs. 2015 Reserve Model variance as at December 2016</b></p> <div data-bbox="750 651 1937 1345"> <p><b>F3 : (Mill/Res) 3 mth and 12 mth rolling variance</b></p> <table border="1"> <caption>Estimated data from Figure 8 chart</caption> <thead> <tr> <th>Month</th> <th>12 MTH t (%)</th> <th>3 MTH t (%)</th> <th>12 MTH Au (%)</th> <th>3 MTH Au (%)</th> <th>12 MTH Oz (%)</th> <th>3 MTH Oz (%)</th> </tr> </thead> <tbody> <tr> <td>Jan-16</td> <td>105</td> <td>105</td> <td>100</td> <td>105</td> <td>100</td> <td>115</td> </tr> <tr> <td>Feb-16</td> <td>110</td> <td>108</td> <td>102</td> <td>110</td> <td>105</td> <td>115</td> </tr> <tr> <td>Mar-16</td> <td>120</td> <td>110</td> <td>104</td> <td>118</td> <td>120</td> <td>125</td> </tr> <tr> <td>Apr-16</td> <td>118</td> <td>112</td> <td>103</td> <td>110</td> <td>118</td> <td>122</td> </tr> <tr> <td>May-16</td> <td>115</td> <td>112</td> <td>105</td> <td>108</td> <td>115</td> <td>118</td> </tr> <tr> <td>Jun-16</td> <td>112</td> <td>103</td> <td>102</td> <td>105</td> <td>108</td> <td>105</td> </tr> <tr> <td>Jul-16</td> <td>110</td> <td>103</td> <td>102</td> <td>110</td> <td>110</td> <td>112</td> </tr> <tr> <td>Aug-16</td> <td>112</td> <td>110</td> <td>104</td> <td>108</td> <td>112</td> <td>115</td> </tr> <tr> <td>Sep-16</td> <td>115</td> <td>115</td> <td>105</td> <td>98</td> <td>112</td> <td>112</td> </tr> <tr> <td>Oct-16</td> <td>118</td> <td>120</td> <td>106</td> <td>96</td> <td>115</td> <td>118</td> </tr> <tr> <td>Nov-16</td> <td>130</td> <td>132</td> <td>106</td> <td>95</td> <td>118</td> <td>125</td> </tr> <tr> <td>Dec-16</td> <td>135</td> <td>138</td> <td>106</td> <td>98</td> <td>118</td> <td>130</td> </tr> </tbody> </table> </div>	Month	12 MTH t (%)	3 MTH t (%)	12 MTH Au (%)	3 MTH Au (%)	12 MTH Oz (%)	3 MTH Oz (%)	Jan-16	105	105	100	105	100	115	Feb-16	110	108	102	110	105	115	Mar-16	120	110	104	118	120	125	Apr-16	118	112	103	110	118	122	May-16	115	112	105	108	115	118	Jun-16	112	103	102	105	108	105	Jul-16	110	103	102	110	110	112	Aug-16	112	110	104	108	112	115	Sep-16	115	115	105	98	112	112	Oct-16	118	120	106	96	115	118	Nov-16	130	132	106	95	118	125	Dec-16	135	138	106	98	118	130
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		<p>Figure 9 shows the 12 month reconciliation between the mill and the grade control model with mining dilution and recovery factors included (105% mass, 95% metal). For December 2016 mass was 107% grade 92% and metal 98%. This shows the influence of the higher than planned dilution from Correnso north and slightly lower ounce recovery, and indicates that the rolling grade control model reconciles well with the mill. All mined material from the reserve and resource models are included in the grade control models and negates the variance seen in the F3 factor due to non-reserve inferred material being mined in increasing quantities later in the year as the operation get further removed from the previous reserve</p> <p><b>Figure 9: Mill vs. Mine Design variance as at December 2016</b></p>  <table border="1"> <caption>F2.5 DOM/ Mine Design (OC) - 12 Month</caption> <thead> <tr> <th>Month</th> <th>Mass (%)</th> <th>Grade (%)</th> <th>Metal (%)</th> </tr> </thead> <tbody> <tr><td>Jan-16</td><td>107</td><td>95</td><td>102</td></tr> <tr><td>Feb-16</td><td>105</td><td>94</td><td>100</td></tr> <tr><td>Mar-16</td><td>104</td><td>93</td><td>97</td></tr> <tr><td>Apr-16</td><td>102</td><td>91</td><td>93</td></tr> <tr><td>May-16</td><td>100</td><td>92</td><td>92</td></tr> <tr><td>Jun-16</td><td>100</td><td>92</td><td>93</td></tr> <tr><td>Jul-16</td><td>100</td><td>89</td><td>90</td></tr> <tr><td>Aug-16</td><td>100</td><td>89</td><td>90</td></tr> <tr><td>Sep-16</td><td>101</td><td>89</td><td>91</td></tr> <tr><td>Oct-16</td><td>103</td><td>90</td><td>93</td></tr> <tr><td>Nov-16</td><td>104</td><td>91</td><td>95</td></tr> <tr><td>Dec-16</td><td>107</td><td>92</td><td>98</td></tr> </tbody> </table>	Month	Mass (%)	Grade (%)	Metal (%)	Jan-16	107	95	102	Feb-16	105	94	100	Mar-16	104	93	97	Apr-16	102	91	93	May-16	100	92	92	Jun-16	100	92	93	Jul-16	100	89	90	Aug-16	100	89	90	Sep-16	101	89	91	Oct-16	103	90	93	Nov-16	104	91	95	Dec-16	107	92	98
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#### Section 4 Estimation and Reporting of Ore Reserves

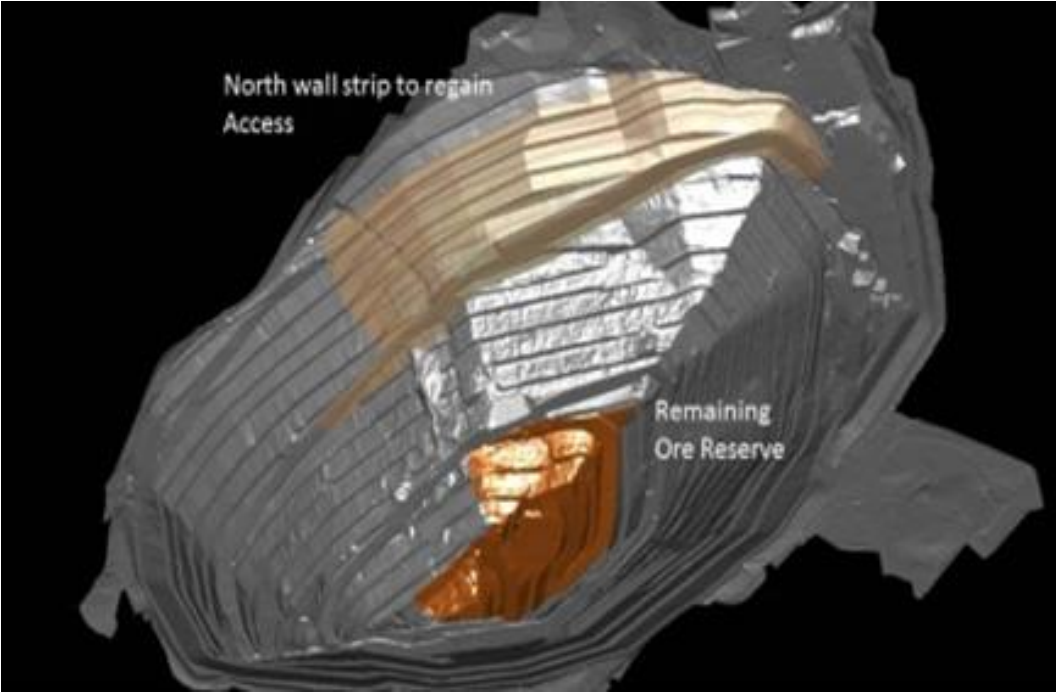
(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	<ul style="list-style-type: none"> <li>• <i>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</i></li> <li>• <i>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Mineral Resource estimate used as a basis for conversion to an Ore Reserves is described in Section 3 of Table 1.</li> <li>• Mineral Resources are reported inclusive of the Ore Reserves.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li>• <i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Competent Person for Underground Ore Reserves is David Townsend who has been employed at Waihi from 2006. He has been involved in the design and development of the underground mine since 2006, and oversees all technical aspects of the underground mine.</li> <li>• The Competent Person for Open Pit Ore Reserves is Trevor Maton who has been employed at Waihi from 2003. He has been involved in the design and development of the open pit mine since 2003.</li> </ul>
Study status	<ul style="list-style-type: none"> <li>• <i>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</i></li> <li>• <i>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Open pit mining and ore processing at Waihi has been in continuous operation since 1988. A localised failure of the north wall that undercut the main access ramp suspended open pit mining operations in April 2015. A 1 million tonne failure of the north wall occurred in April 2016. A mining study has been initiated to identify methods to recover the remaining Ore Reserve, but still requires additional geotechnical analysis.</li> <li>• Underground mining and ore processing at Waihi has been in continuous operation since 2004.</li> <li>• The study work undertaken for Correnso Extensions and underground mine meets Feasibility Study level standard. Mining studies have been conducted for mine design, mine planning, ventilation, cut-off grade, detailed cost estimation and economic evaluation. The site has had a 10 year operating experience with mineral resource reconciliation and metallurgical recovery performance of the underground resources. Actual costs for underground mining, ore processing, G&amp;A and selling costs are known.</li> <li>• A mine plan has been developed which is technically achievable and economically viable. All Modifying Factors have been considered.</li> <li>• Consents are in place for all underground mining covered by this report and all planned mining methods are in accordance with the license, permit and consent conditions, principally related to placement of backfill, blast vibration limits, method of working and hydrogeological controls.</li> </ul>

Criteria	JORC Code explanation	Commentary
Cut-off parameters	<ul style="list-style-type: none"> <li><i>The basis of the cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>Cut –off grade is based on Ore Reserve metal prices of NZ\$1,857 per ounce. A silver price of NZ\$25 per ounce for silver is applied as a by-product credit to the operating costs.</li> <li>Inputs to the calculation of cut-off grades for Waihi open pit and underground include mining costs, metallurgical recoveries, treatment and refining costs, general and administrative costs, royalties and metal prices.</li> </ul> <p><b>Martha Open Pit</b></p> <ul style="list-style-type: none"> <li>The cut-off grade used to determine Ore Reserves for the Open Pit was 0.5 g/t Au.</li> </ul> <p><b>Correnso Underground</b></p> <ul style="list-style-type: none"> <li>The following cut-off grades have been used to determine the Underground Ore Reserve: <ul style="list-style-type: none"> <li>Ore development and stoping beyond designed limits 4.3g/t Au,</li> <li>Ore development beyond stope limits 4.2g/t Au,</li> <li>Incremental stopes (ore development in place) 3.9g/t Au,</li> <li>Incremental ore development 2.5g/t Au.</li> </ul> </li> <li>The cut-off grades are determined from a mining cost of NZ\$110/ore tonne and processing cost of NZ\$45/ore tonne (which include all general and administrative charges).</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li><i>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</i></li> <li><i>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</i></li> <li><i>The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling.</i></li> <li><i>The major assumptions made and Mineral Resource model used for pit and stope</i></li> </ul>	<p><b>Martha Open Pit</b></p> <ul style="list-style-type: none"> <li>The method for conversion of Mineral Resource to Ore Reserve involved a 2010 pit optimisation study using the “Whittle” Lerch-Grossman algorithm to determine the economic limits of the Ore Reserve. Mining of this layback commenced in 2010.</li> <li>A localised failure of the north wall occurred in April 2015 which undercut the main access ramp. Operations were suspended in April 2015 and the open pit mining contract terminated in June 2015. A 1 million tonne failure of this wall occurred during April 2016 and studies are in progress to regain access to the bottom of the pit.</li> <li>Waihi Gold open pit utilises conventional drill, blast, load and haul with standard mid-sized mining equipment. A mining contractor was employed for open pit operations under a schedule of rates, which was in place from May 2014 until its termination in June 2015.</li> <li>The selected mining method and design is appropriate for the Martha open pit. The open pit pre-strip has been completed and access for materials handling has been operating effectively</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>optimisation (if appropriate).</i></p> <ul style="list-style-type: none"> <li>• <i>The mining dilution factors used.</i></li> <li>• <i>The mining recovery factors used.</i></li> <li>• <i>Any minimum mining widths used.</i></li> <li>• <i>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</i></li> <li>• <i>The infrastructure requirements of the selected mining methods.</i></li> </ul>	<p>since 2010.</p> <ul style="list-style-type: none"> <li>• The open pit mining process at Martha is determined largely by the land use consents granted to the Company. Waste and ore is categorised into hard and soft material. Waste is further categorised into potentially acid forming or non-acid forming rock. Ore sampling is conducted in-pit by RC drilling. Ore blocks are blocked out on the basis of this sampling and take into account the capacities of the equipment to selectively mine these blocks.</li> <li>• Soft material is ripped by D9 dozer whereas all hard material is blasted. Strict controls on blast vibration determine the blast hole spacing and the maximum allowable charge weight per delay. Generally ore is blasted in 5metre vertical intervals (two flitches), but blast vibration limitations may require blast holes to be drilled at 2.5metre vertical intervals. Electronic detonators are used in all holes to ensure detonation of charges occur as per the design sequence. The Company monitors each blast vibration for conformance at a number of monitoring stations in the surrounding community.</li> <li>• All ore and waste is loaded via 190 tonne backhoe excavators into 85 tonne rear dump trucks and trucked via a 1 in 10 ramp and generally direct tipped to a jaw crusher or Stamler breaker station. Small quantities of ore and waste are stockpiled close to the jaw crusher.</li> <li>• The presence of historic workings in the open pit requires probe drilling to identify voids or weak pillars which create both a safety hazard and an operating constraint. Underground voids are either banded off or marked with hazard tape. Excavators and trucks must operate around the void working in towards the void. This process can at times influence the bench extraction sequence.</li> <li>• All ore and waste is crushed. Ore is conveyed 1.5 km to the process plant and placed in a 40,000t stockpile. A surge (Polishing Pond) stockpile (up to 1.2MT) is available close to the water treatment plant for excess ore. Waste is directed to the Waste Development site and used for construction of the Tailings Dams or for underground backfill.</li> <li>• The minimum mining width has been set at 3 metres wide, determined by the observed width of many of the small narrow veins that are being mined. Equipment has been sized to suit these design parameters. The selective mining unit developed for the geological block model is a bench height of 2.5metres, and east west dimension of 3metres and north south dimension of 10metres reflecting the drill spacing and the main trend of the mineralised veins in an east westerly direction.</li> <li>• A detailed geotechnical study was completed for Waihi Gold by PSM in 2010 based on geotechnical drilling, structural pit mapping and geotechnical modelling. Geotechnical domains were re-defined based on the recent analysis. The design criteria used to support calculation of</li> </ul>

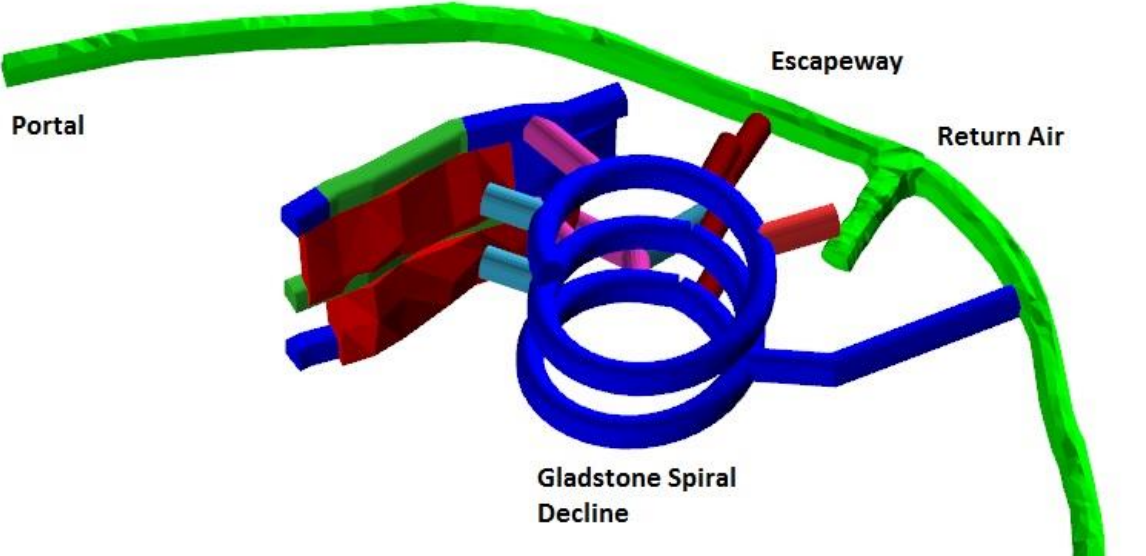
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		<p>Ore Reserves are reported in the table below.</p> <p style="text-align: center;"><b>Table 7: Design Criteria to Support Calculation of Ore Reserves</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">SECTOR</th> <th colspan="6">PIT WALL DIP DIRECTION</th> </tr> <tr> <th colspan="2">SOUTHEAST TOWARDS 330°</th> <th colspan="2">EAST TOWARDS 270°</th> <th colspan="2">NORTHEAST TOWARDS 195°</th> </tr> <tr> <th>Bench</th> <th>Face Slope</th> <th>Inter-Ramp</th> <th>Face Slope</th> <th>Inter-Ramp</th> <th>Face Slope</th> <th>Inter-Ramp</th> </tr> </thead> <tbody> <tr> <td></td> <td>&gt;1135</td> <td></td> <td></td> <td></td> <td></td> <td>30°</td> <td rowspan="3">30°</td> </tr> <tr> <td>1135</td> <td>1120</td> <td>30°</td> <td rowspan="7">35°</td> <td></td> <td></td> <td>35°</td> </tr> <tr> <td>1120</td> <td>1104</td> <td>30°</td> <td>37°</td> <td rowspan="2">30°</td> <td>40°</td> </tr> <tr> <td>1104</td> <td>1090</td> <td>30°</td> <td>37°</td> <td>37°</td> </tr> <tr> <td>1090</td> <td>1070</td> <td>37°</td> <td>37°</td> <td>37°</td> <td>40°</td> </tr> <tr> <td>1070</td> <td>1050</td> <td>45°</td> <td>37°</td> <td></td> <td>55°</td> <td rowspan="3">44°</td> </tr> <tr> <td>1050</td> <td>1030</td> <td>45°</td> <td>37°</td> <td></td> <td>60°</td> </tr> <tr> <td>1030</td> <td>1010</td> <td>45°</td> <td>37°</td> <td></td> <td>65°</td> </tr> <tr> <td>1010</td> <td>990</td> <td>45°</td> <td></td> <td></td> <td>65°</td> <td rowspan="5">50°</td> </tr> <tr> <td>990</td> <td>970</td> <td>55°</td> <td rowspan="5">47°</td> <td></td> <td>65°</td> </tr> <tr> <td>970</td> <td>950</td> <td>55°</td> <td></td> <td>65°</td> </tr> <tr> <td>950</td> <td>930</td> <td>55°</td> <td></td> <td>70°</td> </tr> <tr> <td>930</td> <td>910</td> <td>60°</td> <td></td> <td>70°</td> </tr> <tr> <td>910</td> <td>890</td> <td>60°</td> <td></td> <td></td> <td>70°</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>The open pit geotechnical conditions are impacted by the presence of extensive historic mine workings, particularly on the south and east walls of the pit. Caving initiated during historic mining has resulted in zones of poor quality rock mass within and outside of the pit slope limits. There has been ongoing large scale block movement over the last seventy years and this large scale block movement will continue into the caved zones in the future beyond the life of the open pit..</li> <li>Geotechnical monitoring has continued following the localised failure of the north wall that</li> </ul>	SECTOR	PIT WALL DIP DIRECTION						SOUTHEAST TOWARDS 330°		EAST TOWARDS 270°		NORTHEAST TOWARDS 195°		Bench	Face Slope	Inter-Ramp	Face Slope	Inter-Ramp	Face Slope	Inter-Ramp		>1135					30°	30°	1135	1120	30°	35°			35°	1120	1104	30°	37°	30°	40°	1104	1090	30°	37°	37°	1090	1070	37°	37°	37°	40°	1070	1050	45°	37°		55°	44°	1050	1030	45°	37°		60°	1030	1010	45°	37°		65°	1010	990	45°			65°	50°	990	970	55°	47°		65°	970	950	55°		65°	950	930	55°		70°	930	910	60°		70°	910	890	60°			70°
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		<p>undercut the main access ramp and suspended operations in April 2015.</p> <p><b>Figure 7: Open Pit Ore Reserve Limits and Stability Cutback</b></p>  <ul style="list-style-type: none"> <li>• Reverse Circulation grade control drilling has been used since 2006 and is drilled to an approximate 10m x 5m pattern with 1.5m down hole sample lengths. Drill holes are currently inclined to the north but this will be continually reviewed in the light of routine pit mapping.</li> <li>• The ore zones are broad on each mining bench, and the overall dilution edge effects are minimal, with the result that there is little difference between the overall in situ and diluted tonnes and grade. The Mineral Resource block model has a block dimension which is larger than the optimum selective mining unit (SMU) for the equipment currently operating at Waihi Gold. When estimating open pit Ore Reserves there is no requirement for additional mining dilution subsequent to the geological modelling stage. Waihi Gold will continue to monitor dilution assumptions during on-going operations.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>• No mining losses were applied. It is considered that the resource estimation technique applied to the broad ore zones provides an adequate estimate of the run of mine (ROM) tonnes and grades. Reconciliation data from mining the Martha open pit supports this approach.</li> <li>• There are no Inferred Mineral Resources included in the open pit economic evaluation. The studies have demonstrated that the open pit operation is technically and economically viable without the inclusion of inferred Mineral Resources.</li> <li>• All fixed infrastructure required for the chosen mining method to extract the open pit Ore Reserve is in place.</li> </ul> <p><b>Correnso Underground</b> <u>Mining Methods</u></p> <ul style="list-style-type: none"> <li>• Mining options available for Correnso are limited because of the consent conditions which include blasting and backfill constraints. Modified Avoca longhole bench mining with waste rock backfill was selected as the preferred mining method for extraction of Correnso. Other supplementary methods involve floor benching and overhand cut and fill.</li> <li>• Access to the Correnso underground is via a decline from previously mined areas, and also serves as a fresh air intake. A single primary exhaust rise and escapeway, which also serves as a fresh air intake, has been raise bored to surface and equipped. The Gladstone orebody is accessed through the existing Favona development and has been designed to incorporate its own internal return air rises and escapeways. The portal is located close to the processing plant.</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p data-bbox="1021 268 2045 371"><b>Figure 9: Oblique of Underground Ore Reserve. Note that the image below does not show the final design, but is indicative of the overall design. Dark blue level development and light blue stopes have been mined prior to 31 December 2016.</b></p> <p data-bbox="893 632 2022 778">All mining areas have been designed with a 15m level spacing, floor to floor, except for the Correnso Deeps. This is primarily to limit blast vibration but this also assists hanging wall and footwall stability. This is a lesser level spacing than used in the now completed Trio underground mine, but similar to that employed at Favona underground. The mine layout for the current underground workings can be summarized as follows:</p> <ul data-bbox="1086 802 2022 1107" style="list-style-type: none"> <li>○ Primary accesses via the existing lower Trio access drive, the 844 exploration drive and from the Trio Mine.</li> <li>○ Exhaust ventilation development from the 972 access exhausting levels from a dedicated return air raise adjacent to the spiral decline.</li> <li>○ Ore and level Development at 15m Level Spacing, 18m in Correnso Deeps</li> <li>○ Ventilation rise adjacent to the level accesses.</li> <li>○ Ore passes and waste passes to all levels throughout Correnso, All other areas have independent stockpiles.</li> </ul> <ul data-bbox="896 1129 1991 1358" style="list-style-type: none"> <li>● The permitted mining method requires all stopes and selected development to be backfilled. Mine waste supplemented with waste rock from the surface Waste Rock Embankment is planned to be used.</li> <li>● In their review of backfill for the Correnso project consulting group Mining One concluded that the proposed loose rock fill backfill option for the Correnso underground project provides the most economical backfill solution, whilst limiting the potential for stope collapse and surface subsidence.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p data-bbox="891 288 1440 316"><u>Figure 10: Oblique view of Gladstone mine design.</u></p>  <p data-bbox="891 1007 2042 1070"><u>Gladstone has followed the existing mine design conventions already in place. A conservative approach to this orebody has been taken as the ground conditions are poorer than in other current mine workings.</u></p> <p data-bbox="891 1114 1048 1141"><u>Hydrogeology</u></p> <ul data-bbox="891 1177 2011 1374" style="list-style-type: none"> <li data-bbox="891 1177 2011 1265">• GWS Limited Consulting (GWS) have modelled the groundwater system in Waihi since the late 1980's. Regular monitoring is compared to the modelled predictions and is discussed in the annual settlement and dewatering monitoring report submitted to the Regulators.</li> <li data-bbox="891 1289 2011 1374">• GWS report that a shallow groundwater system associated with volcanic ash, alluvium and completely weathered rhyolite tephra is present at shallow depth. Monitoring data shows that it is unaffected by mine dewatering except immediately adjacent to the Martha Pit. Shallow</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>groundwater levels are controlled principally by rainfall infiltration, low surface soil permeability and natural and assisted drainage to surface water systems.</p> <ul style="list-style-type: none"> <li>• GWS report that the higher volumes of water in the deeper aquifer are contained primarily in the quartz vein, the historic underground workings and infiltrated through the open pit which is more permeable than the surrounding andesite country rock. This system has been drained from the mine dewatering system within the underground mine. Currently the water level is at approximately 780mRL. This needs to be lowered to 710mRL to enable the mining of the current Ore Reserves and Resources. The main pumping station within the mine, as well as the planning extensions is capable of dewatering to this level.</li> </ul> <p><u>Geotechnical Model</u></p> <ul style="list-style-type: none"> <li>• The geotechnical model for stoping assessments was based on empirical modelling using Q ratings for the rock mass quality and applying the Mathews method to determine stable spans. Geotechnical modelling was impacted by mine design where level spacing was set by blast vibration limits and modelling had to ensure stable pillars were left.</li> <li>• Geotechnical assessments indicate that rock mass conditions within the ore zone and immediately adjacent to the ore zones is generally of good to very good quality with the exception of the northern portion of the Correnso Vein. In general the ground conditions at Correnso are expected to be better than seen at Favona and similar to Trio.</li> <li>• It has been proven that stable stope strike spans of up to 30m can be mined in the Correnso and Daybreak orebodies. Some parts of the Empire orebody are in poorer ground characterised by loose block material and stope spans of around 15m are planned. Caving and surface subsidence potential has been assessed for development and stoping with the risk being low if recommendations for ground support, allowable spans, and management techniques are followed. Numerical modelling was undertaken to assess the global effects of mining including global mine stability, risk due to chimney failure of individual stopes, and the effects on ground surface subsidence. The numerical modelling concluded that the likely effects on ground surface stability due to mining would be negligible.</li> </ul>

Criteria	JORC Code explanation	Commentary																		
		<p><u>Mining Recovery and Dilution</u></p> <ul style="list-style-type: none"> <li>The mining recovery factors applied for Correnso underground are summarized in the table below. Over-break is included in the capital and operating lateral waste development dimensions so that no additional over-break is assigned. No over-break is assumed for operating lateral ore development as the over-break tonnes are generally ore which are included in the stope tonnes. Assuming zero over-break in the ore drives removes the risk of either double counting or under calling ore tonnes and metal.</li> <li>Gladstone has been designed using the same recovery and dilution factors, however a higher cut-off grade was used, and shorter stope panels are planned to limit the effects of poor hangingwall stability.</li> <li>Stopes were designed with 0.5m dilution on both the footwall and the hangingwall which when applied with the stope recovery factors reconciles with performance of stopes in Correnso.</li> <li>Tonnage recovery factors shown in the table below for stoping include in-situ ore plus dilution material. Metal recovery factors take into account the difficulties associated with recovering all ore from a stope, particularly under remote control operations. Additionally, it allows for the potential loss of metal due to excess dilution burying ore and limiting recovering of all of the ore.</li> </ul> <p style="text-align: center;"><b>Table 8: Tonnage Recovery Factors</b></p> <table border="1" data-bbox="1034 847 1910 1214"> <thead> <tr> <th data-bbox="1034 847 1525 932">Activity</th> <th data-bbox="1525 847 1722 932">Tonnage recovered</th> <th data-bbox="1722 847 1910 932">Metal recovered</th> </tr> </thead> <tbody> <tr> <td data-bbox="1034 932 1525 983">Lateral Development — Capital Waste</td> <td data-bbox="1525 932 1722 983">100%</td> <td data-bbox="1722 932 1910 983">-</td> </tr> <tr> <td data-bbox="1034 983 1525 1034">Lateral Development — Operating Waste</td> <td data-bbox="1525 983 1722 1034">100%</td> <td data-bbox="1722 983 1910 1034">-</td> </tr> <tr> <td data-bbox="1034 1034 1525 1085">Lateral Development — Operating Ore</td> <td data-bbox="1525 1034 1722 1085">100%</td> <td data-bbox="1722 1034 1910 1085">100%</td> </tr> <tr> <td data-bbox="1034 1085 1525 1136">Vertical Development — Capital Waste</td> <td data-bbox="1525 1085 1722 1136">100%</td> <td data-bbox="1722 1085 1910 1136">-</td> </tr> <tr> <td data-bbox="1034 1136 1525 1214">15m high Long hole Stope (includes 5% fill dilution at zero grade)</td> <td data-bbox="1525 1136 1722 1214">105%</td> <td data-bbox="1722 1136 1910 1214">95%</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>Other mine design constraints used in determining the Underground Ore Reserves were: <ul style="list-style-type: none"> <li>Minimum ratio of 1:1 pillar width separating development openings</li> <li>Maximum 12.5m Avoca stope width and 11.0m in the Northern vein</li> </ul> </li> </ul>	Activity	Tonnage recovered	Metal recovered	Lateral Development — Capital Waste	100%	-	Lateral Development — Operating Waste	100%	-	Lateral Development — Operating Ore	100%	100%	Vertical Development — Capital Waste	100%	-	15m high Long hole Stope (includes 5% fill dilution at zero grade)	105%	95%
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Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>○ Ore drive width after stripping to be no wider than 8.5m</li> <li>• No Inferred Resource metal has been included in the Ore Reserve. Each individual design item was interrogated to report against each Mineral Resource category, and the average grade of each design item reassessed only allowing contribution of metal from Measured and Indicated Mineral Resource categories. As such, any Inferred Resource material was effectively included as diluting material at zero grade.</li> <li>• Underground ore is trucked to the ROM Pad and underground waste will be directly hauled to stope fill or to the surface waste dump as required. There is no Interaction between underground and open pit mobile equipment.</li> <li>• The majority of infrastructure required for the chosen mining method to extract the underground Ore Reserve is already in place. Additional detail is provided under the heading Infrastructure later in this table.</li> </ul>
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>• <i>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</i></li> <li>• <i>Whether the metallurgical process is well-tested technology or novel in nature.</i></li> <li>• <i>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</i></li> <li>• <i>Any assumptions or allowances made for deleterious elements.</i></li> <li>• <i>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</i></li> <li>• <i>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</i></li> </ul>	<ul style="list-style-type: none"> <li>• The metallurgical process at Waihi is well-tested and proven technology, having been in operation for 27 continuous years.</li> <li>• Ore processing consists of five stages: comminution, leaching/adsorption, elution, electro-winning and smelting. Underground stockpile ore is reclaimed at between 40 to 100 tonnes /hour by front end loader and fed onto a static grizzly with an aperture of 200 mm. Martha open pit ore is fed at the rate of 155 tonnes /hour.</li> <li>• The Processing Plant has the capacity to treat up to 1.25 million tonnes of Martha ore or 800,000 tonnes of Correnso ore per annum.</li> <li>• Martha Pit Ore Reserve metallurgical recovery of gold is estimated at 90.5% and silver recovery is estimated at 60% based on the process plant performance and reconciliations over the last 28 years of operation extracting similar veins.</li> <li>• Both gold (Au) and arsenic (As) have been identified as the statistically significant predictors for estimating residue grade for the Correnso resource. Gold recovery regression models were developed from laboratory bench scale test work for the Correnso resources, as shown below: <ul style="list-style-type: none"> <li>○ <i>Predicted Au residue grade = 0.03946 x Au head grade (g/t) + 0.00233 x As head grade (ppm) - 0.1792.</i></li> <li>○ <i>Gold Recovery Estimate = (Au head grade – (Predicted Au Residue grade))/Au head grade x 100.</i></li> </ul> </li> <li>• Arsenic modelling was not included in the mining plan and schedule and process recoveries for</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>Correnso ore are estimated from an estimate of arsenic / gold relationship. The recovery at 88tph throughput is estimated as:</p> <ul style="list-style-type: none"> <li>Recovery % = [Head grade – (0.09*Head grade + 0.25+0.02)] / Head grade * 100%.</li> </ul>
	<ul style="list-style-type: none"> <li><i>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Waihi Gold operation holds the necessary permits, consents, certificates, licences and agreements required to operate the Correnso underground mine and the Martha open pit.</li> <li>Environmental data has been collected over the last 27 years of Waihi operations and baseline data was collected prior to the start of operations and reported in the original mining license application. Data is routinely collected for noise levels, blast vibration, air quality, and discharge water quality from various sources, ground settlement and ground water levels. Data collected in relation to hydrogeology, open pit and tailings storage facility, geotechnical engineering, geochemistry, closure and rehabilitation is peer reviewed on an annual basis by independent reviewers engaged by the Regional Council, District Council and central Government</li> <li>Environmental studies conducted by independent consultants and company staff as part of the Correnso underground project are more extensive than would normally be required but was required to provide sufficient information to support a consent application for Waihi Correnso. Environmental assessment was carried out on a larger Waihi Correnso project which included potential additions from the Daybreak and Empire Grace deposits. The environmental effects based reports are all independently reviewed by consultants employed by the regulators (consent issuers) and are also subject to an extensive hearing process were the issues are thoroughly assessed by independent commissioners.</li> <li>Studies have included air quality, water quality and ecology, noise, blast vibration effects, traffic, potential for subsidence, ground settlement in response to dewatering, property values, dewatering, and geochemistry of tailings, waste and groundwater.</li> <li>The 27 year operational history since attainment of commercial production in 1988 has provided a good understanding of performance of the waste rock dumps and tailings storage facility.</li> <li>All waste produced from the underground mine is classified as potentially acid forming and is returned underground as stope backfill. The Correnso consent requires material to be classified according to acid forming potential, and PAF material requires lime dosing.</li> <li>Waste from the open pit is crushed and conveyed 2.0km from the open pit to the waste development load-out site where it is transported a further 1km to the Waste Development Area or stockpiled for future use. At the Waste Development Area, the waste is selectively placed in accordance with a quality control and geochemical control program to form a dam for the tailings</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>impoundment. All waste is compacted in accordance with strict design specifications</p> <ul style="list-style-type: none"> <li>Vibration modelling has been completed for Correnso by Heilig and Partners to ensure mining methods can meet the Consent conditions. Modelling of the likely scale of blasting has been based upon vibration relationships developed from the underground blasting at Waihi over the last six years. When mining the lower levels (more than 300m below surface), blasting can use simplified stope blasting procedures (i.e. single deck of column per blast hole). The upper sections of the mine (220m to 300m below surface) will be blasted with conventional stoping practices using several discrete columns of explosive within a single blast hole to control vibration levels. Above 220m below surface, blasting is limited to 3.5m long development rounds.</li> </ul>
Infrastructure	<ul style="list-style-type: none"> <li><i>The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Waihi Gold operation has been in commercial production since 1988 and all mine site infrastructure has been completed to support the open pit and underground operations including; tailings storage facility, workshops, water treatment plant and ore processing facilities.</li> </ul>
Costs	<ul style="list-style-type: none"> <li><i>The derivation of, or assumptions made, regarding projected capital costs in the study.</i></li> <li><i>The methodology used to estimate operating costs.</i></li> <li><i>Allowances made for the content of deleterious elements.</i></li> <li><i>The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.</i></li> <li><i>The source of exchange rates used in the study.</i></li> <li><i>Derivation of transportation charges.</i></li> <li><i>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</i></li> <li><i>The allowances made for royalties payable, both Government and private.</i></li> </ul>	<p><b>Martha Open Pit</b></p> <ul style="list-style-type: none"> <li>No capital expenditure is required for the Open Pit Ore Reserve. The North East Layback is included under operating expenditure. Additional expenditure may, however, be required to re-establish access for mining following the north wall failures in April 2015 and April 2016.</li> <li>A detailed cost model provides the basis for the estimate of open pit operating costs. The cost model was developed using first principles derived from contractor rates, supplier quotations and current cost data. The model develops cash flows based on: <ul style="list-style-type: none"> <li>mining schedules, processing stockpiles and mine feed to process plant,</li> <li>application of driver and non-driver costs to mining, processing and G&amp;A,</li> <li>application of capital costs, closure costs, exploration and employee severance costs, and</li> <li>calculation of cash flows including provision of royalties, working capital and depreciation and taxation.</li> </ul> </li> <li>Processing, concentrate treatment, freight, insurance and general and administrative costs have been developed using data sourced from recent operating activities.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>• No penalty elements have been recorded in concentrates produced to date that affects the full calculation of payable metal.</li> <li>• The detailed cost model is in New Zealand currency. The commodity assumptions used in the determination of Ore Reserves were US\$1,200 per ounce for gold and US\$18 per ounce for silver. An exchange rate of 0.7 has been used.</li> <li>• The Martha royalty applicable to the Martha open pit is governed by the Mining License. The royalty is one per cent on net sales revenue from gold and silver.</li> </ul> <p><b>Correnso Underground</b></p> <ul style="list-style-type: none"> <li>• Capital costs for the Waihi Correnso project comprise mainly capital mine development and installation of fixed underground equipment such as refuge chambers, ladder-ways, communication systems, pump stations and substations. Other capital costs include the Property and Community Investment Program, plant and administration sustaining capital.</li> <li>• Capital development as at June 30<sup>th</sup> 2015 was 95% complete and capital procurement was 95% complete. The underground operations have since passed into production. No major capital cost items are outstanding or required for the extraction of the Ore Reserve.</li> <li>• A detailed cost model provides the basis for the estimate of underground operating costs. The cost model was developed using first principles derived from supplier quotations and current cost data. The model develops cash flows based on: <ul style="list-style-type: none"> <li>○ mining schedules, processing stockpiles and mine feed to process plant,</li> <li>○ application of driver and non-driver costs to mining, processing and G&amp;A,</li> <li>○ application of capital costs, closure costs, exploration and employee severance costs, and</li> <li>○ calculation of cash flows including provision of royalties, working capital and depreciation and taxation</li> </ul> </li> <li>• Processing, concentrate treatment, freight, insurance and general and administrative costs have been sourced from recent operating activities.</li> <li>• No penalty elements have been recorded in concentrates produced to date that affect the calculation of payable metal.</li> <li>• The detailed cost model is in New Zealand currency. The commodity assumptions used in the determination of Ore Reserves were US\$1,200 per ounce for gold and US\$18 per ounce for</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>silver. An exchange rate of 0.7 has been used.</p> <ul style="list-style-type: none"> <li>• :</li> <li>• Correnso falls within the Favona Mining Permit 41 808 (MP 41 808) area which is governed by the 1996 Minerals Program for Crown royalty purposes. The Favona Mining Permit provides for the higher of one per cent royalty on net sales revenue from gold and silver, or five per cent royalty on accounting profits.</li> </ul>
Revenue factors	<ul style="list-style-type: none"> <li>• <i>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</i></li> <li>• <i>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Detailed mine designs were undertaken for both the open pit and underground operations. Diluted and recovered grades were calculated for all material being mined, which were in turn assessed against the relevant cut-off grades for determination of inclusion within the Ore Reserve estimate. Head grades for material sent to the process plant directly correspond to mined grades calculated.</li> <li>• Silver credits are not included in the revenue factors but as a by-product cost offset.</li> <li>• All costs at the Waihi operation are based in New Zealand Dollars. Costs have been converted using the following exchange rates, which are long-term OceanaGold benchmark rates: <ul style="list-style-type: none"> <li>○ USD 0.70 : NZD 1.00</li> </ul> </li> <li>• Charges for transportation, treatment and refining charges are based on operational history and in part based on existing contracts that are periodically reviewed and renewed.</li> <li>• Metal prices used for in economic evaluation were US\$1,200 per ounce for gold and US\$18 per ounce for silver, fixed for the life of the mine.</li> </ul>
Market assessment	<ul style="list-style-type: none"> <li>• <i>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</i></li> <li>• <i>A customer and competitor analysis along with the identification of likely market windows for the product.</i></li> <li>• <i>Price and volume forecasts and the basis for these forecasts.</i></li> <li>• <i>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Long-term market assessments are provided by a number of independent companies. There are no hedge contracts in respect of production from the Waihi Gold operation.</li> <li>• The market for gold doré is well-established.</li> </ul>

Criteria	JORC Code explanation	Commentary
Economic	<ul style="list-style-type: none"> <li><i>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</i></li> <li><i>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</i></li> </ul>	<ul style="list-style-type: none"> <li>Open pit mining costs, underground mining costs, processing costs and general and administrative costs at Waihi Gold are well understood, with 28 years of continuous operation.</li> <li>Net present cash flow evaluation at a discount rate of 7% was applied to the economic analysis for Correnso underground which showed a positive net cash flow.</li> <li>Sensitivity studies were carried out on various parameters including mining cost, processing cost, metal prices and discount rate. This data suggests that the NPV is robust.</li> </ul>
Social	<ul style="list-style-type: none"> <li><i>The status of agreements with key stakeholders and matters leading to social licence to operate.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Correnso underground project has an established grouping of stakeholders and project affected people whom have been engaged via the various stakeholder engagement structures such as Iwi, Resident Groups, Community based organizations and local government.</li> <li>Prescribed Peer Review meetings held between Waihi Gold, Hauraki District Council, Waikato Regional Council and the Ministry of Business and Innovation.</li> <li>The operation has already established complaints and grievance systems / procedures for the ongoing management of all project grievances. This procedure will be a key process by which any associated complaints and grievances that arise from the operations will be addressed.</li> <li>The Correnso consent is prescriptive in terms of stakeholder engagement with the Community: <ul style="list-style-type: none"> <li>Following the first exercise of this consent, the consent holder shall hold a consultation meeting open to the public. The meeting shall be called quarterly during the first year of mining activities provided for under this consent, and six-monthly thereafter. The meeting shall be chaired by an independent chairman.</li> <li>Upon the first exercise of this consent, and at six-monthly intervals thereafter, the consent holder shall invite representatives of those tangata whenua who have a particular interest in the Waihi area, of the Hauraki District Council and of the Waikato Regional Council to attend a meeting.</li> <li>At least 1 month prior to exercising this consent, the consent holder shall appoint a person (the "Liaison Officer"), and any replacement person subject to the approval of the Hauraki District Council and the Waikato Regional Council (the "Councils"), to liaise between the consent holder, the community and the Councils.</li> <li>The Liaison Officer shall also be active in informing the Waihi community regarding any new proposed underground mining beyond the Correnso, Grace/Empire and Daybreak orebodies.</li> </ul> </li> <li>In addition to stakeholder engagement, the consent requires Waihi Gold to maintain a Property</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>Policy to support property values in the area. This requires the Company to provide funds to purchase properties above stopes and pay ex-gratia payments to property owners above mine development as well as maintaining a property purchase fund and funding for community projects. The consent caps the funding available for the property purchase fund.</p>
Other	<ul style="list-style-type: none"> <li>• <i>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</i></li> <li>• <i>Any identified material naturally occurring risks.</i></li> <li>• <i>The status of material legal agreements and marketing arrangements.</i></li> <li>• <i>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Waihi operation is in a high rainfall area, and heavy rain events are not unexpected. Procedures and costing are in place to deal with such events for the open pit operation, and will not impact on the viability of extracting the Ore Reserve.</li> <li>• Provision has been made in the underground study to account for anticipated water inflow, based on a hydrogeology study undertaken by GWS Consulting Ltd.</li> <li>• The Waihi operation holds the permits, consents, certificates, licences and agreements required to conduct its current operations, and to construct and operate the proposed Correnso Extensions underground mine.</li> <li>• New Zealand has an established framework that is well regulated and monitored by a range of regulatory bodies. Waihi Gold has dedicated programs and personnel involved in monitoring consent compliance and works closely with authorities to promptly address additional requests for information. Risks associated with review and renewal of operating consents is, upon that basis, regarded as manageable within the ordinary course of business.</li> <li>• Contracts are in place covering underground mining, transportation and refining of bullion, and the purchase and delivery of fuel, electricity supply, explosives and other commodities. These agreements conform to industry norms.</li> <li>• Waihi Gold maintains a number of operating permits for the importation of reagents into New Zealand. New Zealand has an established framework that is well regulated and monitored by a range of regulatory bodies. Risk associated with renewal of importation permits, is upon that basis regarded as manageable.</li> <li>• There is no material, unresolved matters dependent upon a third party on which extraction of the Ore Reserve is contingent.</li> </ul>
Classification	<ul style="list-style-type: none"> <li>• <i>The basis for the classification of the Ore Reserves into varying confidence categories.</i></li> <li>• <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> <li>• <i>The proportion of Probable Ore Reserves that have been derived from Measured</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Proved Ore Reserve is a sub-set of Measured Mineral Resources, and the Probable Ore Reserve is derived from Indicated Mineral Resources. Inferred Mineral Resource material has been included as dilution only, with no Inferred Resource metal included in the Ore Reserve estimate.</li> <li>• No Probable Ore Reserves have been derived from Measured Mineral Resources.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>Mineral Resources (if any).</i></p>	<ul style="list-style-type: none"> <li>It is the opinion of the Competent Person for Ore Reserve estimation that the Mineral Resource classification adequately represents the degree of confidence in the orebody.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of Ore Reserve estimates.</i></li> </ul>	<p>In 2016, OceanaGold conducted an internal technical review for the Waihi operation. The guiding principles for the review included quality of data, supporting information, methodologies employed, conformance to acceptance industry practice and professional standards, and site coverage and capability. The review concluded:</p> <ul style="list-style-type: none"> <li>Historically the reserve models at Waihi have reconciled well against production, providing confidence in the LOMP reserve estimates and the ability to deliver them.</li> <li>The reconciliation process is well understood and well documented. Stopes are routinely closed out, with an analysis of mining performance, dilution and ore-loss.</li> <li>The underground mine geology team is stable, and is appropriately resourced for the level of geological complexity and production rate.</li> <li>The existing open pit reserve in the Stage 4 Martha pit has been compromised as a result of the north wall failure. A study however is in progress to review the economics of mining this stage, given that the base case is to commit to north wall rehabilitation. In the meantime, it is reasonable to continue to report this as resource.</li> <li>The mineralisation of the Martha system below the existing open pit provides the largest potential for mineable resource available at Waihi.</li> </ul>
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> <li><i>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 reserve within stated confidence limits, or, if such an approach is not deemed</i></li> </ul>	<ul style="list-style-type: none"> <li>Reconciliation of actual production to the Mineral Resource model since the commencement of operations indicates that the estimate is representative of the deposit (see resource model versus mine versus mill reconciliation in "discussion of relative accuracy/ confidence" in Section 3).</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</i></p> <ul style="list-style-type: none"> <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>• Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</i></li> <li><i>• It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	

**Section 5 Estimation and Reporting of Diamonds and Other Gemstones**

(Criteria listed in other relevant sections also apply to this section. Additional guidelines are available in the ‘Guidelines for the Reporting of Diamond Exploration Results’ issued by the Diamond Exploration Best Practices Committee established by the Canadian Institute of Mining, Metallurgy and Petroleum.)

**[Section 5 is not applicable to the Martha Open Pit Operations or the Correnso Underground Mine].**

## **Material Information Summary**

A Material Information Summary pursuant to ASX Listing Rules 5.8 and 5.9 is provided below for the Macraes Gold Project (MGP) resource and reserve estimates. The Assessment and Reporting Criteria in accordance with JORC Code 2012 is presented in Appendix 1.

### **1.0 Macraes Gold Project**

The Macraes Gold Project is located 91 km northwest of Dunedin, in the Otago Region of the South Island, New Zealand. The Macraes Gold Project occurs 1-2km to the east of the Macraes flat township and is predominately surrounded by farmland. Modern open pit mining commenced in 1990 and underground mining commenced in 2006. With the exception of Coronation North, OceanaGold (OGL) holds the necessary permits, consents, certificates, licenses, and agreements required to operate the open cuts and underground mine that form MGP. OGL is currently in the process of obtaining the necessary permits, consents to mine at Coronation North.

#### **1.1 Geology and Geological Interpretation**

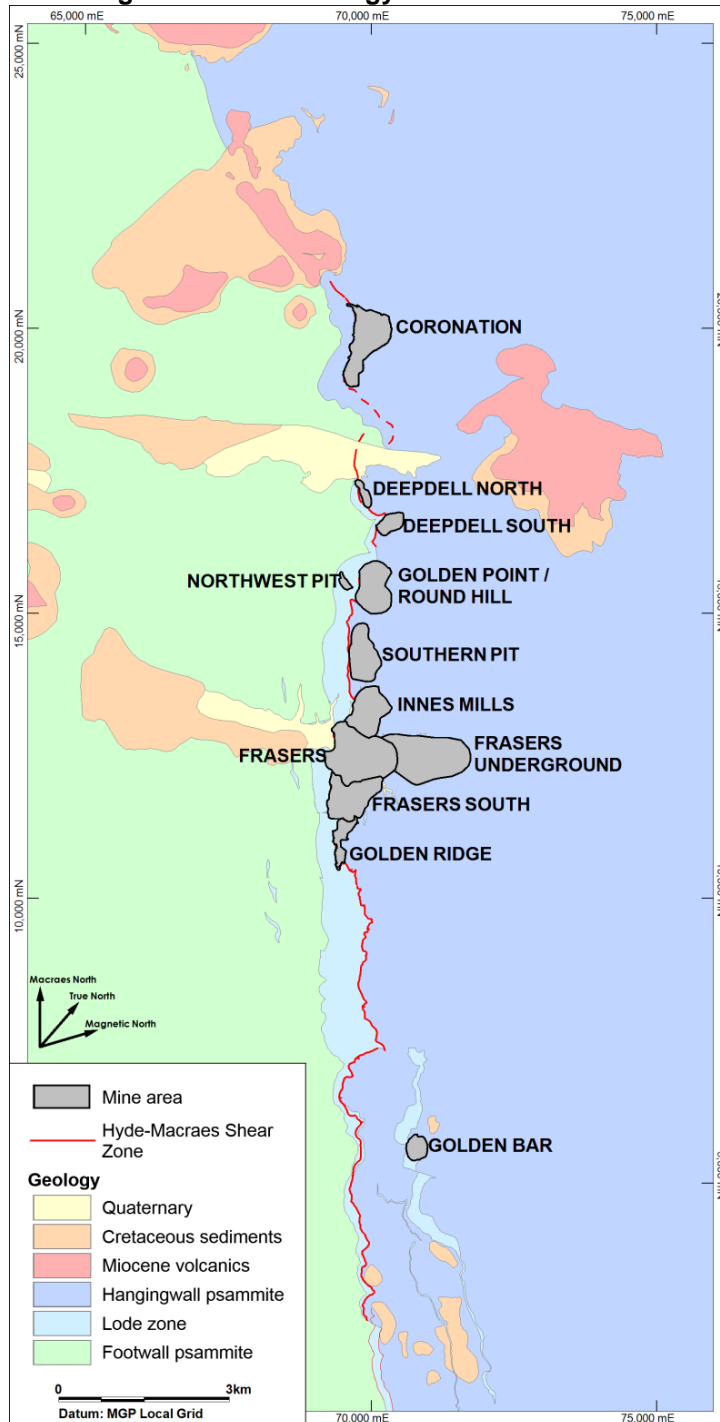
The Macraes orogenic gold deposits, consisting of a series of 12 open pits and 1 underground mine, are located within a low-angle (~15-20°) late metamorphic (Jurassic) shear zone called the Hyde Macraes Shear Zone (HMSZ), which has been traced for at least 30km along strike as shown on Figure 1. The HMSZ consists of variably altered, deformed, and mineralized schist up to 150m thick, known as the Intrashear Schist. The thickest part of the shear zone consists of several stacked mineralized zones. These shears have ductile deformation textures overprinted by cataclasis. The Hangingwall shear can be up to 25m thick and is commonly darker coloured due to fine grained graphite and sheared sulphide minerals.

The following four types of mineralization occur within the HMSZ at Macraes.

- Mineralized schist. This style of mineralization involved hydrothermal replacement of schist minerals with sulphides and microcrystalline quartz. Mineralization was accompanied by only minor deformation.
- Black sheared schist. This type of schist is pervaded by cm to mm scale anastomosing fine graphite and sulphide bearing micro shears. This type of mineralization is typically proximal to the Hangingwall Shear. Scheelite mineralization occurs in the silicified cataclastic shears.
- Shear-parallel quartz veins. These veins lie within and/or adjacent to the black sheared schist, and have generally been deformed with the associated shears. The veins locally cross-cut the foliation in the host schist at low to moderate angles. Veins are mainly massive quartz, with some internal lamination and localized brecciation. Sulphide minerals are scattered through the quartz, aligned along laminae and stylolitic seams. These veins range from 1cm to > 2m. Scheelite mineralization is associated with quartz veining in some areas.
- Stockwork. These veins occur in localized swarms that are confined to the Intrashear Schist. Individual swarms range from c. 100 to 2,000m<sup>2</sup> in area and consist of numerous

(10 – 100) subparallel veins. Most of these veins formed sub-perpendicular to the shallow east dipping shear fabric of the Intrashear Schist. Stockwork veins are typically traceable for 1-5m vertically with most filling fractures that are 5 – 10cm thick, but can be up to 1m thick. Swarms of stockwork veins within the Intrashear Schist were lithologically controlled by the dimensions and locations of more competent pods of Intrashear Schist.

**Figure 1: MGP Geology Plan & Pit Location**



## **1.2 Drilling, Sampling and Sub-Sampling**

Resources at the MGP are defined using a combination of predominately reverse circulation (RC) drilling and diamond drilling.

RC samples were collected as bulk samples in 1 metre intervals and riffle split into uniquely numbered sample bags to produce a 2 to 4kg sub-sample. Geological logging and sampling was completed at the drill site. At conclusion of the drill hole the samples are taken directly to the onsite laboratory operated by SGS (NZ) Ltd.

Diamond core is geologically logged, photographed and sawn in half with a diamond saw. In general samples are 1m in length unless dictated to by significant geological or mineralisation contacts in the core. The half cut core samples are then delivered to the onsite lab operated by SGS (NZ) Ltd.

The quantity and quality of the lithological, geotechnical, geochemical, collar and down hole survey data collected in the exploration, delineation, underground, and grade control drill programs are considered sufficient to support the Mineral Resource and Ore Reserve estimation.

## **1.3 Sample Analysis methods**

At MGP, OGL operates an assay laboratory under contract to SGS (NZ) Ltd. QAQC procedures involve the use of certified reference material (CRM), lab duplicates, and lab standards. Sample batches are re-assayed if 1 of the OGL CRM's is outside defined limits.

RC Samples are dried and crushed to 100% passing 5mm. A 500gram sub-sample is split and the entire sub-sample pulverised to 90% passing 75 microns. A 50gram aliquot is split for fire assay using SGS's FAA505 scheme which has a detection limit of 0.01 g/t Au. Diamond core is dried and crushed to 100% passing 5mm. A 500gram sub-sample is split and the entire sub-sample pulverised to 90% passing 75 microns. A 50gram aliquot is split for fire assayed using SGS's FAA505 scheme which has a detection limit of 0.01 g/t Au

## **1.4 Estimation Methodology**

Grade estimation, except for the Ounce and Stoneburn resource estimates, is by large panel (25mE x 25mN x 2.5mRL) recoverable resource estimates using multiple indicator kriging (MIK) using FSSI proprietary GS3 software. Grades are estimated into 25m x 25m x 2.5m panels which are half the nominal drill hole spacing and a mining selectivity of 5mE x 5mN by 2.5mRL is assumed. The Ounce and Stoneburn resource estimate were estimated using polygonal methods.

Wire-framed shear structures are largely defined on the basis of sectional and plan interpretations of gold grade, geology and geological interpretations from previously mined resources. The wire-framed structures are generally a minimum of 2m  $\geq$  0.4g/t with 1m of external dilution. Internal



dilution is generally a maximum of 2m to 3m  $\leq$  0.4g/t. Wire-frames are extended to a maximum of 25m past the end of any drilling. Unconstrained domains are defined by exclusion.

Grade correlation was determined by variogram analysis for each of the 14 MIK class bins for each domain. Grades are not top cut, however, the grade of the last bin used in the MIK interpolation is the average of the bin average and bin median for the domain.

This resource estimation methodology has been successfully used at MGP since 2001 and is considered appropriate for the style of mineralisation.

### **1.5 Resource Classification**

The resource estimate is classified primarily on the basis of drilling density. Wire-framed mineralised structures are classified as measured for resources based on 25m x 25m drill spacing, as Indicated for resources based on 50m x 50m drill spacing and at drill spacing's greater than 50m x 50m are classified as Inferred.

The unconstrained stockwork mineralisation at 25m x 25m drill spacing is classified as Indicated and at drill spacing's greater than this Inferred.

The above classification protocol used at MGP since 1995 is considered by the Competent Person to be appropriate for the deposit.

### **1.6 Cut-off Grade**

Mineral Resources are reported using a cut-off grade of 0.4g/t Au and the underground at 0.5g/t cut-off to achieve a head grade of 2.0g/t or better.

### **1.7 Mining and Metallurgical methods, parameters and other modifying factors.**

Inputs to the calculation of the reserve cut-off grades for the MGP open pit and underground mine include mining costs, metallurgical recoveries, treatment and refining costs, general and administration costs, royalties, and commodity prices.

At the MGP mining is by a combination of conventional open pit and underground retreat uphole open stoping methods.

OGL owns and operates both the open pit and underground mining fleets and mining costs are therefore well understood.

Recovery of gold at the MGP is achieved through crushing, grinding, sulphide floatation, pressure oxidation (POX) and a standard carbon-in-leach (CIL).

The plant has an established skilled workforce and management team in place. Recent cost estimates and processing recoveries support the reporting of the stated Ore Reserves.



OGL has a two granted Mining Permits with terms sufficient to extract known reserves and owns all the land necessary for open pit and underground mining to proceed. With the exception of Coronation North, OceanaGold (OGL) holds the necessary permits, consents, certificates, licenses, and agreements required to operate the open cuts and underground mine that form MGP. OGL is currently in the process of obtaining the necessary permits, consents to mine at Coronation North.

### **Competent Persons**

Information relating to Exploration Results and Mineral Resources in this document was prepared by or under the supervision of Mr Sean Doyle, information relating to Open Pit Ore Reserves and Underground Ore Reserves was prepared by or under the supervision of Mr Knowell Madambi. Messrs Doyle and Madambi are members and Chartered Professionals of the Australasian Institute of Mining and Metallurgy. Mr Doyle is the Senior Resource Geologist at MGP and is a full-time employee of Oceana Gold (New Zealand) Limited. Mr Madambi is the Technical Services Manager at MGP and is also a full-time employee of Oceana Gold (New Zealand) Limited. Messrs Doyle and Madambi have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Messrs Doyle and Madambi consent to the inclusion in the report of the matters based on the information in the form and context in which it appears.

For further scientific and technical information relating to the Macraes Gold Project, please refer to the NI 43-101 technical report available on SEDAR.

### **SUMMARY OF TABLE 1 - 2012 JORC: Macraes Gold Project**

The Macraes Gold Project is located 91 km northwest of Dunedin, in the Otago Region of the South Island, New Zealand. The Macraes Gold occurs 1-2km to the east of the Macraes flat township and is predominately surrounded by farmland. Modern open pit mining commenced in 1990 and underground mining commenced in 2006. With the exception of Coronation North, OceanaGold (OGL) holds the necessary permits, consents, certificates, licenses, and agreements required to operate the open cuts and underground mine that form MGP. OGL is currently in the process of obtaining the necessary permits, consents to mine at Coronation North.

### **Resources**

The combined MGP resource estimates inclusive of stockpiles, as at 31 December 2016, are presented in Table 1-1, Table 1-2, and Table 1-3 and are classified in accordance with CIM and JORC 2012.

The resource estimate is sub-divided for reporting purposes: an open-cut resource that excludes material within the limits of the Frasers underground mine; and underground resources within the Frasers Underground. The resources are depleted for mining as at 31 December, 2016.

**Table 1-1: Open Cut Resource Estimate**

Class	Tonnes (Mt)	Au(g/t)	Au(Moz)
Measured	17.5	1.11	0.62
Indicated	65.1	0.96	2.00
<b>Measured &amp; Indicated</b>	<b>82.5</b>	<b>0.99</b>	<b>2.62</b>
Inferred	38.6	0.9	1.1

**Table 1-2: Underground Resource Estimate**

Class	Tonnes (Mt)	Au(g/t)	Au(Moz)
Measured	3.88	3.11	0.39
Indicated	7.34	2.06	0.49
<b>Measured &amp; Indicated</b>	<b>11.2</b>	<b>2.42</b>	<b>0.87</b>
Inferred	3.5	1.4	0.2

**Table 1-3: Combined Resource Estimate**

Class	Tonnes (Mt)	Au(g/t)	Au(Moz)
Measured	21.4	1.47	1.01
Indicated	72.4	1.07	2.48
<b>Measured &amp; Indicated</b>	<b>93.8</b>	<b>1.16</b>	<b>3.50</b>
Inferred	42.1	0.9	1.2

Notes to Accompany Mineral Resource Table:

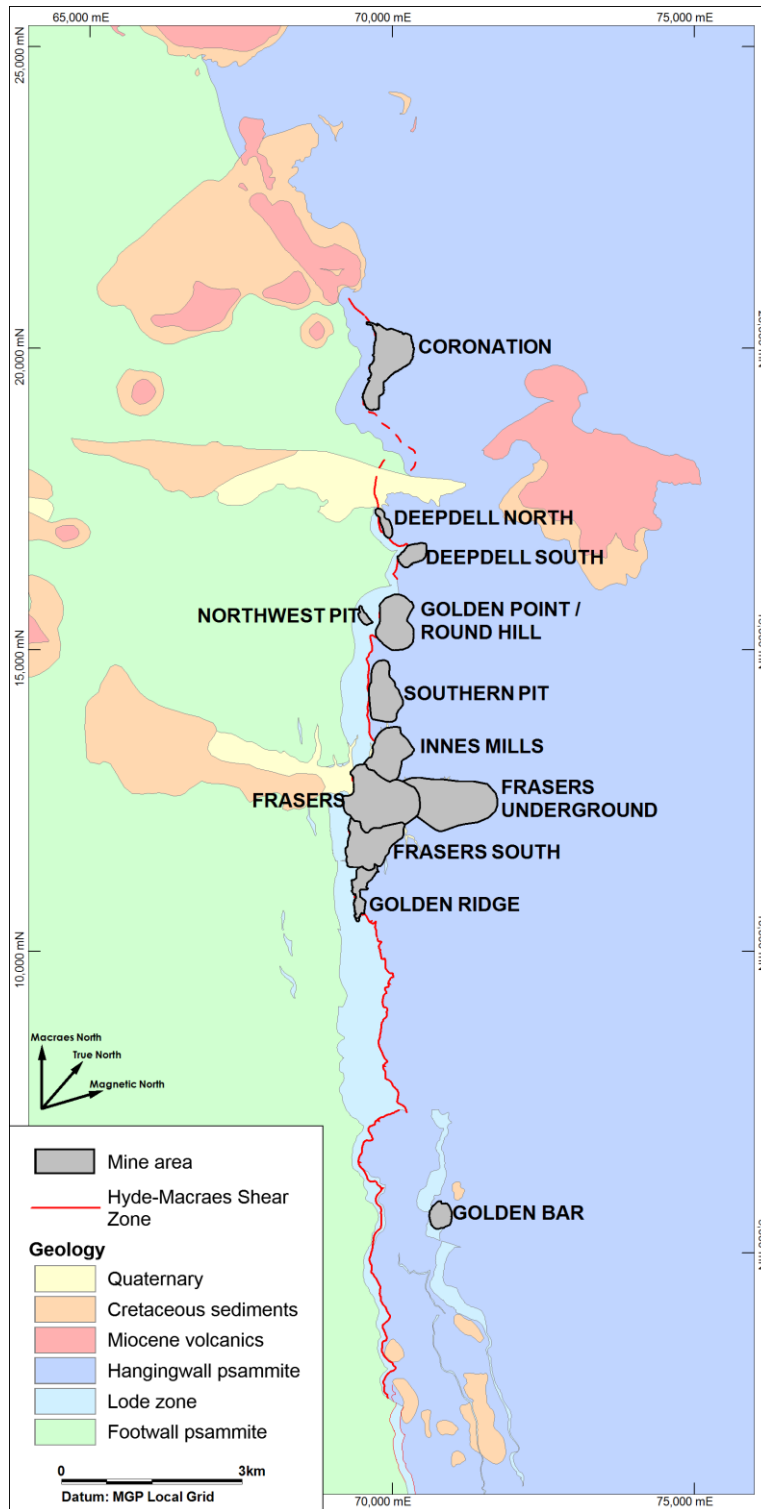
7. Mineral Resources are inclusive of Ore reserves and stockpiles;
8. Mineral Resources are reported on a 100% basis;
9. Open pit Mineral Resources, are reported within an Inferred-on gold price of NZD\$2,200/oz. Underground Resources are geologically constrained.
10. Ounces are estimates of metal contained in the Mineral Resource and do not include allowances for processing losses or mining dilution.

The Project comprises several areas of mineralization, which are at different stages of mining development. The Frasers/Innes Mills (FRIM) is in the final stage of production. Coronation is in full production and Coronation North is in development awaiting final mining consents/permits. Frasers Underground is in full production.

The Macraes orogenic gold deposits are located within a low-angle (~15-20°) late metamorphic (Jurassic) shear zone called the Hyde Macraes Shear Zone (HMSZ), which has been traced for at least 30km along strike as shown on Figure 1. The HMSZ consists of variably altered, deformed, and mineralized schist up to 150m thick, known as the Intrashear Schist. The thickest part of the shear zone consists of several stacked mineralized zones. These shears have ductile deformation textures overprinted by cataclasis. The Hangingwall shear can be up to 25m thick and is commonly

darker coloured due to fine grained graphite and sheared sulphide, primarily pyrite and arsenopyrite.

Figure 1: MGP Geology Plan



Approximately 6,825 drillholes for 875,000m has been drilled at MGP since 1980 of which approximately 90% are RC. the main ore minerals are pyrite and arsenopyrite sulphides with ubiquitous gangue consisting of quartz, sheared schist and trace graphite.

Gold grades are estimated using multiple indicator kriging into large panels. Dry bulk densities of 2.50 t/m<sup>3</sup> are assigned to oxide and 2.65 t/m<sup>3</sup> to fresh rock for the conversion of volumes to tonnage. These are based on 732 density determinations.

The quantity and quality of the lithological, geotechnical, collar and down hole survey data collected in the exploration, delineation, underground, and grade control drill programs are sufficient to support the Mineral Resource and Ore Reserve estimation.

To classify the Mineral Resource, appropriate account was taken of geology, drill hole spacing, search criteria, reliability of input data, and the Competent Person's confidence in the continuity of geology and metal values.

## Reserves

The Ore Reserve estimate for MGP as at 31 December 2016 is shown in Table 1-4:

**Table 1-4: MGP Reserve Estimate**

Source	Reserve Class	Tonnes (Mt)	Au (g/t)	Contained Au (Moz)
Open Pit	Proved	12.2	1.08	0.42
	Probable	18.1	1.12	0.65
Underground	Proved	0.54	2.70	0.05
	Probable	1.31	2.30	0.10
Total Proved		12.7	1.15	0.47
Total Probable		1.85	2.42	0.75
<b>Total</b>		32.1	1.18	1.22

### Notes to Accompany Mineral Reserve Table:

7. Ore reserves are inclusive of stockpiles and are reported within current mine designs which are based on current economic assumptions;
8. Ore reserves are reported to a gold price of NZD\$1,857/oz;
9. Tonnages include allowances for losses and dilution resulting from mining methods;
10. Ounces are estimates of metal contained in the Ore reserves and do not include allowances for processing losses.

The change in Ore reserves reported at December 31, 2016 compared with those previously reported at December 31, 2015 is reported in Table 1-5.

**Table 1-5: December 2015 Reserve Estimates vs. Dec 2016 Reserve Estimates**

Reserve Area	Tonnes (Mt)	Au (g/t)	Contained Au (Moz)
<b>December 31, 2015 Reserve</b>			
Open Pit	25.74	1.30	0.95
Underground	1.77	2.56	0.15
Stockpile	5.73	0.65	0.12
<b>Total (Dec 31, 2015)</b>	<b>33.2</b>	<b>1.14</b>	<b>1.22</b>
<b>Changes to Reserve, Dec 15 vs. Dec 16</b>			
Open Pit	-0.30	4.13	0.04
Underground	0.08	3.89	-0.01
Stockpile	-0.97	0.96	-0.03
<b>Total (Dec 31, 2015)</b>	<b>-1.12</b>	<b>-</b>	<b>0.00</b>
<b>December 31 2016 Reserve</b>			
Open Pit	25.5	1.20	0.99
Underground	1.85	2.42	0.14
Stockpile	4.76	0.56	0.09
<b>Total (Dec, 2016)</b>	<b>32.1</b>	<b>1.18</b>	<b>1.22</b>

Changes between the December 30, 2015 Reserve and the December 31, 2016 Reserve estimate primarily reflect the depletion of ore from the open pits and underground mine as well as additions to Coronation and Coronation North.

Inputs to the calculation of the reserve cut-off grades for MGP open pit and underground mine include mining costs, metallurgical recoveries, treatment and refining costs, general and administration costs, royalties, and commodity prices. At MGP mining of the reserves is by a combination of conventional open pit and underground retreat uphole open stoping methods. Stope dilution has been estimated based on expected geotechnical conditions, stope spans and 10 years of operational experience. Recovery of ore requires the use of remote loaders, and allowances have been made for loss of Ore Reserves and for dilution from roof caving. OGL owns and operates both the open pit and underground mining fleets and mining costs are therefore well understood.

Recovery of gold at MGP is achieved through crushing, grinding, sulphide floatation, pressure oxidation (POX) and a standard carbon-in-leach (CIL). The plant has an established skilled workforce and management team in place. Recent cost estimates and processing recoveries support the reporting of the stated Ore Reserves.



OGL has two granted Mining Permits with terms sufficient to extract known reserves and owns all the land necessary for open pit and underground mining to proceed. With the exception of Coronation North, OceanaGold (OGL) holds the necessary permits, consents, certificates, licenses, and agreements required to operate the open cuts and underground mine that form MGP. OGL is currently in the process of obtaining the necessary permits, consents to mine at Coronation North.

### **Competent Persons**

Information relating to Exploration Results and Mineral Resources in this document was prepared by or under the supervision of Mr Sean Doyle, information relating to Open Pit Ore Reserves and Underground Ore Reserves was prepared by or under the supervision of Mr Knowell Madambi. Messrs Doyle and Madambi are members and Chartered Professionals of the Australasian Institute of Mining and Metallurgy. Mr Doyle is the Senior Resource Geologist at MGP and is a full-time employee of Oceana Gold (New Zealand) Limited. Mr Madambi is the Technical Services Manager at MGP and is also a full-time employee of Oceana Gold (New Zealand) Limited. Messrs Doyle and Madambi have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Messrs Doyle and Madambi consent to the inclusion in the report of the matters based on the information in the form and context in which it appears.

**JORC Code, 2012 Edition – Table 1 Report of Exploration Results for Macraes Operations  
Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> </ul>	<ul style="list-style-type: none"> <li>Reverse Circulation (RC) drill hole samples comprise 95% of the drilling at Macraes. The remaining 5% are from sampled diamond core.</li> <li>The RC sampling, logging and assay protocol has been in place since 1994.</li> <li>Reverse circulation drill holes are sampled on 1 metre intervals from which 2 to 4kg sub-samples are riffle split.</li> <li>The 2 to 4kg was pulverised to produce a 50g charge and assayed for Au by fire assay at the SGS (NZ) Ltd Macraes site laboratory.</li> <li>A certified reference sample (CRM) is inserted every 20<sup>th</sup> sample</li> <li>Representative RC drill chips for each 1 metre are collected and placed in plastic chip trays which are stored onsite at the Macraes Gold Project (MGP) for future reference.</li> <li>Assay pulps are recovered from SGS (NZ) and stored onsite at MGP for future reference.</li> <li>Diamond drill core is photographed, logged, sawn to half core and sampled by OceanaGold personnel at the onsite core shed.</li> <li>Sample lengths are generally 1 metre lengths, or less, as dictated by lithological contacts.</li> <li>Fire assay for Au is undertaken at SGS (NZ) Ltd MGP site laboratory.</li> <li>A certified reference sample (CRM) is inserted every 20<sup>th</sup> sample.</li> <li>The remaining half cut core and assay pulps are stored onsite at MGP for future reference.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li><i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>The RC drill holes were obtained by using a reverse circulation drill rig with a 135mm face sampling hammer.</li> <li>The diamond drill core was obtained using triple tube HQ diameter drilling.</li> </ul>



Criteria	JORC Code explanation	Commentary
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The reverse circulation drilling was sampled in 1 metre intervals. Sample recovery was estimated from visual inspection of sample bags with a target of &gt; 90% recovery. For the drill holes reported sample recovery was considered acceptable. It is OceanaGold's procedure that if a reverse circulation drill hole goes wet, drilling is stopped and completed with a diamond tail. Reverse circulation drill hole sampling at MGP under wet conditions is prone to sampling grade bias.</li> <li>• For diamond drilling recovery is recorded for every run and in general core recovery is in excess of 95%. Triple tube drilling was used to maximize core recovery through the Au mineralised zones.</li> <li>• Analysis of grade versus core recovery does not show any relationship to be present.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• RC drilling is logged every 1 metre using Macraes Gold Project logging codes that have been in place since 1994.</li> <li>• Diamond core was geologically logged and photographed following OceanaGold's standard operating procedure for core logging. The geological logging process documents lithological and structural information as well as basic geotechnical information on RQD and major defects. Core logging generally identifies the upper surface of the mineralised shear; RC chip logging is not definitive about the position of this contact. Consequently geological interpretation uses a combination of logged geology and gold grade data.</li> <li>• Drill holes were generally logged and sampled from 20m above the Hangingwall contact. If position of Hangingwall contact uncertain holes were logged and sampled in their entirety.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for</i></li> </ul>	<ul style="list-style-type: none"> <li>• RC 1 metre samples are collected into a cyclone and then split through a riffle splitter. Close attention is paid to ensure each interval sampled is 1 metre. Drilling advance is paused at the end of each 1 metre, to allow the entire sample to clear the splitter prior to resuming drilling. The cyclone and splitter are kept clean.</li> <li>• Half core was cut along the inferred long axis of the mineralised ellipse to achieve a representative sample.</li> <li>• Sub-sampling size is considered appropriate and the method representative for the style and thickness of mineralisation. This is borne out by 26 years of mining at Macraes.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>instance results for field duplicate/second-half sampling.</i></p> <ul style="list-style-type: none"> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Where sufficient core is available, generally &gt;15kgs and preferably &gt;30kgs of quarter cut core, metallurgical samples are selected. Due to the volume requirement this means a metallurgical sample may consist of material from multiple holes.</li> <li>• Metallurgical sampling aims to be as geologically and spatially representative as possible.</li> <li>• RC chips cannot be used at MGP for metallurgical sampling due to contamination with hammer oil which negatively impacts sulphide float test work.</li> </ul>
<p><i>Quality of assay data and laboratory tests</i></p>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometres, handheld XRF instruments, etc, the parametres used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>• <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>• At MGP, SGS (NZ) Ltd operates an assay laboratory under contract to OceanaGold (NZ) Ltd.</li> <li>• QAQC procedures involve the use of certified reference material, lab duplicates, and lab standards. Sample batches are re-assayed if 1 of the OceanaGold CRM's is outside defined limits.</li> </ul> <p><u>Sample preparation RC</u></p> <ol style="list-style-type: none"> <li>1. Samples checked off against submission sheet.</li> <li>2. Samples are then dried at 150 degrees until visibly dry.</li> <li>3. Entire sample is crushed. Crush size is under 5mm and approximately 500g is retained for pulverising.</li> <li>4. The 500 gram sample is pulverised to 90% passing 75 micron.</li> </ol> <p><u>Sample preparation diamond</u></p> <ol style="list-style-type: none"> <li>1. Samples checked off against submission sheet.</li> <li>2. Samples are then dried at 150 degrees until visibly dry.</li> <li>3. Entire core pre-crushed using a crusher. Nominal top size is 30mm (in one dimension only).</li> <li>3. Entire sample is crushed. Crush size is under 5mm and approximately 500g is retained for pulverising.</li> <li>4. The 500 gram sample is pulverised to 90% passing 75 micron.</li> </ol> <p><u>Assay</u></p> <p>50g fires assays were completed using SGS's FAA505 scheme.</p> <ol style="list-style-type: none"> <li>1. 50 gram of sample is weighed with 170 gram of lead flux and tumble mixed in a plastic pot.</li> </ol>

Criteria	JORC Code explanation	Commentary
		<p>2. contents are transferred to a crucible and fusion of the gold in the sample with the lead in the flux occurs in a LPG fired blast furnace at 1,100 degrees C</p> <p>4. cupellation of the lead button to recover the gold prill then occurs in an LPG fired muffle furnace set at 950 degrees C</p> <p>5. the prills are recovered from the cupels, digested in plastic test tubes with aqua regia. Gold determinations by atomic absorption.</p> <p>Q/QC is checked and results released.</p>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Geological logging is compiled digitally using Tough Books at the drill site or the core shed.</li> <li>• At hole completion the digital log is loaded into the MGP acQuire exploration database and validated.</li> <li>• Geological observation of mineralisation is generally well correlated with assay results.</li> <li>• No adjustments are made to the assay data received from SGS (NZ) Ltd.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All drill hole collars are surveyed by OceanaGold mine surveyors using MGP grid to an accuracy of +/- 0.10 metre</li> <li>• All drill holes are down hole surveyed every 30m using a digital down hole camera.</li> <li>• Topographic control is by detailed aerial surveys of mine and prospect areas to 0.5m accuracy.</li> </ul>
Data spacing and distribution	<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>	<ul style="list-style-type: none"> <li>• Drill hole spacing at the exploration stage is initially at 100m by 100m spacing. If drill holes intersect significant mineralisation the drill hole spacing is progressively reduced to limited infill to 25 x 25 metres. RC drill holes are sampled in 1 metre intervals. Diamond drill holes are generally sampled in 1 metre intervals unless hole geology dictates otherwise.</li> <li>• Average spacing of pierce points for FRUG is 50 by 50 metre grid spacing.</li> </ul>
Orientation of data in relation to	<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> </ul>	<ul style="list-style-type: none"> <li>• Surface drill holes are generally vertical to intersect a generally 15 to 25 degree dipping gold mineralised structure.</li> <li>• Whilst this direction is sub-optimal for steeply dipping quartz vein</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>geological structure</i>	<ul style="list-style-type: none"> <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>	<p>arrays, near-vertical reverse circulation and diamond drilling has been used as the basis for resource definition MGP since 1985.</p> <ul style="list-style-type: none"> <li>At FRUG drill holes are typically drilled from exploration drives or rises, positioned 25 metres to 100 metres above the Hangingwall Shear. The holes fan out to achieve pierce point intersections at angles typically greater than 45 degrees relative to the mineralised structure.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>Sample bags are uniquely numbered and transported directly from the drill site or core shed to the onsite laboratory operated by SGS (NZ) Ltd and are logged into the laboratory system on delivery.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>RSC completed an audit of the MGP site laboratory in November 2014 and concluded that "the laboratory in general operates at an acceptable level of quality"</li> <li>OceanaGold's sampling procedure conforms to industry standard practice and has been reconciled with mining data over the past 26 years.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Golden Point is within MP 41 064 which is a granted mining permit held 100% by OceanaGold (NZ) Ltd which expires 31-1-2030 and MP52 738 which is a granted mining permit held 100% by OceanaGold (NZ) Ltd which expires 30/10/2020.</li> <li>OceanaGold (NZ) Ltd owns the land that covers the Golden Point prospect.</li> <li>OceanaGold has a 26 year track record of obtaining and maintaining all the necessary consents and permits required to mine defined resources and reserves at MGP.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>At Golden Point initial exploration drilling was carried out in the late 1980's by Homestake (NZ) Ltd and BHP Gold (NZ) Ltd within MP 41 064 and MP52 738. OceanaGold (NZ)</li> <li></li> </ul>

Criteria	JORC Code explanation	Commentary
Geology	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<p>The Macraes orogenic gold deposits are located within a low-angle (~15-20°) late metamorphic (Jurassic) shear zone, the Hyde Macraes Shear Zone (HMSZ), which has been traced for at least 30km along strike. The HMSZ consists of variably altered, deformed, and mineralized schist up to 150m thick, known as the Intrashear Schist. The thickest part of the shear zone consists of several mineralized zones stacked on metre-thick shears. These shears have ductile deformation textures overprinted by cataclasis. The Hangingwall shear can be up to 25m thick and is commonly darker coloured due to fine grained graphite and sheared sulphide minerals.</p> <p>The following four types of mineralization occur within the HMSZ at Macraes.</p> <ul style="list-style-type: none"> <li>Mineralized schist. This style of mineralization involved hydrothermal replacement of schist minerals with sulphides and microcrystalline quartz. Mineralization was accompanied by only minor deformation.</li> <li>Black sheared schist. This type of schist is pervaded by cm to mm scale anastomosing fine graphite and sulphide bearing microshears. This type of mineralization is typically proximal to the Hangingwall Shear. Scheelite mineralization occurs in the silicified cataclastic shears.</li> <li>Shear-parallel quartz veins. These veins lie within and/or adjacent to the black sheared schist, and have generally been deformed with the associated shears. The veins locally cross-cut the foliation in the host schist at low to moderate angles. Veins are mainly massive quartz, with some internal lamination and localized brecciation. Sulphide minerals are scattered through the quartz, aligned along laminae and stylolitic seams. These veins range from 1cm to &gt; 2m. Scheelite mineralization is associated with quartz veining in some areas.</li> <li>Stockworks. These veins occur in localized swarms that are confined to the Intrashear Schist. Individual swarms range from c. 100 to 2000m<sup>2</sup> in area and consist of numerous (10 – 100)</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>subparallel veins. Most of these veins formed sub-perpendicular to the shallow east dipping shear fabric of the Intrashear Schist. Stockwork veins are typically traceable for 1-5m vertically with most filling fractures that are 5 – 10cm thick, but can be up to 1m thick. Swarms of stockwork veins within the Intrashear Schist were lithologically controlled by the dimensions and locations of more competent pods of Intrashear Schist.</p>
<p><i>Drill hole Information</i></p>	<ul style="list-style-type: none"> <li>• <i>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:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> </li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Figures 5 and 6 and Table 9 in the document provide the relevant information for the significant intersections.</li> <li>• A full listing of all the Golden Point drill holes for the area covered by the press release are in named pdf files containing the collar, down hole survey, assay and geology information which is accessible using the link in the press release.</li> </ul>
<p><i>Data aggregation methods</i></p>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Figures 5 and 6 and Table 9 in the document provide the relevant information for the significant intersections.</li> <li>• A full listing of all the Golden Point drill holes for the area covered by the press release are in named pdf files containing the collar, down hole survey, assay and geology information which is accessible using the link in the press release.</li> <li>• Figures 5 and 6 and Table 9 “Significant Intersections” – a significant intersection is defined as an intersection <math>\geq 0.4\text{g/t}</math>, were intersection gram-metres is greater than 10 and can include up to 2 metres <math>&lt; 0.4\text{g/t}</math>, eg 5m @ 2.1g/t = 10.5 gram metres.</li> <li>• 0.4g/t is the current Macraes Gold Project mining cut off.</li> <li>• Assay grades are top cut to 15g/t for the purposes of calculating an intersection.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Relationship between mineralisation widths and intercept lengths</i>	<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>• At Golden Point the drill holes are generally steeply inclined (&gt;75°) to intersect a generally 15 to 25 degree dipping gold mineralised structure.</li> </ul>
<i>Diagrams</i>	<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>• Figures 5 and 6 and Table 9 in the document provide the relevant information for the significant intersections.</li> <li>• A full listing of all the Golden Point drill holes for the area covered by the press release are in named pdf files containing the collar, down hole survey, assay and geology information which is accessible using the link in the press release.</li> <li>•</li> </ul>
<i>Balanced reporting</i>	<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>• Figures 5 and 6 and Table 9 in the document provide the relevant information for the significant intersections.</li> <li>• A full listing of the Golden Point drill holes for the area covered by Figure 6 are in 4 pdf files containing the collar, down hole survey, assay and geology information for each area and are accessible using the link in the press release.</li> </ul>
<i>-Other substantive exploration data</i>	<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>	<ul style="list-style-type: none"> <li>• OceanaGold has been mining at the MGP for 26 years and in that time has mined and milled a little over 105Mt of ore. Any future ore sourced from Golden Point is not expected to be metallurgically different from the ore previously treated</li> <li>• Further mining at Golden Point will be subject geotechnical review as a cut back of the Golden Point pit has the potential to re-initiate movement of the plant site along the Footwall Fault.</li> <li>• A number of RC drill holes drilled in the 1990’s were drilled wet. Wet RC drilling at Macraes has the potential to produce a positive grade bias. As a result wet RC drilling of the Au mineralisation is prohibited.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and</i></li> </ul>	<ul style="list-style-type: none"> <li>• At Golden Point the recent drilling has been focused on completing the 100m x 100m spaced drilling pattern down dip of the previously mined Golden Point pit. Based on the results from the recently completed drilling program a further drilling program is now underway</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>future drilling areas, provided this information is not commercially sensitive.</i>	to close the drill spacing up to 50 x 50m.

### Section 3 Estimation and Reporting of Mineral Resources

#### Introduction

Exploration and at Macraes began in the early 1980's for gold and tungsten and culminated in the definition of the Round Hill resource in 1985. The Macraes Gold Project (MGP) as it became known commenced operations in November 1990 and has been in continuous operation since that time. In that time ore has been sourced from Golden Bar, Golden Ridge, Frasers, Frasers Underground, FRIM, Innes Mills, Southern Pit, Round Hill, North West pit, Deepdell South, Deepdell North and Coronation (pits in Macraes Grid south to north order). To date approximately 105Mt of ore has been mined and milled from these ore sources. Milling at MGP commenced in 1990 using a 1.0g/t mining cutoff and a milling rate of 1.5Mtpa. In 2015 MGP operates at a 0.4g/t mining cutoff milling 5.8Mtpa. The MGP consists of 12 resource estimates spaced along 25km of strike and are spread across two mining permits MP52 738 and MP41 064. The resource estimates covered by this Table 1 report are for Stoneburn, Taylors, Golden Bar, Ounce, Frasers Underground, Frasers, Innes Mills, Round Hill, Deepdell South, Coronation, Coronation North and Nunns NZGT as shown on the Figure 1 and tabulated in Table 1 below. The majority of the resource estimates are large panel recoverable resource estimates compiled using GS3 software and have been in use since 2001.





Taylor's, Golden Bar, Frasers, Innes Mills, Round Hill, Deepdell south, Coronation and Coronation North are estimated using large panel recoverable resource estimates and these resource estimates cover all current open pit Life of Mine (LoM) production.

Stoneburn inferred resource was estimated using 100m cell declustered polygonal estimates within an interpreted geological wireframe.

Ounce inferred resource was estimated using ordinary kriging using *PANGEOS* software within an interpreted geological wireframe.

FRUG resource is estimated using ordinary kriging using *PANGEOS* software. A geological wireframe is interpreted, then unfolded in *PANGEOS* software. The resource is then estimated using ordinary in the unfolded geological wireframe. The resource and the geological wireframe are then unfolded and the resource completed.

Nunns/NZGT inferred resource was estimated using ordinary kriging and was completed externally by RSC Mining and Exploration Services of Dunedin.

This Table 1 covers 12 separate resource estimates compiled using drilling data collected over a 30 year period, using a number of resource estimation methods. As a result this Table 1 should be considered a summary and will focus on the large panel recoverable resource estimates which form the basis of current and future open pit mining.

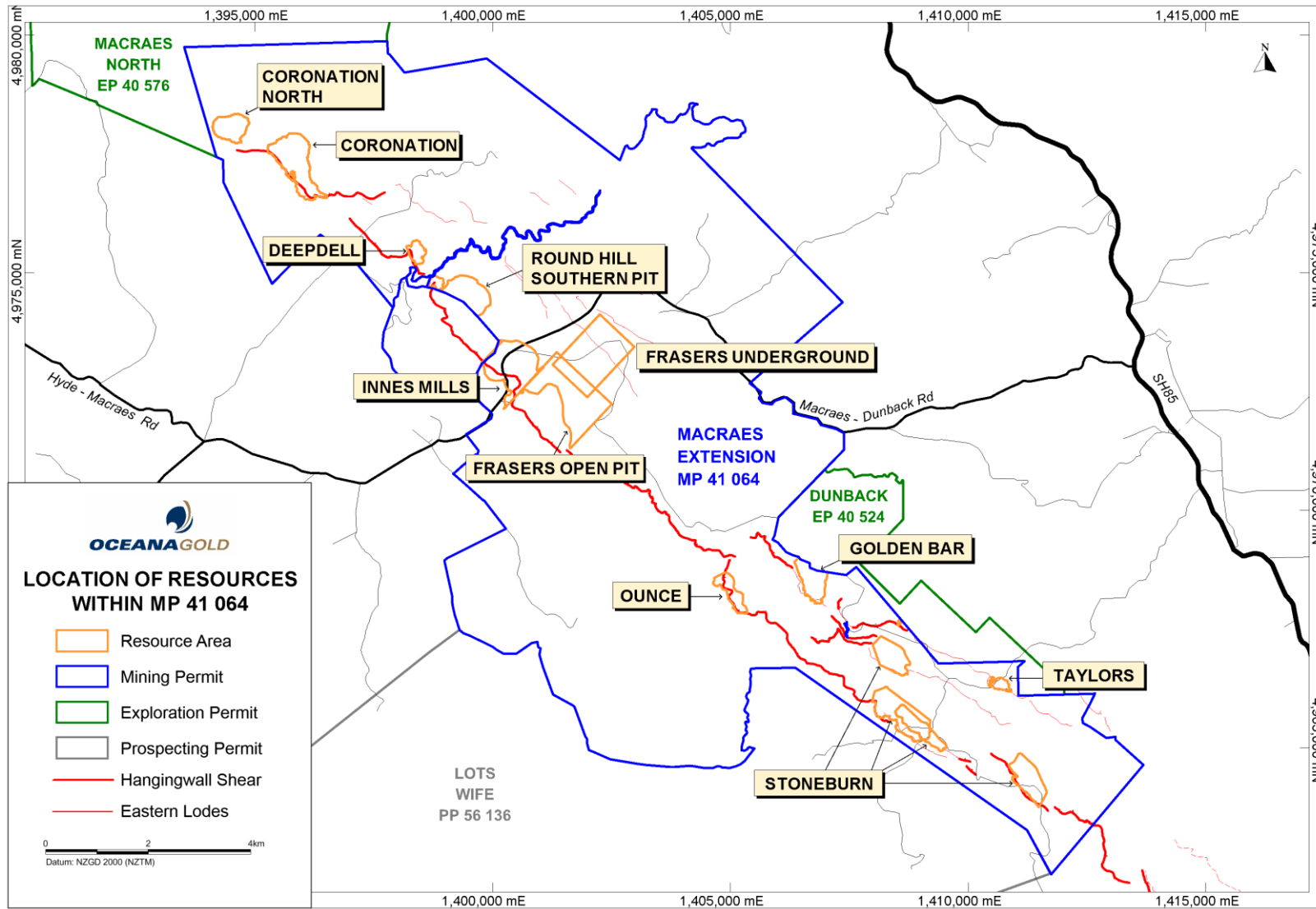


Figure 1: Resource Estimate Locations at the Macraes Gold Project

Table 1: Macraes Gold Project Resources by Resource Area.

OCEANA GOLD (NZ) LTD : MACRAES GOLD PROJECT RESOURCE STATEMENT AS AT 31 December 2016													
RESOURCE CUT OFF GRADE	RESOURCE AREA	MEASURED			INDICATED			MEASURED & INDICATED			INFERRED RESOURCE		
		Mt	Au g/t	Au Moz	Mt	Au g/t	Au Moz	Mt	Au g/t	Au Moz	Mt	Au g/t	Au Moz
0.4g/t	Nunns / NZGT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	1.1	0.04
0.4g/t	Coronation North	0.40	1.34	0.02	4.84	1.46	0.23	5.24	1.45	0.24	4.9	0.9	0.14
0.4g/t	Coronation	0.00	0.00	0.00	4.65	1.10	0.16	4.65	1.10	0.16	1.7	0.8	0.04
0.4g/t	Deepdell	0.45	1.35	0.02	0.01	1.06	0.00	0.46	1.34	0.02	0.2	1.1	0.01
0.4g/t	Round Hill / Southern pit	6.47	1.27	0.26	34.41	0.90	1.00	40.88	0.96	1.26	7.5	0.5	0.13
0.4g/t	Innes Mills	0.90	1.52	0.04	14.06	0.88	0.40	14.96	0.92	0.44	5.5	0.6	0.10
0.4g/t	Frasers Pit	4.41	1.33	0.19	5.67	0.81	0.15	10.08	1.04	0.34	3.0	0.7	0.06
Geologically Constrained	Frasers Underground	3.88	3.11	0.39	7.34	2.06	0.49	11.21	2.42	0.87	3.5	1.4	0.15
0.4g/t	Ounce	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.5	0.8	0.09
0.4g/t	Golden Bar	0.09	1.54	0.00	1.19	1.36	0.05	1.28	1.37	0.06	3.9	1.3	0.17
Geologically Constrained	Stoneburn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.1	1.2	0.26
0.5g/t	Taylor's	0.00	0.00	0.00	0.22	1.62	0.01	0.22	1.62	0.01	0.2	1.1	0.01
0.4g/t	Stockpiles	4.76	0.56	0.09	0.00	0.00	0.00	4.76	0.56	0.09			
	<b>MACRAES TOTAL</b>	<b>21.4</b>	<b>1.47</b>	<b>1.01</b>	<b>72.4</b>	<b>1.07</b>	<b>2.48</b>	<b>93.8</b>	<b>1.16</b>	<b>3.50</b>	<b>42.1</b>	<b>0.9</b>	<b>1.21</b>
	Note: all resources are inclusive of reserves.												
	With the Exception of Stoneburn all resources are cut to NZ\$2,200 optimised pit with inferred turned on and 2016 ming cost data												

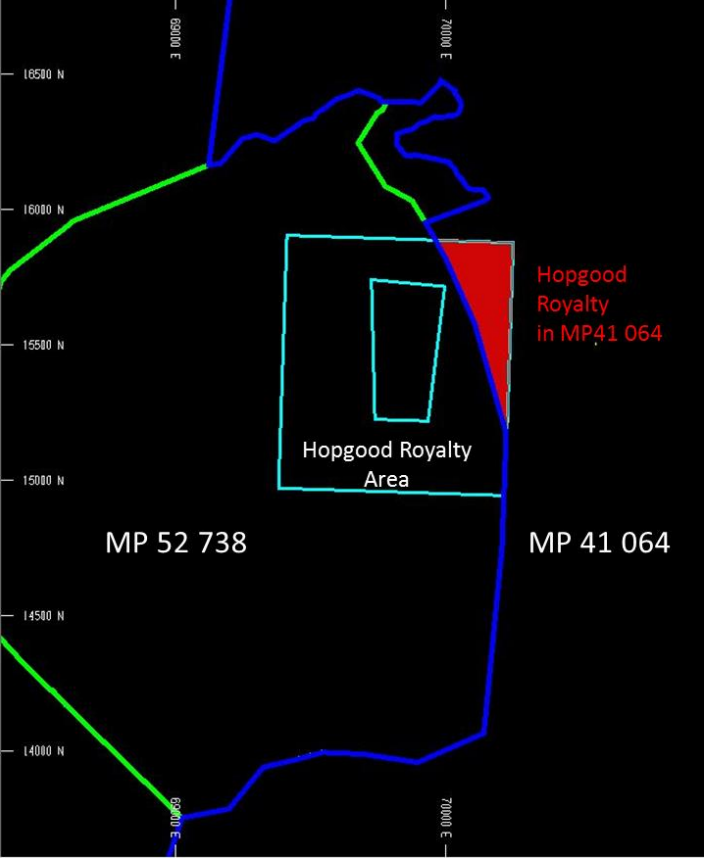
Criteria	JORC Code explanation	Commentary
Database integrity	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>The Macraes Gold Project (MGP) commenced circa 1984 with Homestake (NZ) Exploration Ltd commencing the drill out of the Round Hill project. Drilling has continued on a semi continuous basis since 1984 over a 25km of strike length of the Hyde Macraes Shear Zone as shown in Figure 1 and is currently on going. As a result data collection has evolved from paper to electronic data methods.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>• The pre 1994 drilling data has been checked and validated on a number of occasions and OGL has the original drill logs and in most cases original assay reports.</li> <li>• From 1996 drill hole data was captured electronically via Tough Books or equivalents and loaded into an electronic database.</li> <li>• Assay data was/is loaded electronically from digital data files supplied by the onsite laboratory. The data is checked and validated in 3D. On completion of validation drill hole data is locked to prevent any further editing.</li> <li>• Copies of the electronic drill logs and assay files are also archived for future reference.</li> </ul>
Site visits	<ul style="list-style-type: none"> <li>• <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li>• <i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Mining commenced at MGP in Nov 1990 at Round Hill. Mining has continued continuously since that time. Over this period Sean Doyle has been employed at MGP between 1994 - 2006 &amp; 2008 to current, and has an extensive knowledge of the MGP.</li> </ul>
Geological interpretation	<ul style="list-style-type: none"> <li>• <i>Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.</i></li> <li>• <i>Nature of the data used and of any assumptions made.</i></li> <li>• <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i></li> <li>• <i>The use of geology in guiding and controlling Mineral Resource estimation.</i></li> <li>• <i>The factors affecting continuity both of grade and geology.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Given the high proportion of RC drilling, much of the interpretation is made via wire framing on the basis of gold grade. These wireframes define discrete mineralised shears and are modeled with hard grade boundaries. Mineralisation below these shears is modelled as unconstrained “Stockwork” mineralisation.</li> <li>• Resource estimates are based on a combination of dry RC, factored wet RC and diamond drilling assay results. The assays with the exception of the wet RC are assumed to be unbiased.</li> <li>• Wireframes are generally a minimum of 2m <math>\geq</math> 0.4g/t with 1m of external dilution. Internal dilution is generally a maximum of 2m to 3m <math>\leq</math> 0.4g/t. Wireframes are extended to a maximum of 25m past the end of any drilling.</li> <li>• For Frasers underground the geological wireframes are generally a minimum of 2m <math>\geq</math> 0.5g/t. Internal dilution is generally a maximum of 2m to 3m <math>\leq</math> 0.5g/t.</li> <li>• For most of the ore deposits there are multiple geological interpretations are possible, however, 30 years of resource development, 25 years of open pit mining and 8 years of underground mining has greatly reduced the geological interpretation</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>risk at MGP.</p> <ul style="list-style-type: none"> <li>Geological risk is predominately a function of drill spacing. At MGP the majority of the resources are based on 50 x 50m drill spacing, however most resources are drilled to 37.5 37.5m and in some cases 25 x 25m spacing.</li> </ul>
<i>Dimensions</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>All the resources covered in this Table 1 are located in the 35 kilometre long Hyde Macraes Shear Zone.</li> <li>See Section 2; Geology for a description of the project geology and mineralisation styles.</li> </ul>
<i>Estimation and modelling techniques</i>	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>Large panel (25mE x 25mN x 2.5mRL) recoverable resource estimates via multiple indicator kriging (MIK) using FSSI proprietary GS3 software have been successfully used at MGP since 2001 and are considered appropriate for the style of mineralisation.</li> <li>Grades are estimated into panels with dimensions approximating the nominal drill hole spacing. The mining selectivity is accommodated by defining SMU dimensions which are independent of the panel size.</li> <li>Wireframes define mineralised shears, largely defined on the basis of sectional interpretations of gold grade. Unconstrained domains are defined by exclusion.</li> <li>Search parameters for the wire framed mineralisation vary between the various resource estimates and are a function of mineralisation orientation and drilling spacing. As a general rule searches require a minimum of 16 samples and a maximum of 48 samples from a minimum of 8 octants with the search ellipse aligned along the trend of the mineralisation.</li> <li>Block support correction used the indirect log normal method for large panel recoverable resource estimates.</li> <li>The Frasers Underground, Nunns/NZGT and Ounce no block support correction was applied.</li> <li>The Stoneburn resource estimate has no block support correction applied.</li> <li>The maximum extrapolation distance of a drill hole assay is generally less than 75m.</li> <li>Mining at Round Hill commenced in 1990 and subsequently moved</li> </ul>

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	<i>reconciliation data if available.</i>	<p>north and south. Resource estimates are reconciled on a monthly basis for all production areas.</p> <ul style="list-style-type: none"> <li>• There are currently no economically significant byproducts recovered at the MGP.</li> <li>• No deleterious or non-grade variables are currently estimated.</li> <li>• The resource estimate panel size is 25mE x 25mN x 2.5mRL Drill spacing at MGP ranges from limited 37.5m x 37.5m to 100m x 100m, however, the predominate drill spacing is 50m x 50m. The panel size to drill spacing is considered appropriate.</li> <li>• The recoverable resource estimate assumes an SMU size of 5 m x 5m x 2.5m which approximates the minimum ore block size mined at the MGP.</li> <li>• Grade correlation was determined by variogram analysis for each of the 14 MIK class bins defined by the 10, 20, 30, 40, 50, 60, 70, 75, 80, 85, 90, 95, 97.5, 99 percentiles for each domain.</li> <li>• Grades are not top cut, however, the grade of the last bin used in the MIK interpolation is the average of the bin average and bin median.</li> <li>• The resource estimate was validated by comparing the average bench panel grade with the average of the bench composites. The resource estimate was also validated in 3D.</li> </ul>
Moisture	<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>• Tonnages in the resource estimate are estimated on a dry basis.</li> </ul>
Cut-off parameters	<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>• The resource estimate is reported at a 0.4g/t cut-off which the current is mining cut-off used at MGP. An exception to this is the Taylors that is reported at a 0.5g/t cut-off and the Frasers Underground resource which is reported using a combination of geological wireframes and a 0.5g/t cutoff.</li> </ul>
Mining factors or assumptions	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>• The resource estimates at MGP are constrained to a NZ\$2,200 inferred on optimised pit shell using on 2015 mining costs. The exception to this is the Stoneburn resource estimates as there are no optimised shell and the Frasers</li> <li>• Approximately 80% of the ore will be mined by open pit mining methods using a mining fleet similar to the existing mining fleet. The</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>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></p>	<p>remaining 20% will be mined by underground methods using the existing underground mining fleet.</p> <ul style="list-style-type: none"> <li>• Open cut mining is on 2.5m benches with grade control drilling on a 4m x 4.5m pattern drilling 7.5m deep holes sampled in 2.5m lengths. Ore will be blasted in 7.5m lifts and waste in 15m lifts.</li> <li>• Underground mining commenced at MGP in 2006 and is by long hole open stope methods. It is anticipated this method of mining will continue for the foreseeable future.</li> <li>• Mining permit MP41 064 is subject to two royalties, a royalty payable to the New Zealand government “Crown” and a private individual “Hopgood Royalty”</li> <li>• The “Crown” Royalty is to a maximum of 1% ad valorem, or 5% of accounting profits, whichever is greater which are payable to the Crown annually for gold, silver or any other recovered minerals.</li> <li>• A private royalty (payable to Owen Hopgood) of 5% of gross value (from open pit mining) or 3% of gross value (from underground mining) for gold, silver or any recovered mineral. The area of the royalty is shown in red on the diagram below.</li> </ul>

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<p><i>Metallurgical factors or assumptions</i></p>	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>Metallurgical test work on the 13 identified orebodies at MGP has been an ongoing and continuous process. At the exploration stage it is standard practice to select diamond drill core from selected representative holes and for the various orebodies has been selected and tested</li> <li></li> </ul>



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	<p><i>when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i></p>	<ul style="list-style-type: none"> <li>The Macraes processing plant recoveries have ranged from 73% to 85% over the last 5 years with an average of 82%.</li> </ul>
<p><i>Environmental factors or assumptions</i></p>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>OGL owns all the land required for current open pit and underground operations and the associated infrastructure. For the area of the Nunns/NZGT and Stoneburn resources OGL does not own the land and does not have access agreements to the land, however, OGL is confident access with the rights to purchase can be obtained.</li> <li>With the exception of Coronation North, OGL has all of the necessary resource consents to continue mining (mining = mining of ore and waste from open pits and underground, construction of waste rock stacks and tailings dam facilities). OGL is in the process of obtaining the necessary resource consents to mine at Coronation North and has a 25 year track record of obtaining the necessary resource consents to allow mining to continue.</li> <li>OGL has operated for 25 years within the resource consent the conditions that are designed to protect the environment.</li> </ul>
<p><i>Bulk density</i></p>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	<ul style="list-style-type: none"> <li>Over 650 SG measurements have been done on core from the respective resource areas at MGP.</li> <li>The tonnages are based on dry bulk densities that were determined in 1994/2005/2013 from the analysis of 667 drill core samples. From this work an SG of 2.50 is applied to oxide ore and waste and an SG of 2.65 is applied to sulphide ore and waste. Mining of over 100Mt of ore has shown these values to be appropriate.</li> <li>MGP is in an area of active uplift and as a consequence experiences high erosion rates. As a consequence the weathering profile at MGP is typically 10m to 15m.</li> </ul>
<p><i>Classification</i></p>	<ul style="list-style-type: none"> <li><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li><i>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</i></li> </ul>	<ul style="list-style-type: none"> <li>The resource estimate is classified primarily on the basis of drilling density. Measured if the block meets the primary sample search distance, minimum octant, minimum sample criteria and the recoverable proportions at 0.4 g/t cog are greater than 80%.</li> <li>Indicated if the block meets the secondary sample search distance,</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>and metal values, quality, quantity and distribution of the data).</i></p> <ul style="list-style-type: none"> <li>• <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<p>minimum octant, the minimum sample criteria, its volume is more than 5% shear wireframe volume or the recoverable proportions at 0.4 g/t cog are greater than 30%.</p> <ul style="list-style-type: none"> <li>• Indicated also if all the Measured criteria are met except that the recoverable proportions at 0.4 g/t cog are less than 80%.</li> <li>• Inferred if the block fails the Measured and Indicated criteria but meets the secondary sample search distance, minimum octant and half the minimum sample criteria.</li> <li>• The above classification protocol has been used at MGP since 2001 and is considered by the Competent Person to be appropriate for the deposit.</li> </ul>
Audits or reviews	<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>• A majority of the resource estimates have not been audited, however the Round Hill and Golden Bar resource estimates have been audited by FSSI.</li> </ul>
Discussion of relative accuracy/confidence	<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>• OGL has been using large panel recoverable resource estimation for resource estimates since 2001 and has long history of acceptable reconciliation. The method is considered appropriate by the competent person.</li> <li>• The resource estimate is considered to be a global resource estimate that is suitable for open cut bulk mining.</li> </ul>