Material Information Summary

A Material Information Summary pursuant to ASX Listing Rules 5.8 and 5.9 is provided below for the Waihi 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 Waihi Gold Project

The Waihi Gold operation is located 142 km Southeast of Auckland in the Township of Waihi, Hauraki, New Zealand. The Waihi township is known as a gold mining town and has a notable history gold production. Open pit mining commenced at the site in 1988 with the first ore processed in that year 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, licences and agreements required to operate the Martha open pit and the Correnso underground mine.

The Project comprises several areas of mineralization, which are at different stages of development. The Martha pit is in the final stages of production but awaiting consents to complete a remedial cut to the north wall, termed Martha Phase 4. 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 and down dip extensions of the Correnso underground mine and the addition of the Daybreak and Empire veins referred to collectively as the Correnso Project. The Martha Underground and Martha Phase 4 Pit projects are in the consenting phase.

The Gladstone Project is based on a conceptual open pit centred around the Gladstone hill and Winner hill area. The resource model describes the mineralisation within Gladstone and Winner hills and includes part of the Moonlight orebody, depleted for underground mining.

2.0 Geology and Geologic Interpretation

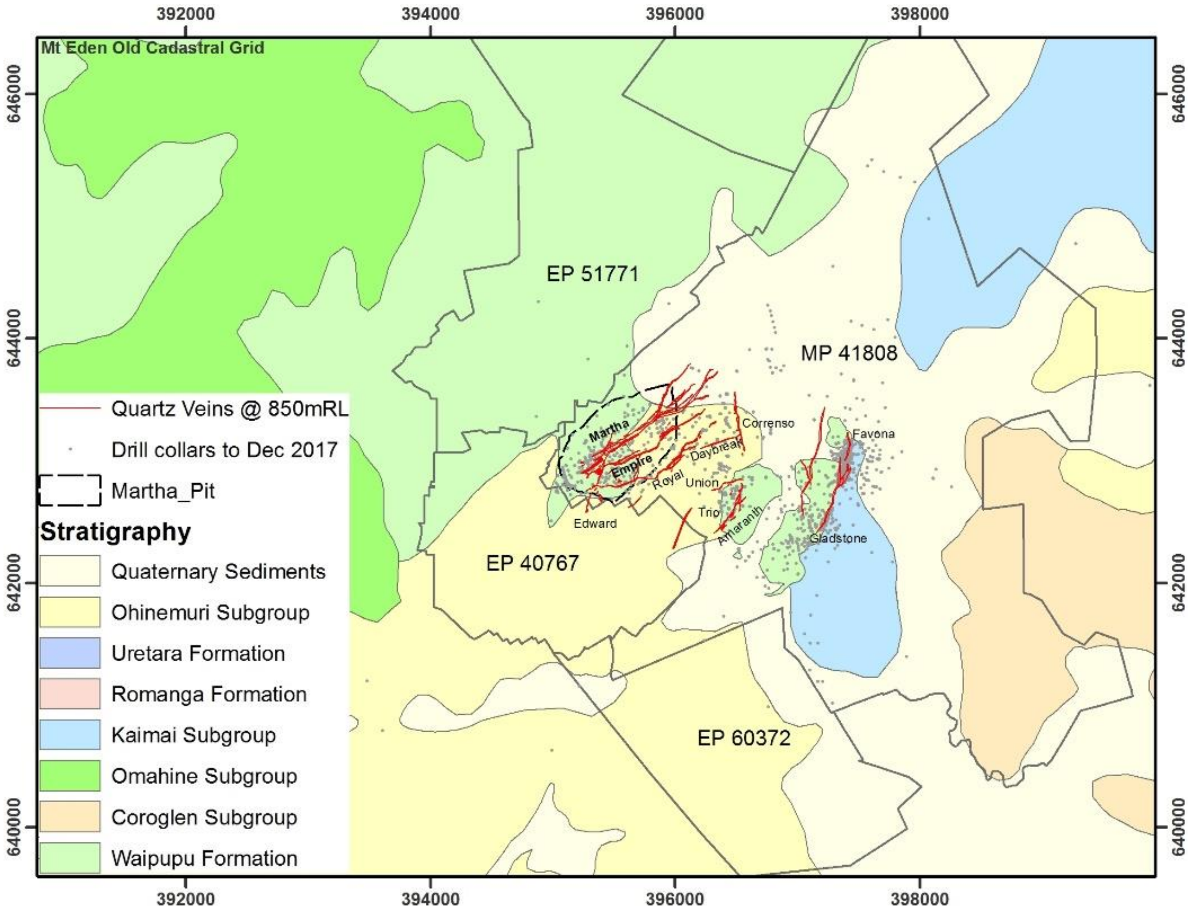
The major gold - silver deposits of the Waihi District are classical low sulphidation adularia-sericite epithermal quartz vein systems associated with north to northeast trending faults. Larger veins have characteristically developed in dilational sites in the steepened upper profile of extensional faults 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.

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.

Gold-silver mineralisation occurs 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% lead) and sphalerite (up to 1% zinc).

The geologic interpretation processes utilised in construction of all Waihi Models utilises log data, assay data, underground face and backs mapping and, 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.

Figure 1-1: Project Geology Plan



Gold mostly occurs as electrum in the Waihi epithermal vein deposits and has a particle size <10µm. 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.

3.0 Drilling, Sampling and Sub -Sampling

Approximately 560,000m has been drilled in 3,700 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.

Drill hole data is initially captured in an Access Database used for drill hole planning and management. That data is validated during data-entry. And imported from Access into the main AcQuire database interface.

After geological logging, sample intervals are defined and marked up by Oceana geologists.

Current standardised sample preparation procedures are:

- Jaw crushing of half core to 95% passing 5mm to 24th September 2004 (UW212 & 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).
- Rotary split to produce 800g crushed product;

- Ring milled to a nominal 80% finer than 75µm;
- Approximately 300g of pulverized sample placed by scoop into paper sachets to which the original sample tag is affixed.

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.

4.0 Sample Analysis methods

Gold analysis is undertaken using 30gram fire assay with AAS finish, silver is by acid digest with AAS finish, multielement copper, arsenic, lead, zinc and antimony is analyzed by acid digest with ICP finish. 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 mineralization.

5.0 Estimation Methodology

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^3 are assigned by rock type.

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.

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 tightly 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 drill hole data only with longer search ranges to estimate blocks not estimated in the first pass. Tetra unfolding is utilised to address local variations in vein orientation.

Gold grades are top capped and length-composited within the vein wireframes and lithological unit. Grade estimates are prepared utilising unfolding and ordinary kriging. Nearest neighbour and Id2 estimates are also prepared for validation and assessment.

6.0 Resource Classification

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.

There is significant experience in mining and assessing the continuity of mineralisation with the veins for Martha and the adjacent deposits. The vein style mineralisation has strong visual controls and is well understood, with historic mapping and cross-cut sampling demonstrating continuity over significant ranges. Classification is based on the requirement for the average distance to the closest three holes.

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.

7.0 Cut-off Grade

Variable cut-off grades are used for the Waihi Gold Project. Ore Reserves are based on a gold price of NZD$1806 and Resources are based on a gold price of NZD$2083. 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. Silver is treated as a by-product.

8.0 Mining, Metallurgy and other modifying factors

Open pit mining was undertaken by a contractor from 1988 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 and has been in use since 2006. Stope dilution has been estimated based on expected geotechnical conditions, stope spans and site reconciliation. Recovery of the Ore Reserve requires the use of remote loaders, and allowances have been made for loss of Ore Reserves and for dilution from back fill.

The Mineral Resource associated with the Martha Underground project is based on a combination of long hole bench stoping and the side ring mining method. Stope shapes were developed using the Alford mineable stope optimiser. The recovery and dilution Modifying Factors have been estimated by independent consultants and applied to the Mineral Resource.

Recovery of gold at Waihi Gold uses a conventional 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 Correnso Ore Reserve. Consents are required for extraction of the Martha pit Ore Reserve and applications have been lodged with the Regional and District Councils and a decision is expected at the end of 2018 or early 2019.

9.0 Competent Person

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 Correnso underground Ore Reserves was prepared by or under the supervision of Mr David Townsend, and Martha Underground and all open pit Ore Reserves were 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 Competent Persons 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.

SUMMARY OF TABLE 1 - 2012 JORC: Waihi Gold Mine

The Waihi Gold operation is located 142 km Southeast of Auckland in the Township of Waihi, Hauraki, New Zealand. The Waihi township is known as a gold mining town and has a notable history gold production. Open pit mining commenced at the site in 1988 with the first ore processed in that year 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, licences and agreements required to operate the Martha open pit and Correnso underground mine.

Resources

The Waihi Gold resource estimates, as at 30 June 2018, 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 includes material within the limits of the Martha Phase 4 pit and the Gladstone Pit; and underground Resources within the Correnso Extended Permit Area and beneath the Martha Pit. Previously reported resources for the Gladstone underground project have been incorporated into the Gladstone Pit project. The Resources are depleted for mining as at 30 June 2018.

Table 1-1: Open Cut Resource Estimate

Class	Tonnes (Mt)	Au(g/t)	Ag(g/t)	Au(Moz)	Ag(Moz)
Measured	0.155	3.05	30.5	0.015	0.152
Indicated	2.074	2.38	12.4	0.158	0.829
Measured & Indicated	**2.230**	**2.43**	**13.7**	**0.174**	**0.981**
Inferred	0.300	1.28	2.0	0.012	0.019

Table 1-2: Underground Resource Estimate

Class	Tonnes (Mt)	Au(g/t)	Ag(g/t)	Au(Moz)	Ag(Moz)
Measured	0.033	8.90	13.7	0.009	0.015
Indicated	1.405	5.67	16.6	0.256	0.721
Measured & Indicated	**1.438**	**5.74**	**16.5**	**0.265**	**0.763**
Inferred	2.558	4.28	16.8	0.352	1.38

Table 1-3: Combined Resource Estimate

Class	Tonnes (Mt)	Au(g/t)	Ag(g/t)	Au(Moz)	Ag(Moz)
Measured	0.189	4.07	27.5	0.025	0.167
Indicated	3.479	3.71	13.9	0.415	1.551
Measured & Indicated	**3.668**	**3.73**	**14.8**	**0.440**	**1.744**
Inferred	2.858	3.97	15.3	0.365	1.401

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$2,083/oz;
4. Tonnages include allowances for losses resulting from mining methods. Tonnages are rounded to the nearest 1,000 tonnes;
5. 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;
6. Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content;
7. Tonnage and grade measurements are in metric units. Gold ounces are reported as troy ounces.
8. Minor stockpile quantities of Mineral Resources are included in both the underground and open pit totals

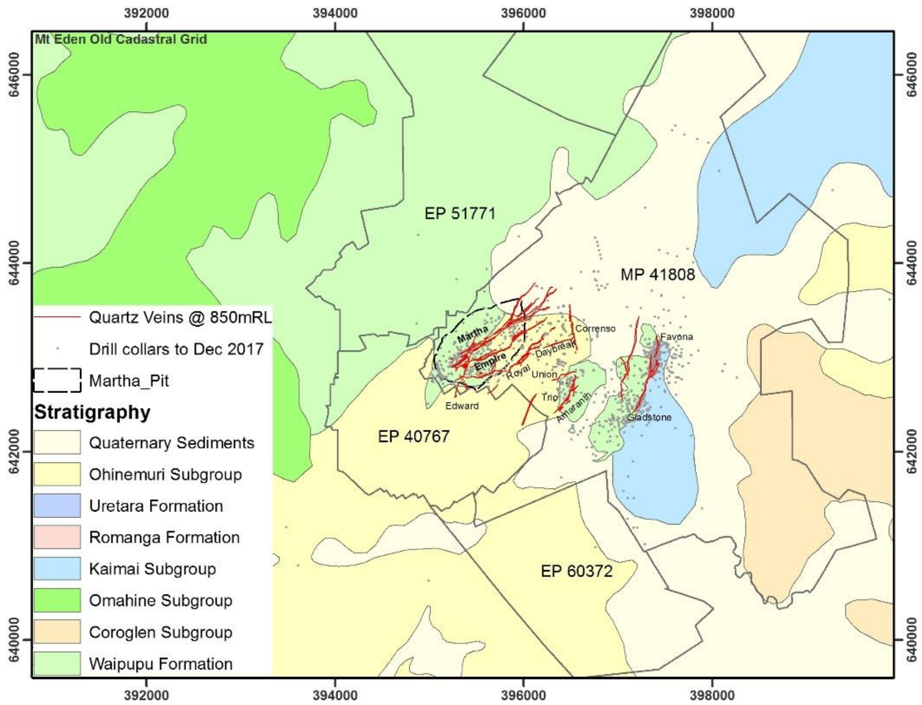
The Project comprises several areas of mineralization, which are at different stages of development. The Martha Phase 4 Open Pit is in the final stages of production. The Correnso project is in the mature production phase with the associated Empire and Daybreak projects in the development phase. The 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. The Martha Underground and Martha Phase 4 Pit projects are in the consenting phase.

The Gladstone Project is based on conceptual open pit/s around the Gladstone hill and Winner hill area. The resource model describes the mineralisation within Gladstone and Winner hills and includes part of the Moonlight orebody, depleted for underground mining. The previously declared Gladstone underground Reserve of 8150 ounces has been moved to the open pit resource total.

Exploration activity has continued in proximity to the Martha Project. As at the model assessment date 56 drill holes for a total of 16,200 meters have been completed from the 920mRL and 800mRL drill drives. Over the course of the next 3 years, the Company will continue to drill from these two exploration drives beneath the Martha Open Pit for resource conversion with upwards of 100 km of additional drilling likely to be required to test the full extent of the mineralised system. The resource is associated with Martha, Edward, Empire, Royal and Welcome veins and numerous minor veins located beneath the existing Martha Pit.

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 560,000m has been drilled in 3,700 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^3 are modelled by rock type for the conversion of volumes to tonnage. These are based on >10,400 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 30 June 2018 is shown in Table 1-4:

Table 1-4: 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	30.5	0.015	0.152
	Probable	0.656	2.91	29.1	0.061	0.614
Underground	Proved	0.033	8.90	13.7	0.009	0.015
	Probable	0.727	5.22	10.5	0.122	0.246
Total Proved		0.189	4.07	27.5	0.025	0.167
Total Probable		1.383	4.12	19.3	0.183	0.860
Total (Dec 31, 2017)		1.572	4.12	20.3	0.208	1.027

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$1,806/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.
7. Previously reported Gladstone Underground reserves have been transferred to Gladstone Open Pit Resource
8. Year to date production has been depleted from the Proven resource for the active mining projects. Resource updates for these projects will be undertaken in the coming months to update resource confidence for these projects prior to the end of year resource declaration.

The change in Ore Reserves reported at June 30, 2018 compared with those previously reported at December 31, 2017 is reported in Table 1-5.

Table 1-5: December 2016 Reserve Estimates vs. Dec 2017 Reserve Estimates

Reserve Area	Tonnes (Mt)	Au (g/t)	Ag(g/t)	Contained Au (Moz)	Contained Ag (Moz)

December 31, 2017 Reserve

Open Pit	0.811	2.94	29.4	0.077	0.766
Underground	0.968	5.62	11.2	0.175	0.348
Total (Dec 31, 2017)	1.740	4.35	19.7	0.242	1.099

Changes to Reserve, Dec 17 vs. June 18

Open Pit	0	0.00	0.00	0.000	0.000
Underground	-0.207	5.58	11.1	-0.035	-0.075
Total	-0.207	15.64	30.5	-0.103	-0.200

June 30, 2018 Reserve

Open Pit	0.811	2.94	29.4	0.077	0.766
Underground	0.760	5.38	10.7	0.132	0. 261
Total (Jun 30, 2018)	1.572	4.12	20.3	0.208	1.027

Changes between the December 31, 2017 Reserve and the June 30, 2018 Reserve estimate primarily reflect depletion of ore from the underground.

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 site reconciliation. Recovery of ore requires the use of remote loaders, and allowances have been made for loss of Ore Reserves and for dilution from back fill.

Recovery of gold at Waihi Gold uses a conventional 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	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *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.*	Core Drilling ○ 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 <5 to 10µm. Current standardised sample preparation procedures are: • Wet and dry weighing before and after oven drying at 90°C overnight; • Jaw crushing to 95% passing 5mm to 24th September 2004 (UW212 & 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). • Rotary split to produce 800g crushed product; • Ring milled to a nominal 80% finer than 75µm; • Approximately 300g of pulverized sample placed by scoop into paper sachets to which the original sample tag is affixed. ○ 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 an HQ3 or NQ3 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 or 1.7-2kg respectively, whereas grade control utilises an 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.

Criteria	JORC Code explanation	Commentary

		RC Drilling
		• RC drilling was predominantly used for grade control in the Martha Pit and has not been utilised since closure after the north wall failure. Sample preparation was carried out as follows:
		  ○ Samples are dried at >100°C overnight at minimum, longer when sample moisture is high.
		  ○ The sample is crushed using a Boyd crusher to nominal 95% passing 7 mm.
		  ○ 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.
		  ○ Retained material (approximately 900g) is ground in an LM2 mill for a minimum of 3 minutes to 80% passing 75µm.
		  ○ 200 g of pulp is removed by scoop and sealed in a Kraft envelope with the sample tag attached.
		• From 28th May 2007 until 20th September 2014 pulps are assayed by SGS for Gold and Silver by 30 g Aqua Regia Digest. From 20th September 2014 Fire Assay analysis was conducted on Au only.
		Underground Face Sampling
		• 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.
		• Minimum sample interval size is 0.3m with a maximum interval of 2.0m. Intervals greater than 2.0m should be sub-sampled.
		• 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 split of what is thought to be the highest-grade sample), a field duplicate (assumed highest grade interval re-sampled for repeatability analysis) and a standard (positioned after the crush duplicate). (Please see below under Blanks, Standards and Crush Duplicates for more information).
		• 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.

Criteria	JORC Code explanation	Commentary
		• 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. • All samples taken during face sampling are placed into pre-labelled calico bags. One label is stapled onto the lip of the bag and the other is placed loosely inside the bag.
Drilling techniques	• *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.).*	• Approximately 560000m have been drilled in 3,700 core and 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. 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. • 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. • 10,772m of diamond core has been drilled for 66 drill holes on the Gladstone Hill project since October 2016, with 2152.7m of this drilled from underground platforms. • Drilling metres for the Martha Project resource model update include drilling from the Martha UG specific 800mRL and 920mRL drill-drives commenced in August 2017. Up to 4 diamond drill rigs have been dedicated to an ongoing drilling campaign, with approximately ~16.2km of Martha UG resource drilling completed at the time of assessment.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	• Core recoveries are measured after each drill run, comparing length of core recovered vs. drill depth. Recovery is monitored daily by site Geologists to rationalize recovery against the intersection of historic mining voids with re-drilling actioned if necessary. • Core recovery in intact vein averages 92.5% within the Martha Project. • Core recoveries were generally better than 95% for the extended Correnso project. • There is no relationship between core recovery and grade. • Core recoveries in the recent Gladstone Project drilling campaign are between 89-90%. The zones of poor recovery are typically associated with post mineral package in the non-mineralised units. • Recovery weighted grade estimates are assessed routinely in the construction of grade

Criteria	JORC Code explanation	Commentary
		estimate. 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.
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• The core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation. • Electronic Geological logs are created using Microsoft Excel and uploaded to an AcQuire database. Previously 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. In June 2015, the geological logging data was migrated to an AcQuire database and logging systems modified to a MS Office platform. • Log intervals are based on geological boundaries or assigned a nominal length of one metre. RC grade control drilling in the open pit is sampled over 1.5m intervals. The geological 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. All logging is peer reviewed by geologists as part of a comprehensive validation process. A complete digital photographic record is maintained for all drill core. 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. • All drill core is photographed and stored digitally on the Waihi server. • 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.
Sub-sampling techniques	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and*	• Refer to sampling techniques section.

Criteria	JORC Code explanation	Commentary
and sample preparation	*appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *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.*	• Quality control of drill core samples has been monitored in the following areas: • 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. • Assaying at primary lab SGS through insertion of 1 or 2 standards, a duplicate sample, and a blank for every 20 samples. • QAQC checks in the database for standards, blanks and duplicates. • Since October 2015 all assay data is validated upon importation into the AcQuire database using inbuilt QAQC functions. CRM performance is regularly scrutinised and the database QAQC function thresholds are reviewed bi-annually. CRMs are assigned to samples on a rotational roster in a "pigeon pair" system. • Monthly QAQC reporting and review is undertaken on all assay results from SGS. • Prior to this all assay data was 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 15%. The criterion for blanks is that they do not exceed more than 4 times the lower detection method of the assay method. • 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

Criteria	JORC Code explanation	Commentary
		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. • 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 grams 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. • Additional Multi-element data has been obtained from the Brisbane ALS Laboratory for Gladstone Resource samples. Generally, elements including mercury, arsenic, selenium and antimony increase at shallow levels within epithermal deposits. The presence of sinter and Quartz vein textures in the Gladstone drill core indicate that the resource is at the top of an epithermal system. Due to this, multi element data with an extended suite of elements (Au, Bi, Hg, Sb, Se, Sn, Te, Th, Ti, U, W, Ag, Al, As, B, Ba, Be, Ca, Cd, Ce, Co, Cr, Cu, Fe, Ga, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sc, Sc, Sr, Ti, V, Zn) has been undertaken. Sample preparation was conducted at SGS Waihi following standardised procedures with a variation to sample drying temperature. A reduced temperature of 60 °C has been used to limit Hg volatilisation. **Underground Face Samples** • Every face must include a blank, standard and crush duplicate as per the QAQC guidelines. • 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. **Open Pit RC Grade Control Data** • 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

Criteria	JORC Code explanation	Commentary
		sampling and sample preparation practices and ensure that results are within acceptable ranges of accuracy and precision. • All QAQC data is managed in AcQuire via the CheckAssay and CheckChemistry compound definitions. Blanks and standards were reviewed on a weekly basis using AcQuire QAQC objects.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• 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 • All assay data is stored in the database in an as received basis with no adjustment to the returned data • All intercepts are reviewed during the construction of the geological wire frames prior to grade estimation, this review involves visual comparison of core photography, assay and logging data and spatial relationships to adjacent data. Significant intercepts are reported internally on a weekly basis for peer review purposes. • Check assay programs have been undertaken for projects previously as a part of the project advancing past milestones such as feasibility level studies.
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• 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. • 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. • 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. • 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.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• 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 drill hole spacing required to achieve an inferred resource classification in areas of stockwork mineralisation. • For Martha Grade Control, 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. • The Martha UG project uses an average spacing to three drill holes of 60m for inferred and 40m for indicated. There is significant experience in mining and assessing the continuity of mineralisation with the veins for Martha and the adjacent deposits, the vein style mineralisation has a strong visual control and is well understood and has demonstrated continuity over significant ranges. An estimation run utilizing a maximum of three drill holes with a single sample per drill hole was undertaken storing the average distance to the three drill holes used to estimate the block. This formed the basis for the resource classification • The Gladstone deposit has been drilled targeting a nominal drill hole spacing of 30m on the major mineralised veins. A tighter spacing of 22.5 has been targeted in the zones of more discrete Stockwork and Breccia mineralisation. • 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 several 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.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation*	• Drill holes are designed to intersect known mineralised features in a nominally perpendicular orientation is much as practicable given the availability of drilling platforms. Samples intervals are selected based upon observed geological features. • Structural orientation measurements are recorded during logging. These inform true width

Criteria	JORC Code explanation	Commentary
	and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	during geological interpretation and the reporting of significant intercepts.
Sample security	• *The measures taken to ensure sample security.*	• 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.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews of sampling techniques and data have been performed. • Sampling techniques and data handling processes are reviewed annually during internal OGC technical service reviews. • External reviews of sampling techniques and data have been undertaken during third-party technical assessments.

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	• *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.* • *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.*	• The mineralisation occurs on granted permit Mining Permit 41808 (Favona) which 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 to cover the Trio Mine and another to cover the Martha Open Pit Mine and TSF's that operated under ML 32 2388 until its expiry in July 2017. The mining permit covers an area of 1485.38 hectares and covers the Correnso Underground Mine and Martha Open Pit mine. • On MP 41808 the higher of a 1.0% royalty on net sales revenue from gold and silver or 5% accounting profits is payable to the Crown. • The Martha Mine is authorised partly by way of resource consents, and partly by way of Rule 5.17.4.1 P1 of the Hauraki District Plan. Rule 5.17.4.1 P1 authorises activities conducted in accordance with the relevant terms and conditions of, and within the area covered by Mining Licence 32-2388 following its expiry on 16 July 2017. Rule 5.17.4.1 P1 and Land Use Consent 97/98-105 authorise activities within the Mining Licence and Extended Project areas respectively. In combination they authorise mining, stockpiling, conveying, the processing of ore and the disposal of tailings to the existing tailings storage facilities, subject to conditions. While ML 32 2388 expired 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. • Resource consents also authorise the underground mines, including Favona, Trio, Correnso and Slevin. Consents were granted in 2003 for the Favona exploration decline 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. Resource consents for the Trio development were granted in September 2010 and worked commenced late 2010. Resource consents were granted for the Trio underground mine following appeals to the Environment Court in July 2011 and work commenced in June 2012. Resource consents for the Correnso mine were granted in October 2013 and work commenced in December 2013. A resource consent was granted for the Slevin Underground Project in October 2016 which provided for extensions of the Correnso stoping panels towards the Martha open pit. Worked commenced in the Slevin Underground Mine in November 2016. In addition, a resource consent was granted in August 2017 for the Martha Drill Drives Project. This involves the construction of two underground drill drives for the purposes of exploration. Consents granted by the Hauraki District Council for the underground mines have in general authorised blasting, mining, the placement of rock underground as backfill, subject to conditions to protect amenity.

Criteria	JORC Code explanation	Commentary
		• In addition to the authorisations required by Hauraki District Council (HDC), a suite of consents from Waikato Regional Council (WRC) covers such matters as vegetation removal, water takes, diversions and discharges of water, discharges to air, and construction of the Tailings Storage Facilities. Both Hauraki District Council and Waikato Regional Council have conditions in place relating to mine closure, bonds and the post closure Trust. • The Martha Underground Resource lies predominantly below the Martha open pit and resource consent applications to underground mine this resource and the remainder of the Phase 4 Martha Pit were lodged with HDC and WRC on the 25th May 2018 with an expected public notification date of the 16th August 2018.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• 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 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.

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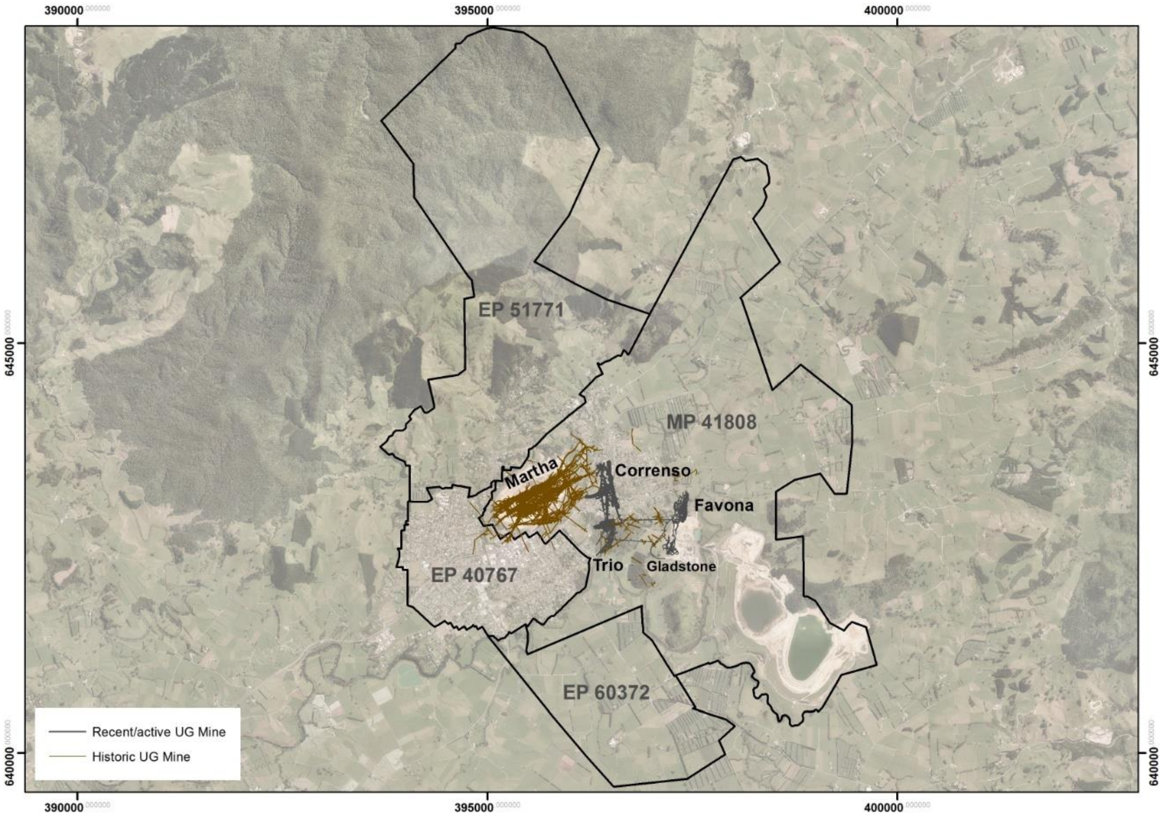
Figure 2.1: Waihi Tenement Map



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<tr><td>Geology</td><td>

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

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- The Waihi deposits display geological features that are typical of epithermal gold deposits. This includes:
- Host lithologies for veins are andesite flows and volcaniclastics.
- 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);

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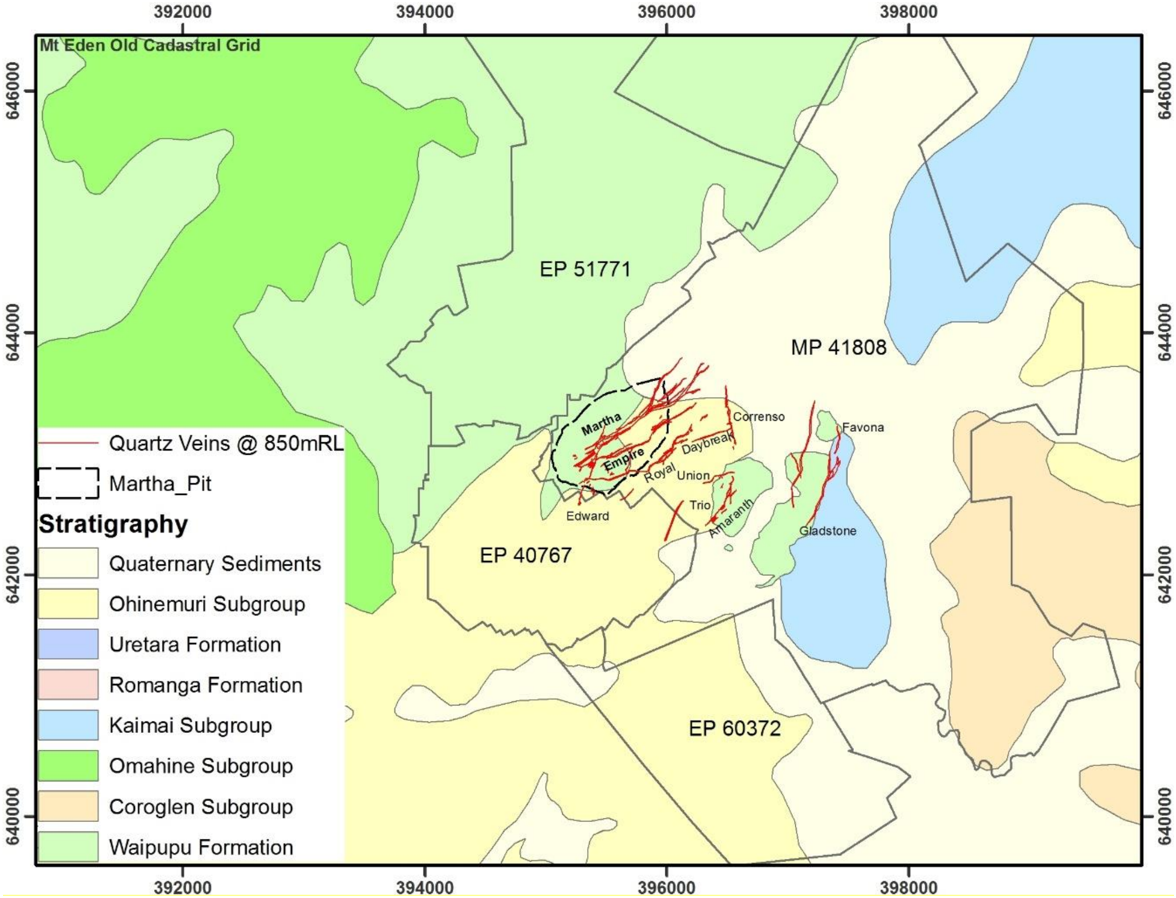
Criteria	JORC Code explanation	Commentary
		• Host andesitic volcanics have undergone pervasive hydrothermal alteration, often with complete replacement of primary mineralogy. Characteristic alteration assemblages include quartz, albite, adularia, carbonate, pyrite, illite, chlorite, interlayered illite-smectite 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. • Shallow-level mineralisation on Gladstone Hill is hosted by extensively gold-mineralised hydrothermal breccias and associated banded quartz veins between 1000mRL and 1150mRL. Mineralisation is localised within sub-vertical vein and pipe-like vent breccias, which are rooted in mineralised quartz veins, and which flare upwards into hydrothermal explosion breccias. Major veins at Gladstone appear to trend ENE to NNE between 215° and 260° and dip steeply to NW, and splay upwards into subsidiary vein sets.
Drill hole Information	• *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:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *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.*	• Additional unreported drillhole information used in the construction of the geological and resource models can be found on the Company's website at http://www.oceanagold.com/investor-centre/filings/
Data aggregation methods	• *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.*	• 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 resource estimates completed • Compositing of data for grade estimation is within distinct geological boundaries, typically within veins. The grades are compiled using length weighting. Grades are not cut within the database

Criteria	JORC Code explanation	Commentary
	• *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	however appropriate statistically derived top-cuts are assigned by domain in the estimation process.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *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').*	• 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 resource estimates completed • 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.

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 2.2: Geology Map of the Waihi Epithermal Vein Camp** 

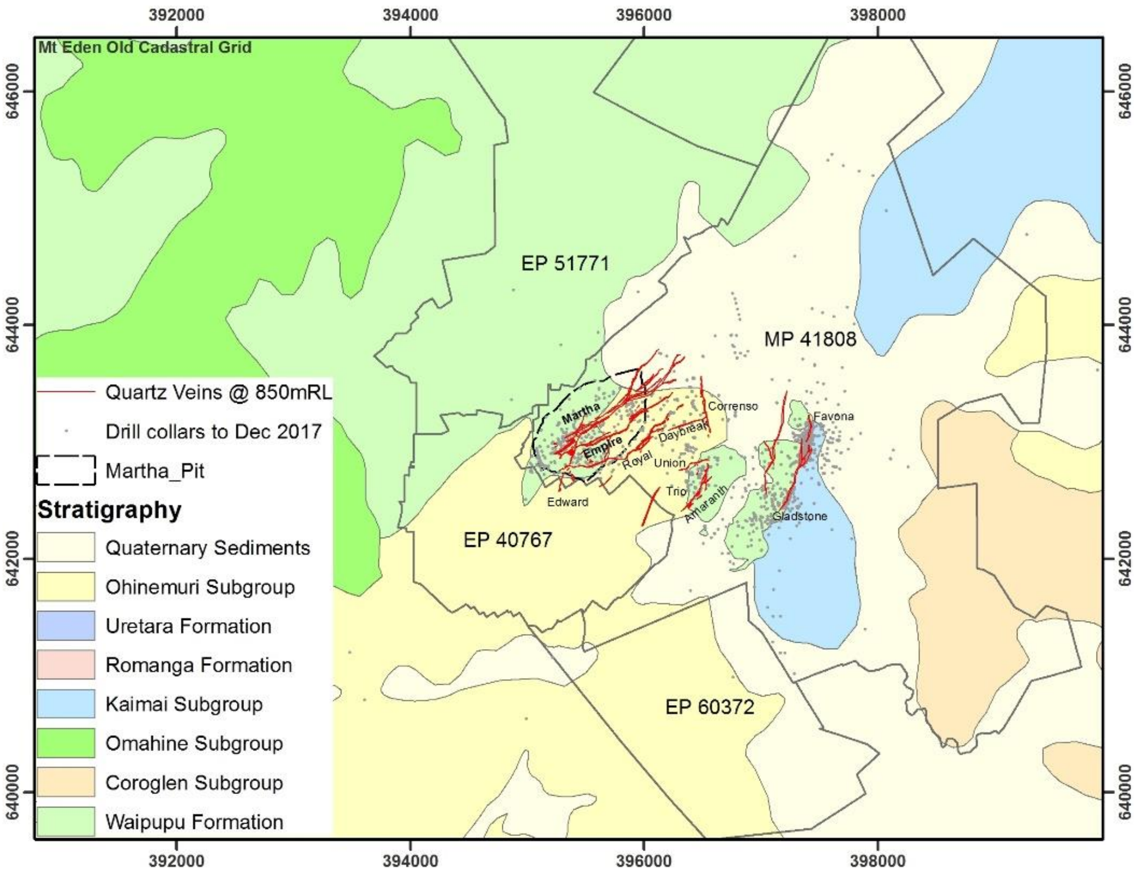
Criteria	JORC Code explanation	Commentary
		Figure 2.3: Drill Hole Location Plan 

Figure 2.4: Plan View of Martha Underground Resources, recent drilling and target areas

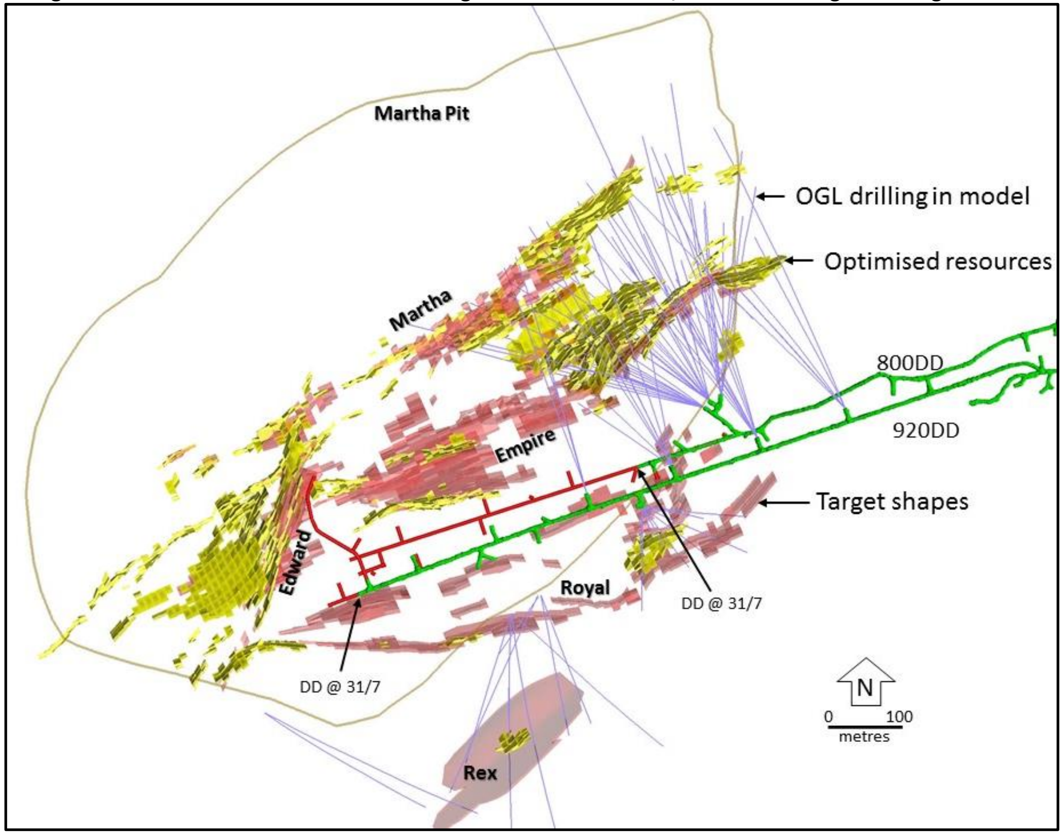


Figure 2.5: Oblique view of Martha Underground Resources and target areas

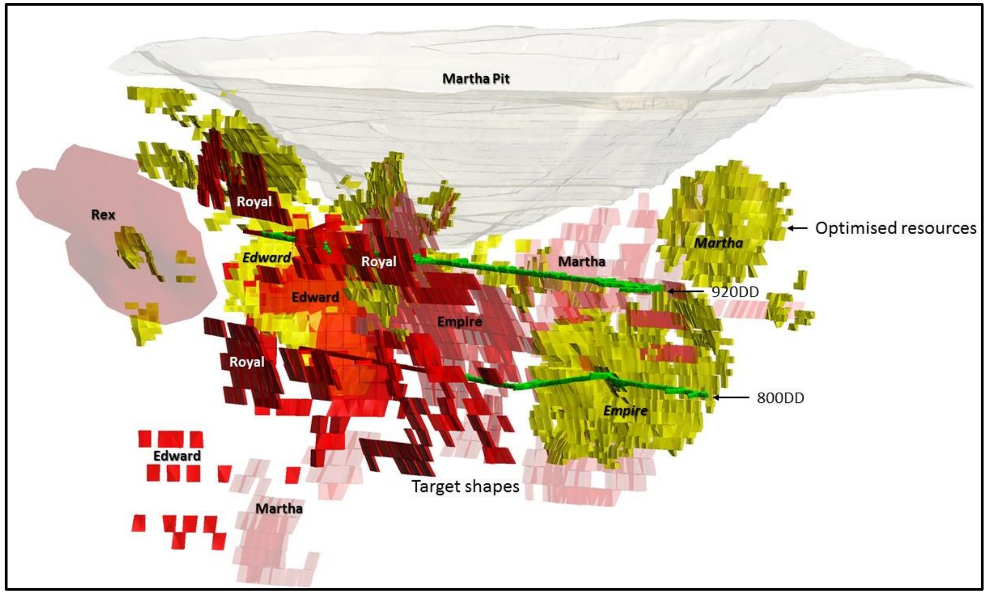


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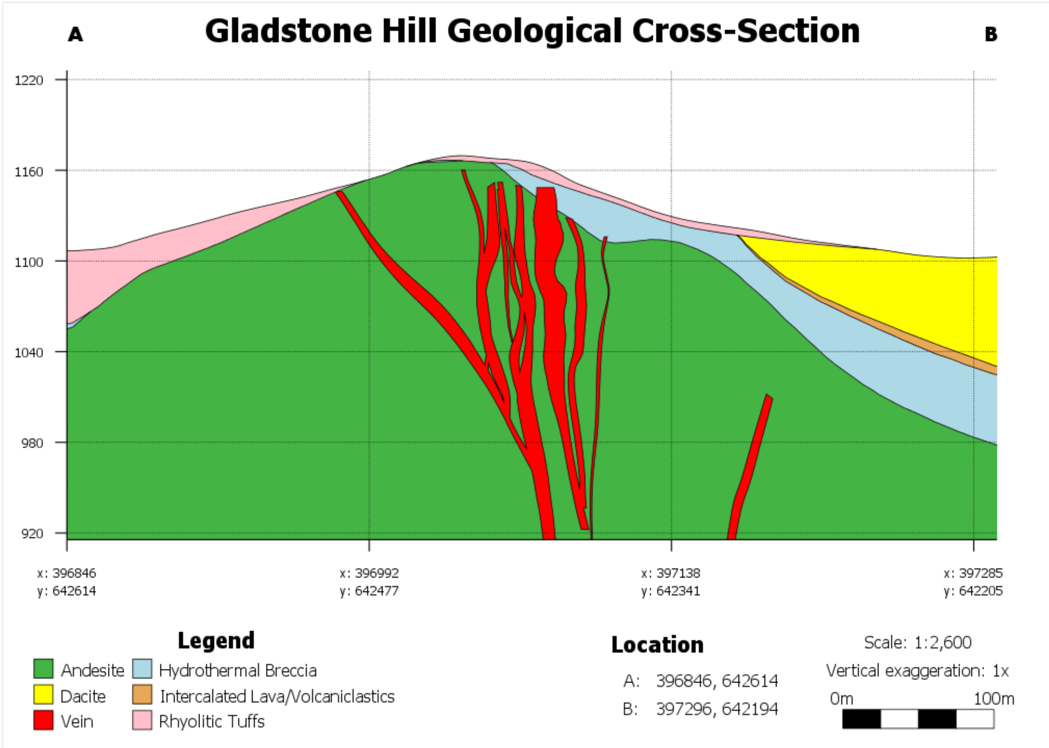
Figure 2.6: Geological Cross Section, Gladstone Project



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<tr><td>Balanced reporting</td><td>

- *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.*

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- 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.

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Criteria	JORC Code explanation	Commentary
Other substantive exploration data	• *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.*	• Exploration drilling is continuing throughout the Waihi Epithermal Vein camp on MP 41808, EP 51771, EP 60372 and EP 40767.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Current drill programmes are planned to complete ~50km's of diamond drilling for the calendar year 2018. • This drilling is comprised of infill on known veins and step out on known veins (95%) and exploration in areas adjacent to known mineralisation (5%). Exploration drilling proposed for 2018 is designed to test extensions of known mineralisation and untested margins of the gravity high associated with the Waihi Deposits where there is potential for the discovery of significant new mineralised vein deposits.

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	• *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.* • *Data validation procedures used.*	• Drill hole data is initially captured in an Access Database used for drill hole planning and management. That data is validated by several inbuilt data-entry checks. • The data is imported from Access into the main AcQuire database interface which includes validation protocols. • Personnel are well trained and routinely check source versus input data during the entry process.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• 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. In preparation for the Martha Underground model, Group Geologist Tim O'Sullivan was consulted with regards some technical considerations in the construction of the model. Past Group Geologist Mike Stewart has also been widely consulted in the construction of various other models that contribute to the combine Waihi Resource.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding*	• 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. • The geologic interpretation processes utilised in construction of all Waihi Models 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. • For production grade control modelling structural data is 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 drill holes in Vulcan® and additional control points are

Criteria	JORC Code explanation	Commentary
	and controlling Mineral Resource estimation. • *The factors affecting continuity both of grade and geology.*	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 to small-scale, localized, parallel or sub-parallel veins / stringers rather than being attributed to contamination or a cross-cutting structure. • Geological modelling of the Martha Underground project was performed in Leapfrog Geo 4.2.1 using the interval selection and vein systems tools. The project was linked directly to the ADMWAIHIEXP AcQuire database using the AcQuire API. • Key geological features are interpreted from a combination of spatially referenced Logging, Assay and Mapping data. Domain-specific grade and geological continuity characteristics were created to create representative wireframes of vein structures. The following data sources contribute to final wireframe shapes: ○ Exploration drilling data – Diamond and rare RC ○ Open Pit Grade Control channel samples and RC samples ○ Historic Quartz Vein Mapping ○ Historic mining triangulations ○ Surface mapping ○ Full width historic x-cuts ○ Core Photography and Logs • Diamond drilling intersects were assigned to structures from a merged assay and geology table. Discrete colourmaps were used to ensure that only distinguishing features were selectable. Criteria commonly used to determine inclusion within a vein include; ○ Au and Ag values ○ VnQtz% ○ Lithcomp - commonly Q, QC ○ Lithtype including void intercepts (STF, STO, CAV, OPEN) ○ Brecciation type and intensity

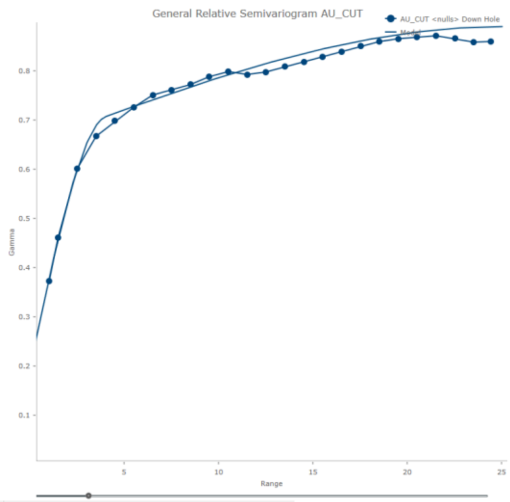
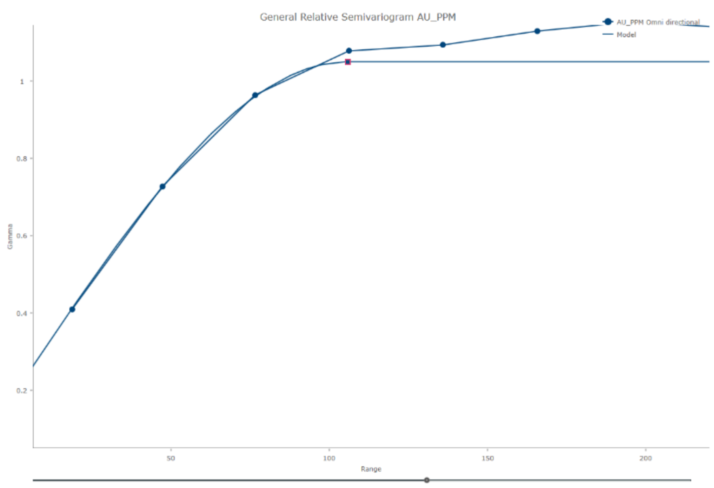
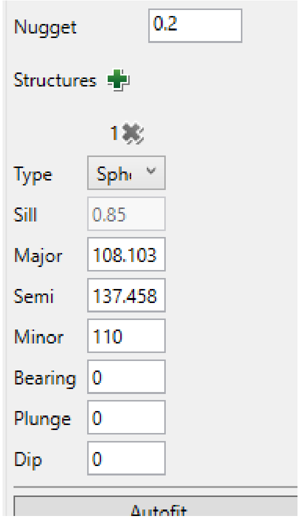
Criteria	JORC Code explanation	Commentary
		• Filters of were commonly applied to identify primary structures within dense data. These were modified on a vein-by-vein basis and compared to core photography to establish geological consistency between veins. • A structural database was constructed using the structural modelling functions in Leapfrog Geo. Oriented discs were used to inform intercept relationships, with structure type, thickness and measurement confidence commonly used as filters. • The digital core photographic record is used extensively during the modelling process. Identifiable characteristics of veins can be recognised, such as mineralogical and textural characteristics, the nature of 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. • 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.
Dimensions	• *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.*	• The Correnso Model was split into the Upper, Main, and Deeps – block definition is as follows: ○ corr_res_20161031_Upper.bdf ○ Parent cell size 1.0m X, 5.0m Y, and 5.0m Z ○ Sub block size 0.5m X, 1.0m Y, and 1.0m Z ○ Offset in X direction 150m ○ Offset in Y direction 500m ○ Offset in Z direction 100m ○ Origin: X 396500; Y 642900; Z 900 ○ Rotation: Bearing 080; Plunge 0; Dip 0 ○ corr_res_20161031_Main.bdf ○ Parent cell size 2.0m X, 10.0m Y, and 10.0m Z

Criteria	JORC Code explanation	Commentary
		○ Sub block size 0.5m X, 2.0m Y, and 2.0m Z ○ Offset in X direction 350m ○ Offset in Y direction 950m ○ Offset in Z direction 200m ○ Origin: X 396400; Y 642700; Z 750 ○ Rotation: Bearing 085; Plunge 0; Dip 0 ○ **corr_res_20170803_Deeps_2MD.bdf** ○ Parent cell size 2.0m X, 10.0m Y, and 10.0m Z ○ Sub block size 1.0m X, 2.5m Y, and 2.5m Z ○ Offset in X direction 300m ○ Offset in Y direction 900m ○ Offset in Z direction 320m ○ Origin: X 396450; Y 642750; Z 500 ○ Rotation: Bearing 085; Plunge 0; Dip 0 • Block definition for the Daybreak Model is as follows: ○ DB_20171204.bdf ○ Parent cell size 5.0m X, 2.0m Y, and 5.0m Z ○ Sub block size 1.0m X, 0.5m Y, and 1.0m Z ○ Offset in X direction 550m ○ Offset in Y direction 300m ○ Offset in Z direction 300m ○ Origin: X 396100; Y 642900; Z 720 ○ Rotation: Bearing 070; Plunge 0; Dip 0

Criteria	JORC Code explanation	Commentary
		• Block definition for the Empire / Christina Model is as follows: ○ gem_20171215_res.bdf ○ Parent cell size 5.0m X, 2.5m Y, and 5.0m Z ○ Sub block size 1.0m X, 0.5m Y, and 1.0m Z ○ Offset in X direction 800m ○ Offset in Y direction 550m ○ Offset in Z direction 300m ○ Origin: X 396250; Y 642950; Z 640 ○ Rotation: Bearing 040; Plunge 0; Dip 0 **Martha Underground–** r0618_MUG_fnl.bdf The block model was constructed in Mt Eden old grid. ○ Origin: X 395150; Y 642330; Z 500 (Mine Grid) ○ Rotation: Bearing 065; Plunge 0; Dip 0 ○ Parent cell size 5.0m X, 5.0m Y, and 5.0m Z ○ Subblocking cell size 2.5m X, 2.5m Y, and 2.5m Z ○ Offset in X direction 1600m ○ Offset in Y direction 900m ○ Offset in Z direction 700m • Block definition for the Gladstone deposit ○ r0218_GLOP_small_reg.bdf ○ Regularised block model – cell size. 2.5 m ○ Offset in X direction 400m ○ Offset in Y direction 800m ○ Offset in Z direction 300m ○ Origin: X 396600: Y 642200: Z 900.0

Criteria	JORC Code explanation	Commentary
		○ Rotation: Bearing 135; Plunge 0; Dip 0
Estimation and modelling techniques	• *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.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining*	• 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. • MineSight® software version 9.10-01 is used to construct the Martha Phase 4 Open Pit model. The estimation technique discussed is considered to be appropriate. • Vulcan® software version 10.1.5 was used to construct the Martha model. The estimation technique discussed is considered to be appropriate. **<u>Grade Capping</u>** Historically top cuts for Waihi veins have been selected from inflections in the data above the 98th 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. The Martha Underground estimate is based on an Ordinary Kriged Estimation plan and based on comparative assessment of the Ordinary Kriged outputs a top-cut % of 99 has been adopted for kriged estimates. The metal removed analysis includes tabulation of the following: ○ Number of samples above the cap ○ Percentage of samples above the cap ○ Minimum, maximum, mean, and variance of samples above the cap ○ Mean and variance of uncapped data ○ Mean and variance of capped data ○ Capped % difference: $\frac{(\text{uncapped mean} - \text{capped mean})}{\text{uncapped mean}} \times 100\%$ ○ Contribution of the samples above the cap to the uncapped variance: $(\text{mean above the cap} - \text{uncapped mean})^2 \times \frac{\text{\% of data above the cap}}{\text{uncapped variance}}$ ○ Contribution of the samples above the cap to the total metal:

Criteria	JORC Code explanation	Commentary
	units. • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	$$(\% \text{ of data above the cap}) \times \frac{\text{mean of data above cap}}{\text{uncapped mean}}$$ • 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. • Grade capping for underground domains is applied on a domain by domain basis, based on site experience and analysis of previous reconciliation data. **Variography** • Down hole and directional variography are typically run using Snowden Supervisor v7 software. Variograms are run 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). The best variography is obtained for the Martha deposit when un-domained data is utilised, Variogram orientation is defined for each domain based on the strike and dip of the veins as modelled. Both downhole and omni-direction variograms have been defined that fitting of a variogram model. The variogram structure is defined using a standardised spherical single structure model with parameters as follows

Criteria	JORC Code explanation	Commentary
		   **<u>Estimation / Interpolation Methods</u>** • Sub-blocking with inverse distance weighting to the second power (ID2) or third power (ID3) methods are used for all underground production models. With the data density which exists in Correnso, Daybreak, the

Criteria	JORC Code explanation	Commentary
		Empire – 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. • 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. • The Correnso and Martha 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 drill hole data only with longer search ranges to estimate blocks not estimated in the first pass. • Gladstone grade estimation is undertaken using similar methodology as that used for Correnso with the exception being the use of regularised blocks. Gladstone deposit veins are interpreted using Leapfrog software. Vein and geology wireframes are then utilised to construct a block model within Vulcan. Drilling data is then length composited within the vein wireframes and lithological units and grade estimates are prepared utilising unfolding and ordinary kriging. Nearest neighbour and Id2 estimates are also prepared for validation and assessment. The grade estimation 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 data; • Veins for the Martha underground model were interpreted using Leapfrog software. Vein and geology wireframes were then utilised to construct a block model within Vulcan. Compositing of data for grade estimation is within distinct geological boundaries. For this model the vein domains were estimated using Ordinary kriging and tetra unfolding was employed to deal with complex vein geometries and to aid in resolution of the grade distribution and sample selection for the estimation.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Estimates of tonnage are prepared on a dry basis.

Criteria	JORC Code explanation	Commentary
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	**Correnso and Associated Veins** • Underground mining cut-offs were based on a gold price NZ$1806, mining costs of NZ$90 / ore tonne and processing costs of NZ$68 / tonne. • Cut-off grades applied to the underground mine are shown in the Table 3.1 below: **Table 3.1: Underground Cut-offs Used** Area / Stoping / Ore Development: Correnso, Daybreak, Empire, Correnso Deeps, Trio Deeps, Christina. / 2.9g/t / 3.1g/t ***Martha Underground Project*** • A cut-off grade of 3g/t has been used for the Martha Underground Resource mine design. • Cut off grades are estimated at a USD 1500 gold price and based on current (2017) processing costs of NZD 39/tonne, general and administration costs of NZD 14.4M per annum, current mining costs (including sustaining capital development) of NZD112 / resource tonne. Additional mining costs of NZD 25 / resource tonne have been allowed for to cater for increased drilling and blasting costs around historical workings using the side ring method and for backfilling historical shrinkage stopes. ***Martha Open Pit*** A cut-off of 0.5 g/t has been utilised for Open Pit Mining in Waihi. Current economic modelling is on this basis however final consent conditions and the respective impact on the cost model will be used to reassess economic cut-off grade prior to recommencing Open Pit Mining Operations There are no Inferred Resources in the Martha Open Pit. ***Gladstone Open Pit*** • In the Optimisation, the minimum cut–off grade is fixed at 0.5 g/t to represent a minimum operational cut-off

Table 3.1: Underground Cut-offs Used

Area	Stoping	Ore Development
Correnso, Daybreak, Empire, Correnso Deeps, Trio Deeps, Christina.	2.9g/t	3.1g/t

Criteria	JORC Code explanation	Commentary

		grade.
		• Cut-off grades are calculated based on rock type as the cost of processing divided by the equivalent price multiplied and process recovery.
		• The equations developed in the study were based on a gold price of USD 1500/oz. and silver price of USD20/oz.
		• For the optimisation, the equivalent gold price was estimated at NZD 68.05/gm, the cost of processing at NZD 33.73/t and process recoveries developed from regression analysis of testwork. The process recovery relationships are shown below:
		• Weathered resources at 90micron grind:
		  ○ $\text{Au grade x } 68.05 \text{ x } (0.902 \text{ x Au grade} - 0.049) / \text{Au grade} = 33.73$
		• Un-weathered resources at 90micron grind:
		  ○ $Au\ grade\ x\ 68.05\ x\ (0.85\ x\ Au\ grade\ - 0.452) / Au\ grade = 33.73$
		• Cut-off grade for breccia resources 0.67 based on a fixed recovery of 74%.
		• Cut- off grades for weathered and un-weathered resources are as shown in Table 3.2:
		Table 3.2: Gladstone Pit Cut-offs Used
		<table><tr><th>Area</th><th>Cut-off grade</th></tr><tr><td>Weathered mineral resources</td><td>0.61 g/t</td></tr><tr><td>Un-weathered resources</td><td>1.12 g/t</td></tr><tr><td>Hydrothermal breccias</td><td>0.67 g/t</td></tr></table>

Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	• *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.*	**<u>Correnso and Associated Veins</u>** • Mining options available for Correnso and associated veins are limited because of the consent conditions, specifically relating to blasting vibration limits and backfill constraints. Long-hole bench mining (Avoca) with waste rock backfill was selected as the preferred mining method for extraction of Correnso with overhand cut and fill in areas particularly sensitive to vibration. Other supplementary methods involve floor benching. • 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. ***Hydrogeology*** • 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. • 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. • 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 (730mRL) by the current underground pumping system. Further drawdown of the water table is required at a rate of 10,000 to 12,000m^3/d to extract the Correnso Mineral Resource. • Permits are in place for the drawdown of the water table to 700mRL. 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 established at 790mRL which pumps direct to the water treatment plant. 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. ***Geotechnical*** • Geotechnical studies were completed by various external consultants (Engineering Geology Ltd, Entech, SRK, Laurie Richards and Beck Engineering) during the Waihi Correnso study.

Criteria	JORC Code explanation	Commentary
		• 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 rock quality classifications. • 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 vein zone as exposed on 795 and 810 is heavily structured with sugary quartz /calcite veins but overall ground conditions are classed as Good. • Overall both the host rock and vein 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. • 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. ***Mining Recovery and Dilution*** • 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. • Stopes are designed with nominally 0.5m dilution applied on both the footwall and the hanging wall. This is based on experience gained when stoping Correnso, Trio, and Favona orebodies. • Tonnage recovery factors shown in the table following for stoping include in-situ ore, plus dilution material. Metal recovery factors consider 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 the ore.

Table 3.3: Tonnage Recovery Factors

Activity	Tonnage recovered	Metal recovered
Lateral Development — Capital Waste	100%	-
Lateral Development — Operating Waste	100%	-

Criteria	JORC Code explanation	Commentary

Lateral Development — Operating resource	100%	100%
Vertical Development — Capital Waste	100%	-
15m high Long Hole Stope (includes 5% fill dilution at zero grade)	108%	95%

- Underground resource is trucked to the ROM pad and underground waste will generally be directly hauled to stope fill or to the surface waste dump as required and subsequently returned to the underground as backfill.

Martha Underground Project

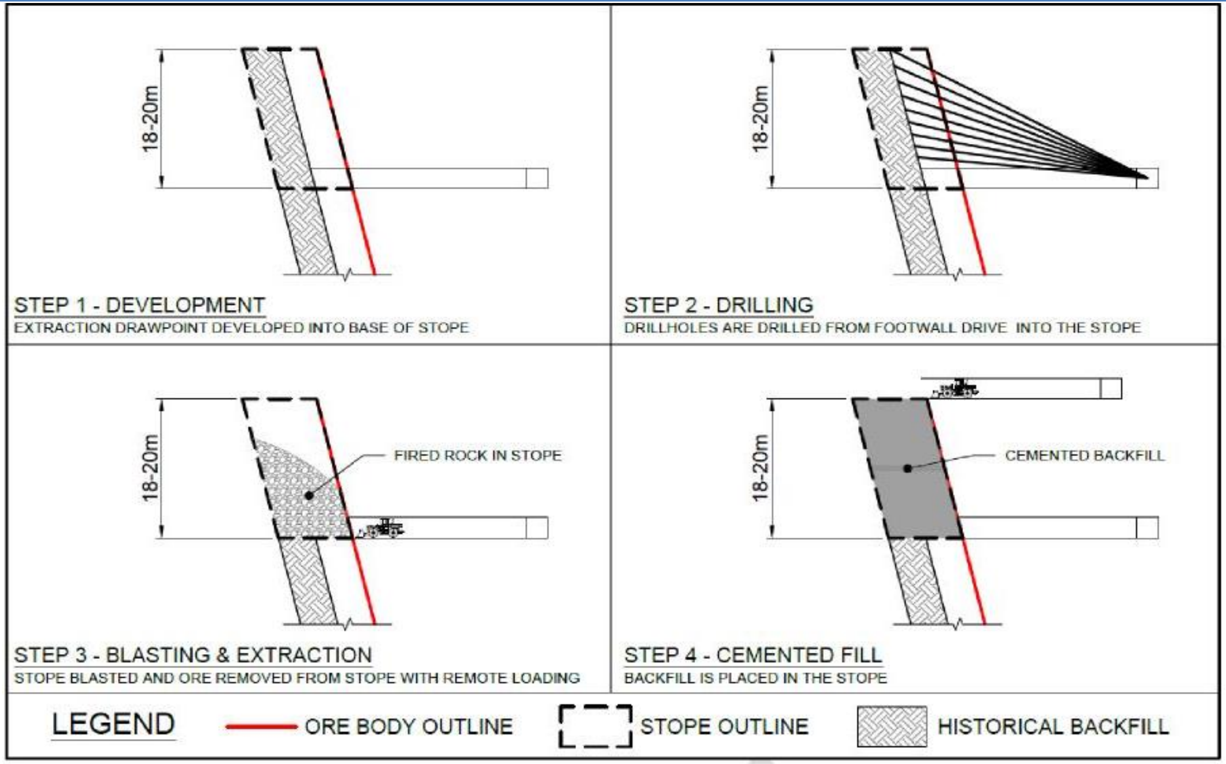
Hydrogeology

- GWS Limited Consulting (GWS) have modelled the groundwater system in Waihi since the late 1980's. A specific groundwater model was prepared for the Martha Underground Project and a technical report issued.
- GWS concluded that:
  - The ore body to be mined comprises near-vertical quartz veining with relatively elevated permeability and storage within an Andesite rock mass of lower permeability and storage. Vein and fault intersections provide interconnections between Martha, Trio and Correnso mines. These intersections have been enhanced by mine developments.
  - Because of the interconnections, dewatering of one vein also dewaters the interconnected veins to a similar elevation, but the Andesite rock mass surrounding and between the veins is dewatered to a lesser degree such that steep hydraulic gradients develop between the veins and the rock mass.
  - While the current dewatering level of the Martha, Trio and Correnso vein systems is at approximately 730 mRL, historical dewatering has been undertaken to approximately 540 mRL and with the proposed Martha Underground Project to extend to 500 mRL only some 40m of previously non-dewatered ground would be dewatered.
  - An estimate of the expected averaged daily pumping rates to dewater range from 14,000m^3/day to 16,700m^3/day.
  - Monitoring data collected over the period since dewatering began in the late 1980s has indicated no adverse effects on shallow groundwater or baseflow to surface waters. This is, largely, a consequence of the perched nature of the surface water bodies in the shallow groundwater system. The proposed deepening will have no additional effect to surface waters than that already experienced.

Geotechnical

- Ground conditions within the Martha Underground Project will be impacted due to proximity to historic mining

Criteria	JORC Code explanation	Commentary
		voids. Mechanisms for mitigating the associated risks will be considered as part of the project scoping study to be undertaken in the coming year. • PSM reported on the effect of the Martha Underground Project on the Martha Pit wall stability and concluded that the Martha underground will run in parallel with the Martha Pit and this will have several benefits: o A proportion of the existing unfilled historical stopes will be stabilised by filling with rockfill and half of these lie in the upper levels immediately below the Martha Pit. o A proportion of the total planned mining is re-mining of historical stopes, it will be mining from the top down, a very large proportion of these lie immediately below the Martha Pit; and cemented aggregate fill will be used extensively in this mining. o These two factors will result in a significant improvement in overall rock mass conditions; firstly, by improving pit stability conditions both in the short and long term, secondly by reducing any impacts of the Martha underground mining and thirdly by reducing the longer-term creep of the rock mass around the historical underground. • AMC investigated the stability of the underground workings and reported that based on the current understanding of ground conditions, the planned ongoing investigation of conditions as suitable drilling positions become available, and the proposed cautious approach to development using close ground control techniques where required, AMC is confident that the proposed Martha underground mine can be developed and brought into production without any compromise to underground or surface stability. • AMC reported that the ground conditions influence the mining method, the means of access, and the design of stopes and access tunnels. A critical aspect of the Martha Underground Project is to undertake investigations to understand those conditions so that a safe and efficient mining method and well-informed approach to developing the mine is used. ***Mining Method*** • Mining method selection work for the Martha Underground Project was undertaken by SRK in 2011 and confirmed in 2016 and 2017. The Mineral Resource has applied the same recommended mining methods recommended by SRK. • A proportion of the Mineral Resource inventory will involve the extraction of remnant ore skins in the footwall or hangingwall of previously mined stopes, or the extraction of both remnant ore skins and historical backfill (which contains economic gold grades). This mining method utilising remote drilling and loading methods, combined with remote LHD equipment for ore extraction from remnant mining areas. This method involves additional waste development adjacent to the remnant stopes, which increases overall development quantities and mining costs. SRK conclude that once established, the method is expected to achieve acceptable ore recovery with few safety issues anticipated. The proposed mining method is illustrated in Figure 3.1.

Criteria	JORC Code explanation	Commentary
		 **Figure 3.1 Side Ring Mining Method** ***Mining Recovery and Dilution*** • SRK have undertaken mining studies on the Martha Underground Project since 2011 and these studies have been referenced to develop the mining recovery and dilution factors. • The stope designs were designed inclusive of the hangingwall and footwall over break. The fill dilution has been calculated as a fixed percentage and has no grade attributed. • The over-break distances applied in the design and calculations are presented in Table 3.4. These were based on the work completed by SRK which considered the geotechnical conditions and blast hole orientations in the calculations. No dilution has been applied to the development.

Criteria	JORC Code explanation	Commentary
		Table 3.4: Mining Dilution Parameters

Stope Type	HW over break (m)	FW over break (m)	Fill dilution (%)	Source
Backfill / Remnant	1.0	-	5	2011 SRK Study
Remnant	1.0	-	5	2011 SRK Study
Virgin	1.0	0.5	5	Assumed same dilution as Remnant Stopes

- SRK recommended the estimated ore recovery factors shown below as appropriate for the mine design. These mining recoveries, presented in Table 3.5, are based on the expected degree of mining difficulty, particularly with drilling and blasting operations for the remnant mining areas. While these estimates are based on considerations that cannot be quantified, SRK believe these factors are reasonable and are neither overly conservative nor overly optimistic.

Table 3.5: Mining Recoveries

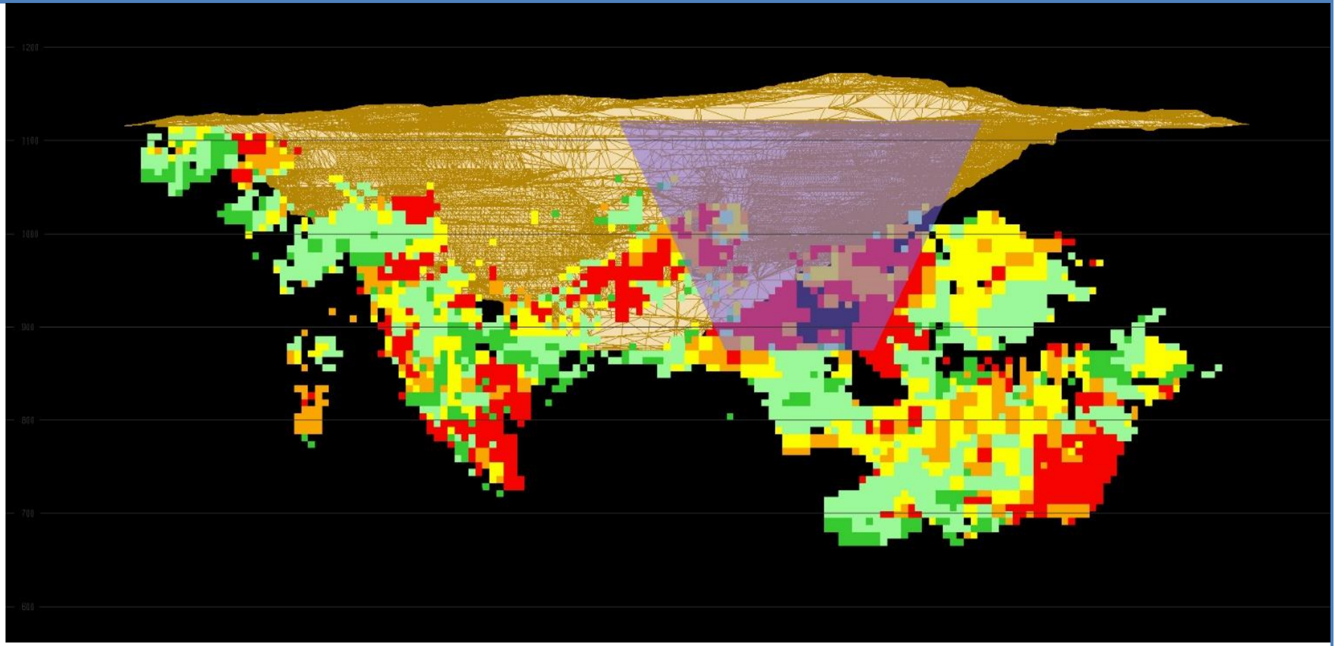
Stope Type	Unit	Mining Recovery	Source	Comments
Backfill/Remnant Stopes	%	60	2011 SRK Study	Side Ring Method
Remnant Stopes	%	75	2011 SRK Study	Side Ring Method
Virgin Stope	%	90	2011 SRK Study	Avoca stoping

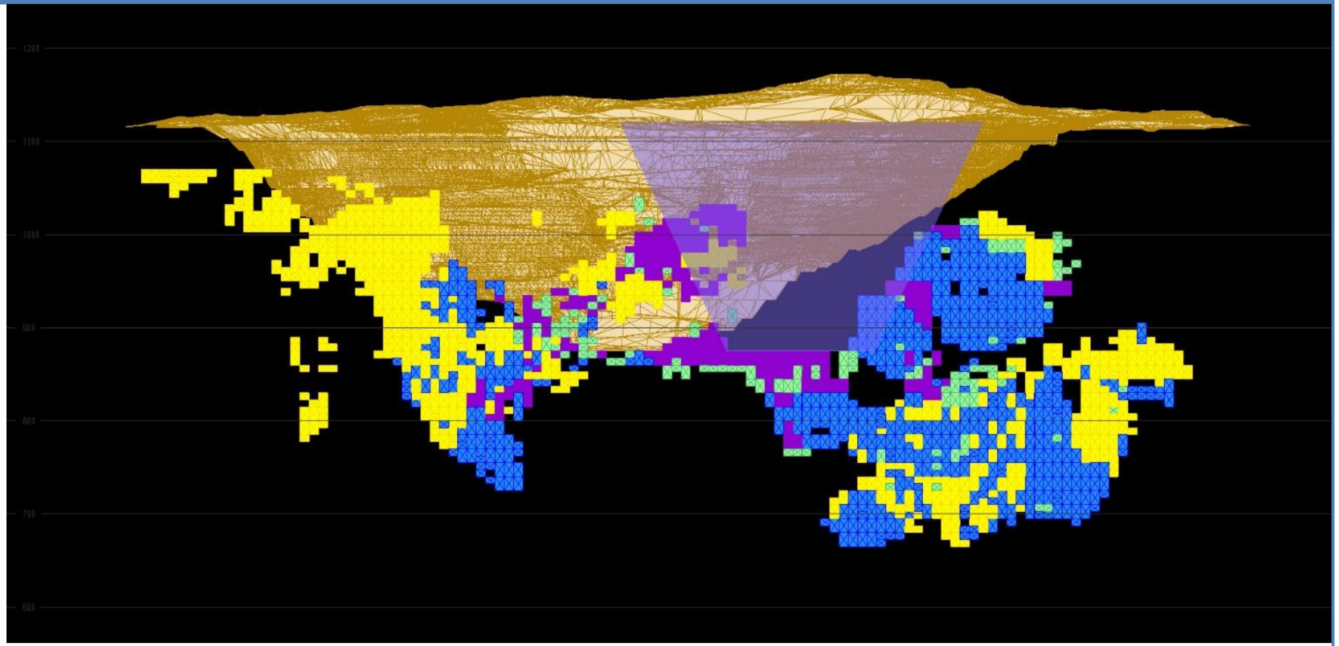
Mineral Resource Estimate

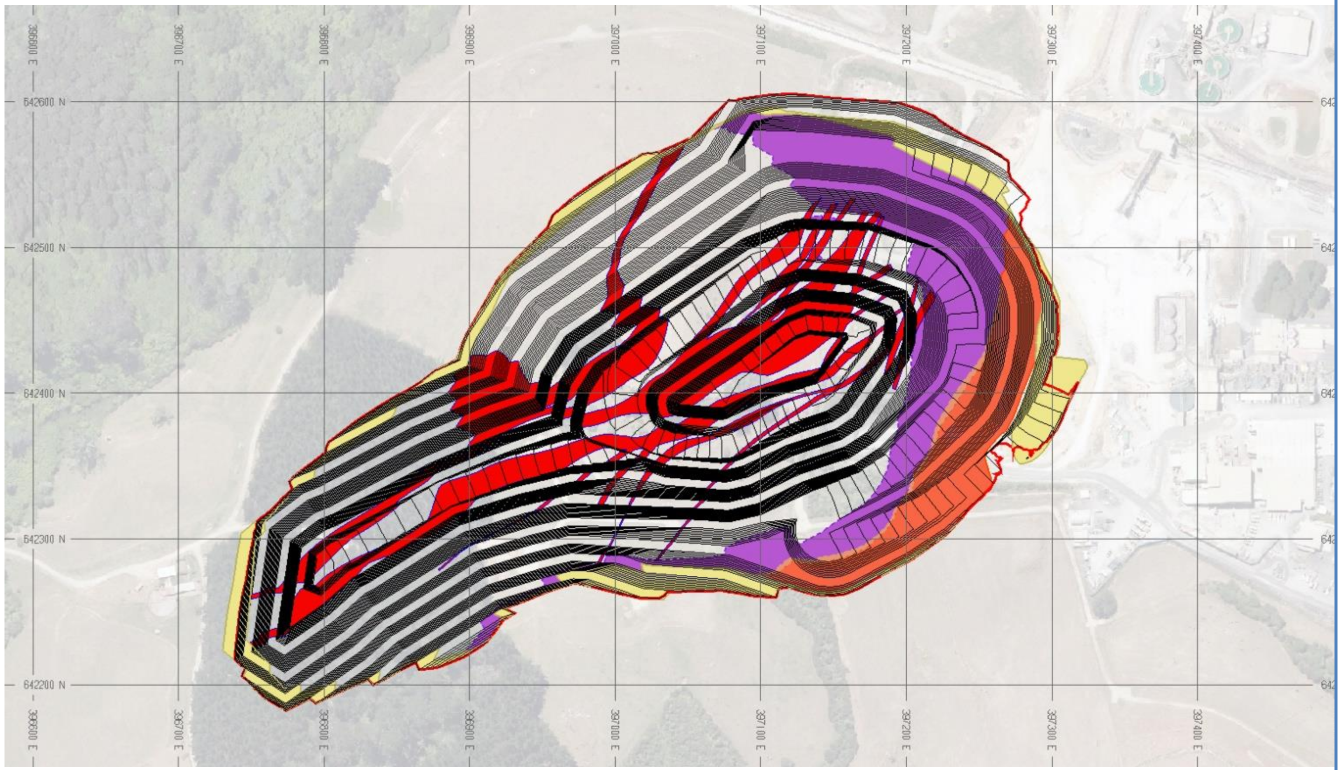
- OceanaGold has estimated the Mineral Resource using the Alford stope optimiser. All stope shapes were created automatically using MSO (Mineable Shape Optimiser).

Criteria	JORC Code explanation	Commentary
		• Nominal stope dimensions of 15m high by 10m in length were selected for the design. • A small number of sub shapes of 15m high by 5m long were also included where these could form part of a larger stoping block. • Stope widths vary, depending on the thickness of the mineralisation. A minimum stope width of 3 m was used for the side ring drilling method (for remnant mining) while a minimum width of 2 m was used for the Avoca bench mining method. • A maximum stope width of 15m was used with a minimum pillar width between stopes of 8m. A maximum percentage of historical stoping of 10% was allowed in each MSO shape. • The method of specifying the strike and dip angles for the initial stope-seed-shapes in MSO was to apply a stope control surface wireframe over the full extent of the orebody where stope shapes are to be generated. • Stope control surfaces were generated in Minesight and the medial surface generation tool was applied to the hangingwall and footwall vein surfaces of each lode resulting in separate medial surfaces for each lode. These surfaces were then combined into a single wireframe file and used inside MSO as a stope control surface. • Figure 3.2 present the MSO shapes prior to exclusion based on geotechnical and economic assessment. Stopes between 3 and 4 g/t are shown in green, between 4 and 5 g/t light green, between 5 and 6 g/t in yellow and between 6 and 7g/t in orange and plus 7g/t in red.

Criteria	JORC Code explanation	Commentary

		
		Figure 3.2 Martha Underground MSO shapes
		• Stope shapes from each MSO run were manually inspected for proximity and any isolated stopes removed.
		• The following stopes were manually excluded from the Mineral Resource estimate:
		  ○ Stopes closer than 50m from the surface.
		  ○ Within a solid created as an exclusion solid around the historical “Milking Cow” zone by projecting the base of the cave zone outwards by 20 m and projecting it upwards at an angle of 65° from horizontal.
		  ○ All stopes intersecting the base of the Martha Reserve pit.
		• Figure 3.3 present the MSO shapes after exclusion based on geotechnical and economic assessment. The yellow stopes represent Avoca stopes and blue / purple stoping around historic remnant stopes.

Criteria	JORC Code explanation	Commentary
		 **Figure 3.3 Martha Underground Mineral Resource Long Section** **<u>Martha Open Pit</u>** There are no Inferred Resources in the Martha Open Pit. **<u>Gladstone Open Pit</u>** • The Gladstone Resource is reported within a conceptual pit shell defined using a USD 1500 gold price, this resource is largely indicated however approximately 10% of the contained metal within the Resource reporting pit shell is classified as inferred. • The method for estimating the Mineral Resource involved a 2018 pit optimisation study using the “Whittle” Lerch-Grossman algorithm to determine the economic limits. • Operating costs were estimated based on contract rates for the Martha open pit conventional drill, blast, load and haul with standard mid-sized mining equipment. The selected mining method and design is appropriate for the Gladstone open pit. • Allowances in the costs estimates were made for separating waste into hard and soft material and further

Criteria	JORC Code explanation	Commentary
		categorised into potentially acid forming or non-acid forming rock and placing in engineered structures. • Capital costs allowed for relocating the underground portal and installation of a crushing facility. • The conceptual pit design in shown in Figure 10.  **Figure 3.4: Gladstone Open Pit Conceptual Design** • Ore is planned to be trucked 0.25 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 planned to be trucked direct to the Waste Development site and used for construction of the Tailings Dams or placed in an engineered rock stack.

Criteria	JORC Code explanation	Commentary

Hydrogeology

- Two aquifers are interpreted across the site, an upper aquifer within the surficial materials and young volcanics, and a lower aquifer within the andesite with the two aquifers partially separated by the lower permeability, weathered and hydrothermally altered cap at the top of the andesite sequence.
- The model at Gladstone comprises:
    - An upper perched groundwater system within the surficial materials of moderate to low hydraulic conductivity, with pore pressures below hydrostatic and a standing water level at ~1096mRL with seasonal fluctuation;
    - A lower groundwater system in the Andesite with a standing water level of approximately ~1075mRL.

Geotechnical

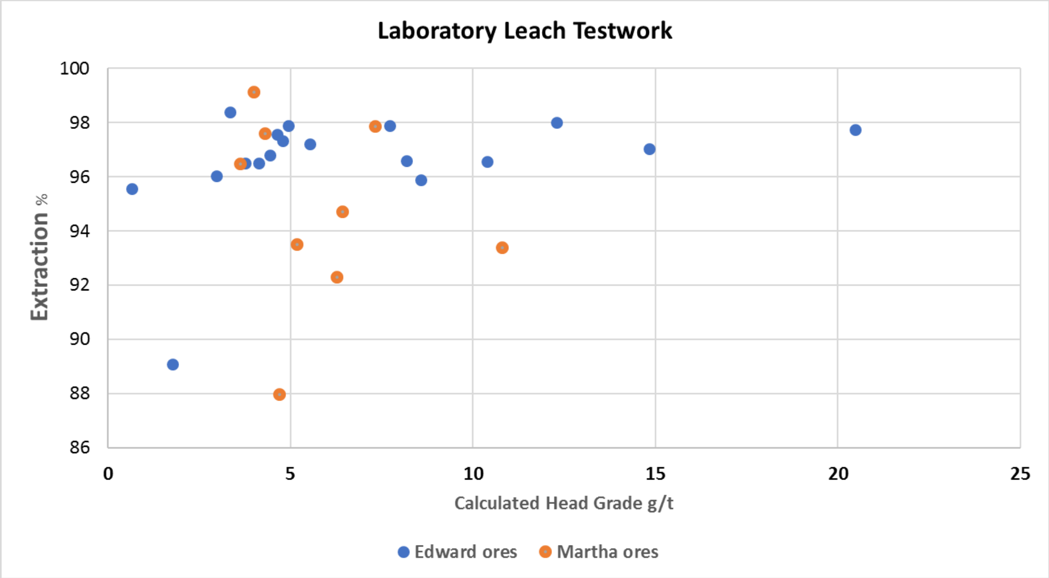
- Geotechnical studies during 2017 on preliminary design concepts including geotechnical drilling, rock / soil testing and detailed core logging showed that the slopes in the Winner Hill pit and the northern slopes in Gladstone Hill were generally satisfactory under fully saturated or partially drained conditions. However, the southern and eastern upper slopes were shown to be marginally stable under fully or partially saturated conditions particularly where there was a significant depth of the surficial deposits.
- The geological model shows the north-western wall will comprise andesite, overlain by a thin band of hydrothermal breccia and a relatively thin sheet of rhyolitic tuff/ignimbrite thickening to the south. The south-eastern wall has a thicker band of rhyolitic tuff/ignimbrite and hydrothermal breccia overlying andesite; and the east wall has the greatest thicknesses of dacite and volcaniclastics.
- Design pit slopes were modified based on a detailed geotechnical study completed by PSM in early 2018 including three additional geotechnical holes and geotechnical modelling. Geotechnical domains were re-defined based on the recent analysis. The design criteria used to support calculation of Mineral Resources are reported in Table 3.6 below.

Table 3.6: Slope Design Criteria to Support Calculation of Mineral Resource

Pit Design Parameter	Bench Height m	Face Slope degrees	Berm Width m
Gladstone Pit			
• 1040 to 1100	15	60	5
• 1100 to 1140	10	40	5

Criteria	JORC Code explanation	Commentary
		• Breccias / Dacites | 10 | 40 | 5 • Surface to 6m depth | 35 Haul Road Width | • 20m wide @1 in 10, surface to 1070, • 12m wide @ 1 in 9 to 1040 **Winner Pit** • 1060 to 1085 | 15 | 60 | 5 • 1085 to 1100 | 15 | 55 | 5 • 1100 to 1130 | 10 | 55 | 5 • Surface to 8m depth | 30 Haul Road Width | 18m wide 1 in 10 ***Mining Recovery and Dilution*** • The minimum mining width has been set at 2.5 metres wide. The selective mining unit developed for the geological block model is a bench height of 2.5metres, and east west dimension of 2.5 metres and north south dimension of 2.5 metres with orientation reflecting the main trend of the mineralised veins in an east westerly direction. • The mineral resource zones are broad on each mining bench, and the overall dilution edge effects are minimal, with the result that there is expected to be 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. • No mining losses were applied. It is considered that the resource estimation technique applied to the broad mineral resource zones provides an adequate estimate of the Mineral Resource tonnes and grades. Reconciliation data from mining the Martha open pit also supports this approach.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining*	**<u>Correnso and Associated Veins</u>** • 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. 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

Criteria	JORC Code explanation	Commentary
	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 of the metallurgical assumptions made.	configuration. This test work has shown the Correnso mineral resources to be amenable for processing via the existing Waihi gold treatment plant flow-sheet. • A grind size P_{80} 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_{80} 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. • It is determined that a grind size P_{80} of 53 microns is the optimum that maximizes value for the Correnso resource. • Recovery is estimated from test work. Recovery is calculated based on the arsenic relationship with gold grade. Recovery at 88tph throughput is estimated at: *Recovery % = [Au Head grade – (0.09*Au Head grade + 0.25+0.02)] / Au Head grade * 100%.* • 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. • Both gold and arsenic have been identified as the statistically significant predictors for estimating residue grade for the Correnso Extensions resource. **<u>Martha Underground Project</u>** • Metallurgical test work has been completed on 30 composite samples of mineral resource intercepts from Edward (18) and Martha (9) and Welcome (1) and Empire East (2). Twenty-three samples were submitted to the Newmont Inverness testing facility. Six samples representing the Edward vein were submitted to Ammtec Laboratory in Perth. Samples were mostly submitted both as quarter core and as jaw crush reject material (95% <7mm), if both were available. • Leach tests showed a range of recoveries from 89% to 98% for the Edward mineral resources and 87% to 99% for Martha mineral resources, as shown in Figure 3.5 below where calculated head grade is plotted against recovery or extraction. • It was found that the recoveries of the Martha resources achieved a minimum of 90% leach extraction at a P80 of 53 µm across the 30 samples. This high base recovery indicates there may be less refractory gold in Martha mineral resources than Correnso. • Project work and metallurgical testing have shown Martha underground mineral resources to be amenable for processing via the existing Waihi gold treatment plant flow-sheet and achieve practicable throughput rates, reagent and consumable consumption and process recovery.

Criteria	JORC Code explanation	Commentary
		• A metallurgical recovery of 90% been used for the Mineral Resource calculation.  **Figure 3.5: Laboratory Leach Testwork Chart** **<u>Martha Open Pit</u>** There are no Inferred Resources in the Martha Open Pit. **<u>Gladstone Open Pit</u>** • Laboratory scale test work has been conducted on the drill hole samples obtained for the Gladstone Mineral Resource. 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 Gladstone mineral resource to be amenable for processing via the existing Waihi gold treatment plant flow-sheet. Recovery is shown to vary with the weathering extent of the Gladstone resource. • The weathered domain achieves higher recoveries than the primary un-weathered domain. Separate recovery relationships have been determined for the weathered and un-weathered domains. A small separate metallurgical domain characterised by the hydrothermal breccia host rock was also identified.

Criteria	JORC Code explanation	Commentary

		• A grind size of P_{80} of 90 microns has been selected, as plant operating experience has shown that this is equivalent to a laboratory gold recovery at a P_{80} of 75 microns. The gold and arsenic relationship identified in Correnso resource is not observed in the Gladstone Resource. The statistically significant drivers of recovery within the Gladstone resource are weathering and gold head grade.
		• The recovery estimate from the test work is calculated at a P_{80} of 75 microns
		  o Weathered: Recovery % = 100 * (0.902 – (0.049 / Head Grade Au))
		  o Un-weathered: Recovery % = 100 * (0.85 – (0.452 / Head Grade Au))
		  o Hydrothermal Breccia: Recovery % = 74%
		  o This relationship predicts an average recovery for the Gladstone Resource of 77.8% based on the average Mineral Resource grade of 1.99 g/t Au.

Environmental factors or assumptions	• *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.*	**Correnso and Associated Veins** • 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 underground mine and the Slevin extensions. • Environmental assessment studies were conducted by independent consultants as part of the Correnso underground project. The environment assessment reports are all independently reviewed by consultants employed by the Council regulators. • 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. • 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. • Vibration modelling has been completed for the Correnso 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 project and extensions can comply with the consent conditions. **Martha Underground Project** • During 2017 and 2018, environmental studies were conducted by independent consultants. Studies have included air quality, water quality and ecology, noise, blast vibration effects, traffic, potential for subsidence,

Criteria	JORC Code explanation	Commentary
		ground settlement in response to dewatering, property values, de-watering, and geochemistry of tailings, waste and groundwater • Consent applications for the project were lodged with the Hauraki District Council and Waikato regional Council on the 25th May 2018. The consent application described the Project and assessed the effects on land use and zoning, land ownership, existing and authorised mining activities, socio-economic context, cultural values, landscape context and character, transportation network, noise and vibration, geotechnical, hydrogeology, surface water, ecology, heritage values, significant trees, and air quality, meteorology and climate. • The consent application is likely to be publicly notified in August 2018, a hearing convened in late 2018 with a decision expected at the end of 2018 or early 2019. The consent application and associated technical reports have been placed on the District Council's website. • Consent conditions are likely to impose restrictions on blasting magnitudes and firing times, mine design, geotechnical monitoring and surface stability. **Martha Open Pit** • There are no Inferred Resources in the Martha Open Pit. **Gladstone Open Pit** • Gladstone project environmental studies have commenced, environmental factors are assumed to be in line with those previously experienced on site. • Studies have assumed that the rehabilitation of the Gladstone pit will require backfilling to the original topography with rock sourced from the Martha pit.
Bulk density	• *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.* • *The bulk density for bulk material must have been measured by methods that*	• 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. • Dry bulk densities for all deposits have been estimated using a water displacement method modified from NZS 4402: 1986, which is considered appropriate for competent half-core (Lipton, 2001). The method involves weighing the sample before and after a series of steps, which include oven-drying a drill core 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

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td>adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.
• Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</td><td>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 based on 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^3 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 default density used for the Correnso Resource model is 2.5 g/cm^3. Gladstone densities range from 2.0 to 2.5 g/cm3, densities are assigned based on geologic unit.
• A mean value of 2.53g/cm^3 was obtained from 634 measurements of Martha Underground vein samples. Within the resource estimate Stope fill is assigned a sg of 1.8g/cm^3. Collapse zones associated with the Milking Cow subsidence and the Pit failure have been assigned a density of 1.9g/cm^3.</td></tr>
<tr><td>Classification</td><td>• The basis for the classification of the Mineral Resources into varying confidence categories.
• 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).
• Whether the result appropriately reflects the Competent Person’s view of the deposit.</td><td>• 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.
<table>
<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>2nd estimation pass stockwork domain</th></tr>
<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>>60m</td><td>>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>
</table>
Table 3.7: Average Drill hole spacing required for resource classification – Correnso, Martha Pit,</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
		Gladstone • Two drill spacing studies using conditional simulation were completed during 2014 which validated the spacing of 30m for Indicated for the Correnso deposit.

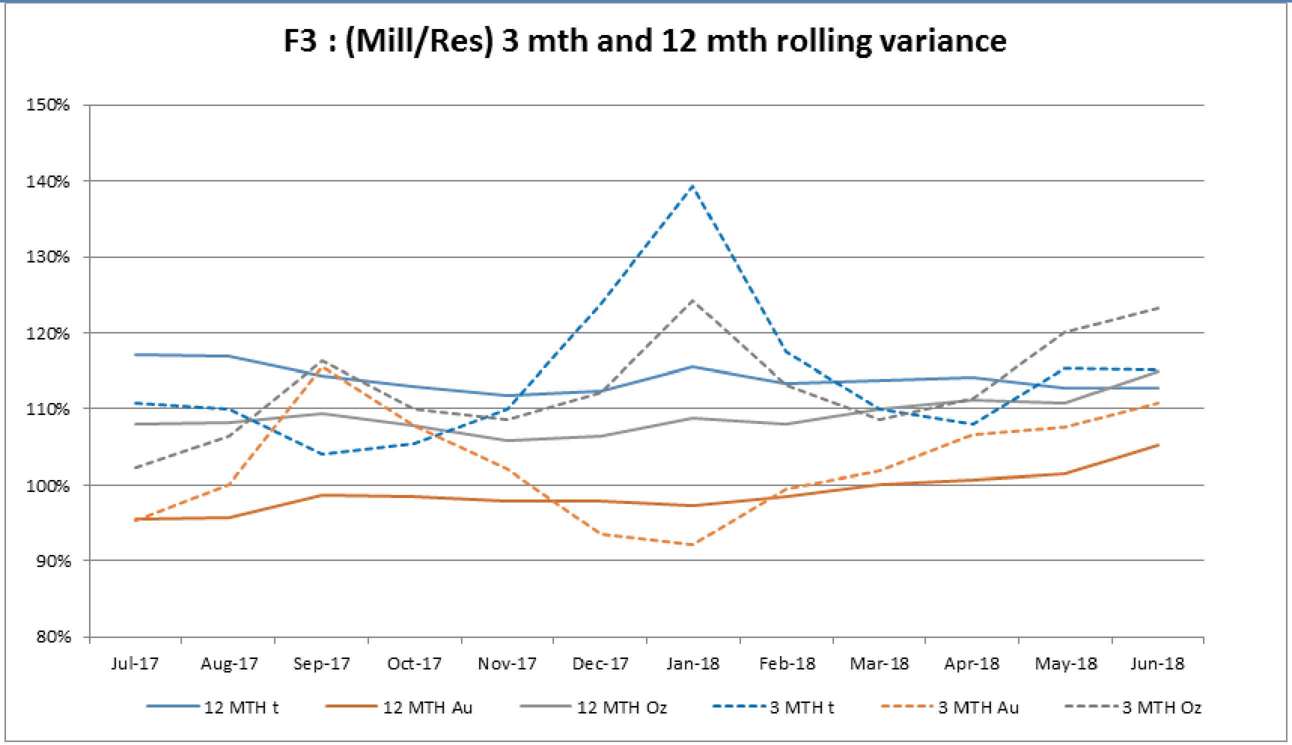
Resource Classification	Vein Zones	Stope backfill	2nd estimation pass stockwork domain – Any blocks estimated using legacy cross cut data
	Average distance to 3 holes		
Measured	—		
Indicated	20 to 40 m		
Inferred	40 to 60 m		
Mineral inventory I	>60m	All material	
Mineral inventory II			All material estimated with less than 3 drill holes

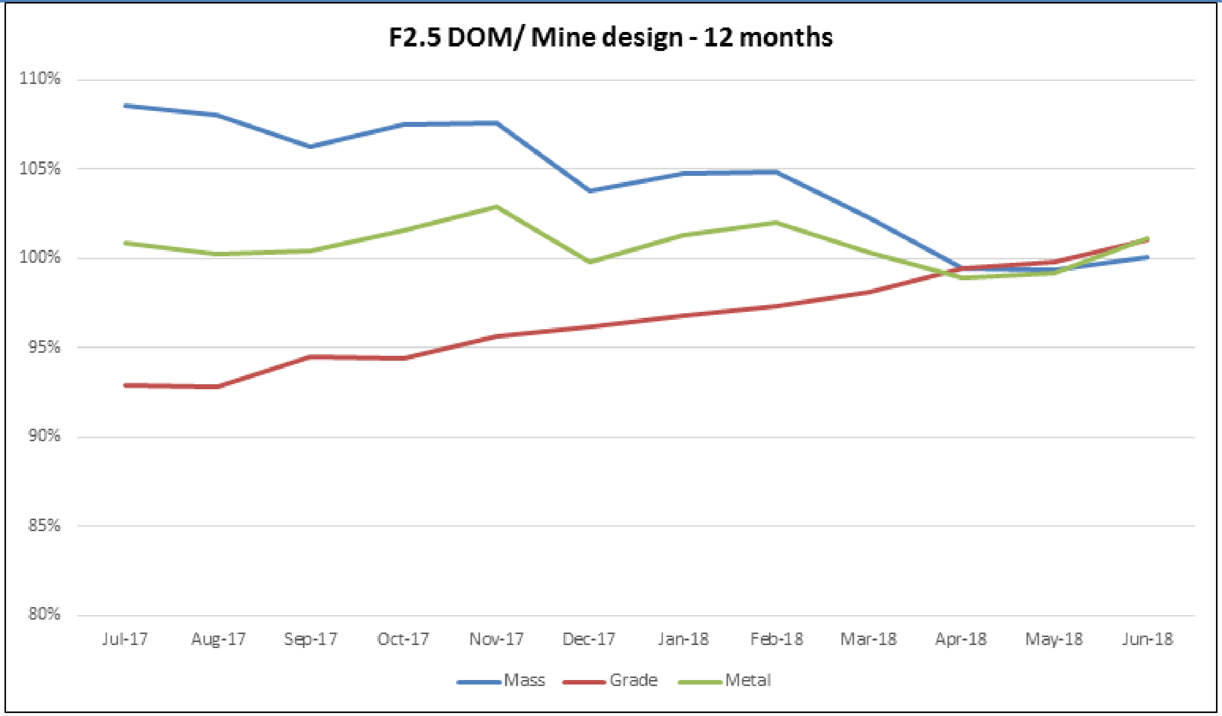
Table 3.8: Average Drill hole spacing required for resource classification – Martha Underground

- There is significant experience in mining and assessing the continuity of mineralisation with the veins for Martha and the adjacent deposits. The vein style mineralisation has strong visual controls and is well understood, with historic mapping and cross-cut sampling demonstrating continuity over significant ranges. Classification is based on the requirement for the average distance to the closest three holes.
- Mine Fill within the historic stopes is classified as Mineral Inventory Resource. There is significant mining history with this reworked material and extensive sampling data exists however it is not possible to assign higher confidence to this material at this time.
- The resource estimate outlined in this document appropriately reflects the Competent Person's view of the deposit.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of Mineral Resource*	• The models are regularly cross checked by OceanaGold Corporation employees that are familiar with the resource estimation practices employed on site.

Criteria	JORC Code explanation	Commentary
	estimates.	• OceanaGold Group Geologist - Tim O'Sullivan has undertaken a site review for the Martha Underground Model. • Mike Stewart (ex OceanaGold Group Geologist) has reviewed the Gladstone And Correnso group estimates. • Entech Senior Geologist Andrew Finch has also undertaken an independent review of the Martha Underground Estimate.
Discussion of relative accuracy/ confidence	• *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.* • *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.* • *These statements of relative accuracy and confidence of the estimate should be compared*	• Model performance is formally reviewed monthly. Investigation of variance between Ore control vs. Resource model (F1), Received at mill vs. Claimed delivered to mill (F2) and Mill vs. Resource (F3) is undertaken at monthly, 3 month rolling and 12 month rolling resolutions. Mitigating actions are identified to minimise sources of variance where practicable. • Figure 3.6 shows 12-month and 3-month reconciliation between the mill and the ore resource model which indicates that over 12 months, ore tonnes were 13% higher, with grade 5% higher and ounces 15% higher than prediction. • Resource data in the F3 comparison includes the indicated and inferred resource declared. A separate Empire lode was identified, grade control modelled and mined at the end of 2017 that was not in the 2017 resource model. The resource component of the F3 factor is calculated by evaluating the portion of resource that matches the reconciled stopes mining during a given month. There is a slight variation on a monthly basis as this is compared with the total tonnes through the mill during the month including reconciled and un-reconciled stopes.

Criteria	JORC Code explanation	Commentary
	with production data, where available.	 **Figure 3.6: Mine / Mill Reconciliation** • Figure 3.7 shows the 12-month reconciliation between the mill and the grade control model with mining dilution and recovery factors included (108% mass, 95% metal). Dilution has been trending down and recovery up with the modifying factors appropriate for the first half of 2018.

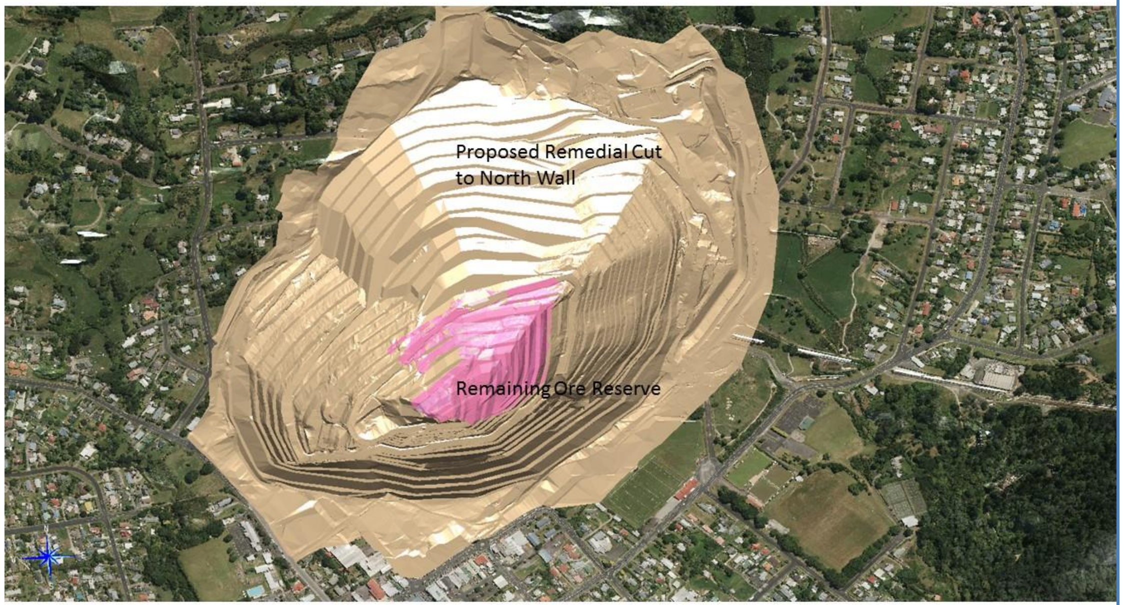
Criteria	JORC Code explanation	Commentary
		 **Figure 3.7: Mine / Mill Reconciliation**

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	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The Mineral Resource estimate used as a basis for conversion to an Ore Reserves is described in Section 3 of Table 1. • Mineral Resources are reported inclusive of the Ore Reserves.
	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• 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. • The Competent Person for Open Pit Ore Reserves is Trevor Maton who has been employed at Waihi from 2003 and has been involved in the design and development of the open pit mine since 2003.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *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.*	• 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 and a mining study has been completed to recover the remaining Ore Reserve. The small cutback is referred to as Martha Phase 4 (MP4). PSM has reviewed the MP4 design for geotechnical stability and have concluded that: ○ MP4 is a remedial cutback of a failure undertaken in order to re-establish the mine, which is a normal part of conventional mining activities and there is nothing unique or special in the planned cutback. ○ Monitoring has now been in place for up to two decades and does not show large scale pit wall instability movements. Consequently, in engineering terms there has been a mine scale validation of the ultimate material properties used for the design of the pit walls. ○ The MP4 pit is much flatter overall than the north wall of the East Layback and this is necessitated by the operational need to incorporate additional haul roads and wide benches. ○ The stability has been checked and overall there are high Factors of Safety for the MP4. The lower slope is potentially affected by underground stopes and disturbed rock mass.

Criteria	JORC Code explanation	Commentary
		• Underground mining and ore processing at Waihi has been in continuous operation since 2004. • The study work undertaken for Correnso 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 12year operating experience with mineral resource reconciliation and metallurgical recovery performance of the underground resources. Actual costs for underground mining, ore processing, G&A and selling costs are known. • A mine plan has been developed which is technically achievable and economically viable. All Modifying Factors have been considered. • 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. • Consents are being applied for to enable mining of MP4 to recover the Martha pit Ore Reserve. Studies accompanying the MP4 application include blast vibration, noise, air quality, hydrology, hydrogeology and groundwater, property values, social impact, geotechnical, ecology, geochemistry, heritage and consultation.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• Cut –off grade is based on Ore Reserve metal prices of NZ$1,806 per ounce. A silver price of NZ$18 per ounce for silver is applied as a by-product credit to the operating costs. • 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. **Martha Open Pit** • The cut-off grade used to determine Ore Reserves for the Open Pit is 0.5 g/t Au. **Correnso Underground** • The following cut-off grades have been used to determine the Underground Ore Reserve: • Ore development and stoping beyond designed limits 3.2g/t Au, • Ore development beyond stope limits 3.1g/t Au, • Incremental stopes (ore development in place) 2.9g/t Au, • Incremental ore development 2.8g/t Au.

Criteria	JORC Code explanation	Commentary
		• The cut-off grades are determined from a mining cost of NZ$90/ore tonne and processing cost of NZ$68/ore tonne (which include all general and administrative charges).
Mining factors or assumptions	• *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).* • *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.* • *The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	**Martha Open Pit** • 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. • 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 have been completed to regain access to the bottom of the pit. The small cutback is referred to as Martha Phase 4 (MP4) and is shown in Figure 4.1 below:  Figure 4.1 Martha Pit Phase 4 cutback • The Martha 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

Criteria	JORC Code explanation	Commentary
		of rates, which was in place from May 2014 until its termination in June 2015. • 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 since 2010. • 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 based on this sampling and consider the capacities of the equipment to selectively mine these blocks. • 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 for vibration conformance at a number of monitoring stations in the surrounding community. • 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. • 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 bunded 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. • 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. • 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 10 metres reflecting the drill spacing and the main trend of the mineralised veins in an east westerly direction.

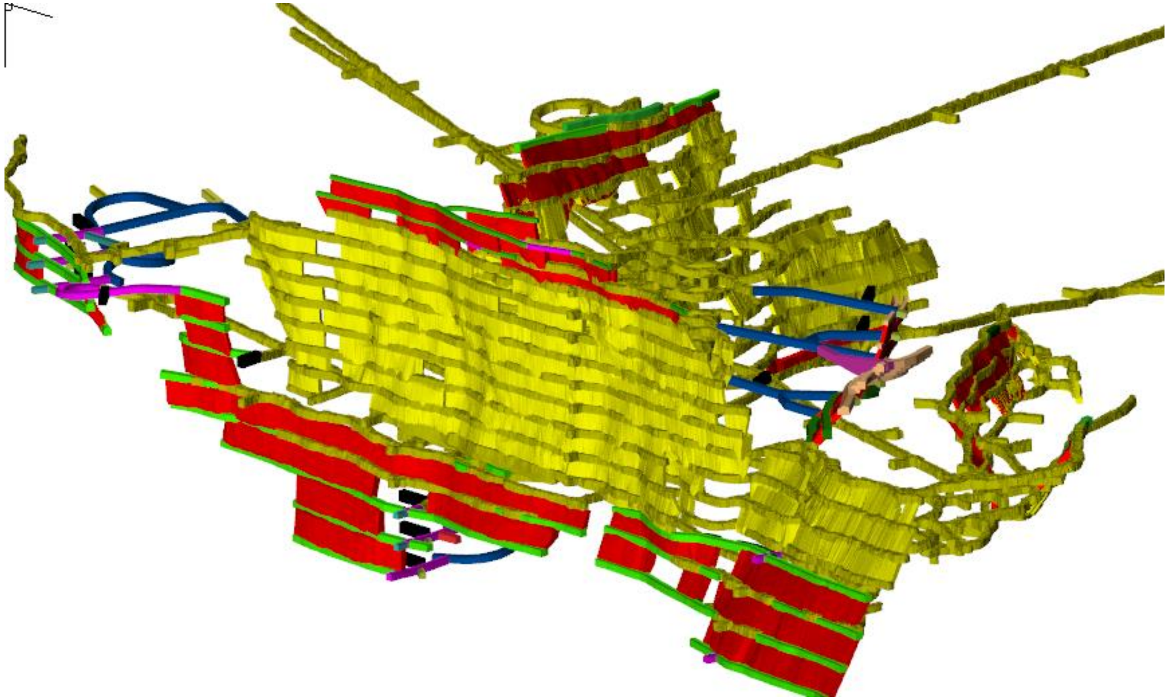
Criteria	JORC Code explanation	Commentary
		• A detailed geotechnical study was completed for Waihi Gold by PSM for the recovery of the remaining Ore Reserve in 2017 / 2018 including the drilling of dedicated geotechnical boreholes, laboratory test work, numerical modelling and structural pit mapping. Geotechnical domains were re-defined based on the recent analysis. The design criteria used to support calculation of Ore Reserves are reported in the table below. • PSM concluded that overall there are high Factors of Safety for the MP4. The lower slope is potentially affected by underground stopes and disturbed rock mass. • MP4 comprises a north wall cut back with all other walls remaining as currently built. The design slopes are shown in Table 4.1.

Table 4.1: Slope Design Criteria to Support Calculation of Ore Reserves

Bench		Face Slope	Face Height	Inter-Ramp
	>1135	35	15	35
1135	1120	45	15	
1120	1104	45	15	
1104	1090	50	15	
1090	1070	60	20	
1070	1050	60	20	33
1050	1030	60	20	
1030	1010	60	20	
1010	990	60	20	
990	970	70	20	
970	950	70	20	55
950	930	70	20	
930	910	70	20	
910	875	70	20	

Criteria	JORC Code explanation	Commentary
		• 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. • Geotechnical robotic monitoring has continued following the localised failure of the north wall that undercut the main access ramp and suspended operations in April 2015. This monitoring shows that the pit wall has stabilised. • 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 inclined to the north. • 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. • 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. • 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. • All fixed infrastructure required for the chosen mining method to extract the open pit Ore Reserve is in place. **Correnso Underground** ***Mining Methods***

Criteria	JORC Code explanation	Commentary
		• There are multiple orebodies within the current underground mine including Correnso, Daybreak, Empire, Trio, and Louis. All mining areas share the same stoping method and have very similar modifying factors and assumptions and design criteria applied. For simplicity all of these areas are hereafter collectively referred to as "Correnso", and exceptions to the collective factors are discussed where appropriate. • 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. Small areas of the Louis orebody will utilise an overhand cut and fill method due to the narrow, shallow dipping nature of the orebody. • Access to underground workings is via a decline from previously mined areas, which also serves as a fresh air intake. The primary ventilation is exhausted through a raise bored shaft to surface but is supplemented by fans that exhaust through historic workings. An escapeway rise that has been raise bored to surface and equipped also serves as a fresh air intake. The portal is located close to the processing plant. • Figure 4.1 shows an oblique view of the Correnso ore reserve (in red). Note that the image below does not show the final design but is indicative of the overall design. Yellow development and stoping has been completed prior to July 2018.

Criteria	JORC Code explanation	Commentary
		 **Figure 4.1: Oblique of Underground Ore Reserve.** • In general mining areas are designed with either a 15m or 18m level spacing, floor to floor. This is primarily to limit blast vibration, but this also assists hanging wall and footwall stability. This is in line with previously mined areas and has proven to be successful and efficient. The mine layout for the current underground workings can be summarized as follows: ○ Primary accesses via the existing development that was used for the Favona, and Trio mines. ○ Exhaust ventilation from the development levels travels to a dedicated return air raise adjacent to the spiral decline. ○ Ore and level Development at level spacing discussed above ○ All material movements on and off levels are via stockpiles developed on the level access.

Criteria	JORC Code explanation	Commentary
		○ 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. ○ The backfill material of loose rockfill is the most economical solution whilst still complying to the consent conditions of eliminating and future surface subsidence. Hydrogeology • 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. • 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. • 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 730mRL. This needs to be lowered to 700mRL 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. • Consents are in place to dewater to 700mRL. Geotechnical Model • 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 is impacted by mine design where level spacing was set by blast vibration limits and modelling had to ensure stable pillars were left. • Geotechnical assessments indicate that rock mass conditions within the ore zones and immediately adjacent to the ore zones are generally of good to very good quality except for the northern portion of the Correnso Vein (which has now been fully extracted). In general, the ground conditions do not require any special remediation other than standard first pass ground support.

Criteria	JORC Code explanation	Commentary
		• It has been proven that stable stope strike spans of up to 30m can be mined all of the orebodies except for Empire where 15m is used due to poor host rock conditions in the Hangingwall. 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. Mining Recovery and Dilution • The mining recovery factors applied for Correnso 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 the lateral ore development as the design parameters account for the dynamic widths that the drives are mined to. • Stopes are designed with dilution on both the footwall and the hanging wall based on geotechnical assessment for the immediate mining area, which when applied with the stope recovery factors reconciles with performance of stopes in active mining areas. • Tonnage recovery factors shown in the table below for stoping include in-situ ore plus dilution material. Metal recovery factors consider 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 the ore.

Table 4.2: Tonnage Recovery Factors

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 Longhole Stope (includes 5% fill dilution at zero grade)	108%	95%

• Other mine design constraints used in determining the Underground Ore Reserves were:

Criteria	JORC Code explanation	Commentary
		• Minimum ratio of 1:1 pillar width separating development openings • Maximum 12.5m Avoca stope width • Ore drive width after stripping to be no wider than 9.5m • 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. • 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. • All of the 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.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *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.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• The metallurgical process at Waihi is well-tested and proven technology, having been in operation for 29 continuous years. • 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 per 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 per hour. • 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. • 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. • 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 and plant actual results for the Correnso resources, as shown below: ○ Head grade >7g/t: Predicted Au residue grade = 0.028 x Au head grade (g/t) + 0.0012 x As head grade (ppm) + 0.264. ○ Head Grade < 7g/t: Predicted Au residue grade = 0.051 x Au head grade (g/t) + 0.0011 x

Criteria	JORC Code explanation	Commentary
		As head grade (ppm) + 0.151. ○ Gold Recovery Estimate = (Au head grade – (Predicted Au Residue grade))/Au head grade x 100. • Arsenic modelling was not included in the mining plan and schedule and process recoveries for Correnso ore are estimated from an estimate of arsenic / gold relationship. The recovery at 88tph throughput is estimated as: ○ Recovery % = [Head grade – (0.09*Head grade + 0.25+0.02)] / Head grade * 100%.
	• *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.*	• The Waihi Gold operation holds the necessary permits, consents, certificates, licences and agreements required to operate the Correnso underground mine. • Consents are being applied for to enable recovery of the Remaining Martha Pit Ore Reserve. The requirement to reapply for mining consents is largely driven by the need to relocate a public road approximately 50m north and re-establish a noise bund. • Consents and an assessment of environmental effects were lodged with Hauraki District Council and Waikato regional Council on 25th May 2018. • Public notification is expected on the 16th August with submissions closing 20 working days after. • Commissioners hearing expected November 2018 with a decision in late 2018 or early 2019. • Environmental data has been collected over the last 29 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 • 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.

Criteria	JORC Code explanation	Commentary
		• 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. • The 29-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. • 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. • 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 impoundment. All waste is compacted in accordance with strict design specifications • 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.
Infrastructure	• *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.*	• 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. • The Company has sufficient consented tailings storage capacity to accommodate all of the Ore Reserve.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating*	**<u>Martha Open Pit</u>** • Only minor capital expenditure is required for the open pit Ore Reserve. The north-east layback is largely included under operating expenditure. Capital expenditure is related to consenting

Criteria	JORC Code explanation	Commentary
	costs. • *Allowances made for the content of deleterious elements.* • *The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	expenses, relocation of a minor public road and re-establishment of the noise bund.. • 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: ○ mining schedules, processing stockpiles and mine feed to process plant, ○ application of driver and non-driver costs to mining, processing and G&A, ○ application of capital costs, closure costs, exploration and employee severance costs, and ○ calculation of cash flows including provision of royalties, working capital and depreciation and taxation. ○ Processing, concentrate treatment, freight, insurance and general and administrative costs have been developed using data sourced from recent operating activities. ○ No penalty elements have been recorded in concentrates produced to date that affects the full calculation of payable metal. • The detailed cost model is in New Zealand currency. The commodity assumptions used in the determination of Ore Reserves were US$1,300 per ounce for gold and US$18 per ounce for silver. An exchange rate of 0.72 has been used. • 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 or 5% accounting profits whichever is greatest. **<u>Correnso Underground</u>** • Capital costs for the Waihi Underground 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. For the mining of the Ore Reserves covered by this report only minor fixed capital of escapeways are required, and much of the capital spend is associated with decline development. • 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: ○ mining schedules, processing stockpiles and mine feed to process plant,

Criteria	JORC Code explanation	Commentary
		○ application of driver and non-driver costs to mining, processing and G&A, ○ application of capital costs, closure costs, exploration and employee severance costs, and ○ calculation of cash flows including provision of royalties, working capital and depreciation and taxation • Processing, concentrate treatment, freight, insurance and general and administrative costs have been sourced from recent operating activities. • No penalty elements have been recorded in concentrates produced to date that affect the calculation of payable metal. • The detailed cost model is in New Zealand currency. The commodity assumptions used in the determination of Ore Reserves were US$1300 per ounce for gold and US$18 per ounce for silver. An exchange rate of 0.72 has been used. • 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.
Revenue factors	• *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.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• 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. • Silver credits are not included in the revenue factors but as a by-product cost offset. • 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: ○ USD 0.72: NZD 1.00 • 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. • Metal prices used for in economic evaluation were US$1,300 per ounce for gold and US$18 per ounce for silver, fixed for the life of the mine.
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and*	• 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.

Criteria	JORC Code explanation	Commentary
	demand into the future. • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• The market for gold doré is well-established.
Economic	• *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.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• 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. • Net present cash flow evaluation of Waihi underground which showed a positive net cash flow. • 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.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• 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. • Prescribed Peer Review meetings held between Waihi Gold, Hauraki District Council, Waikato Regional Council and the Ministry of Business and Innovation. • 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. • The Correnso consent is prescriptive in terms of stakeholder engagement with the Community: ○ 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. ○ 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.

Criteria	JORC Code explanation	Commentary
		○ 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. • In addition to stakeholder engagement, the consent requires Waihi Gold to maintain a Property 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.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *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.*	• 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. • Provision has been made in the underground study to account for anticipated water inflow, based on a hydrogeology study undertaken by GWS Consulting Ltd. • 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. • 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. • 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. • 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. • There is no material, unresolved matters dependent upon a third party on which extraction of the underground Ore Reserve is contingent. • Extraction of the open pit Ore reserve is contingent upon gaining the necessary consents from the Hauraki District Council for open pit mining including the relocation of a public road and re-establishment of the noise bund.

Criteria	JORC Code explanation	Commentary
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• 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. • No Probable Ore Reserves have been derived from Measured Mineral Resources. • 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.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• In 2017, 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: ○ Historically the reserve models at Waihi have reconciled well against production, providing confidence in the LOMP reserve estimates and the ability to deliver them. ○ The reconciliation process is well understood and well documented. Stopes are routinely closed out, with an analysis of mining performance, dilution and ore-loss. ○ The underground mine geology team is stable and is appropriately resourced for the level of geological complexity and production rate. ○ The existing open pit Reserve in the Stage 4 Martha pit has been compromised because 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. ○ The mineralisation of the Martha system below the existing open pit provides the largest potential for mineable resource available at Waihi.
Discussion of relative accuracy/ confidence	• *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*	• 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).

Criteria	JORC Code explanation	Commentary
	appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. • *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.* • *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.* • *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.*	

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].