

SUMMARY OF MATERIAL INFORMATION: WHAREKIRAUPONGA (WKP) INITIAL RESOURCES

Material Information Summary

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

1.0 Wharekirauponga Gold Project

The Wharekirauponga (WKP) Project is located 10 km north of 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, Martha Underground and the Correnso underground mine.

The WKP Au-Ag Project is a high-grade, low sulphidation epithermal vein deposit hosted within a Miocene rhyolite dome complex.

2.0 Geology and Geologic Interpretation

Low sulphidation epithermal quartz veins at WKP are hosted in a rhyolite flow dome complex with overlying and interfingering lithic lapilli tuffs which are in turn partially overlain by post-mineral andesites. The rhyolites have undergone pervasive hydrothermal alteration, often with complete replacement of primary mineralogy by quartz and adularia with minor illite and/or smectite clay alteration. The vein system lies within, NNE trending magnetic low, which likely represents a combination of weakly magnetic primary lithology and magnetite-depleted hydrothermally altered lithologies. The well-defined edges of this magnetic low to the SE and NW suggests it represents a NE trending district-scale graben.

Gold mineralization occurs in association with quartz veining developed along two types of structurally-controlled vein arrays. The principal veins occupy laterally continuous, NE trending (025-47°), moderately dipping (60-65°) district-scale graben step faults, reaching up to 10m in width. Subsidiary, extensional veins (1-100cm wide) are developed between or adjacent to the principle fault hosted veins. These veins often form significant arrays that are moderate to steeply dipping with a more northerly to NNE strike and appear to lack lateral and vertical continuity compared to the fault hosted veins.

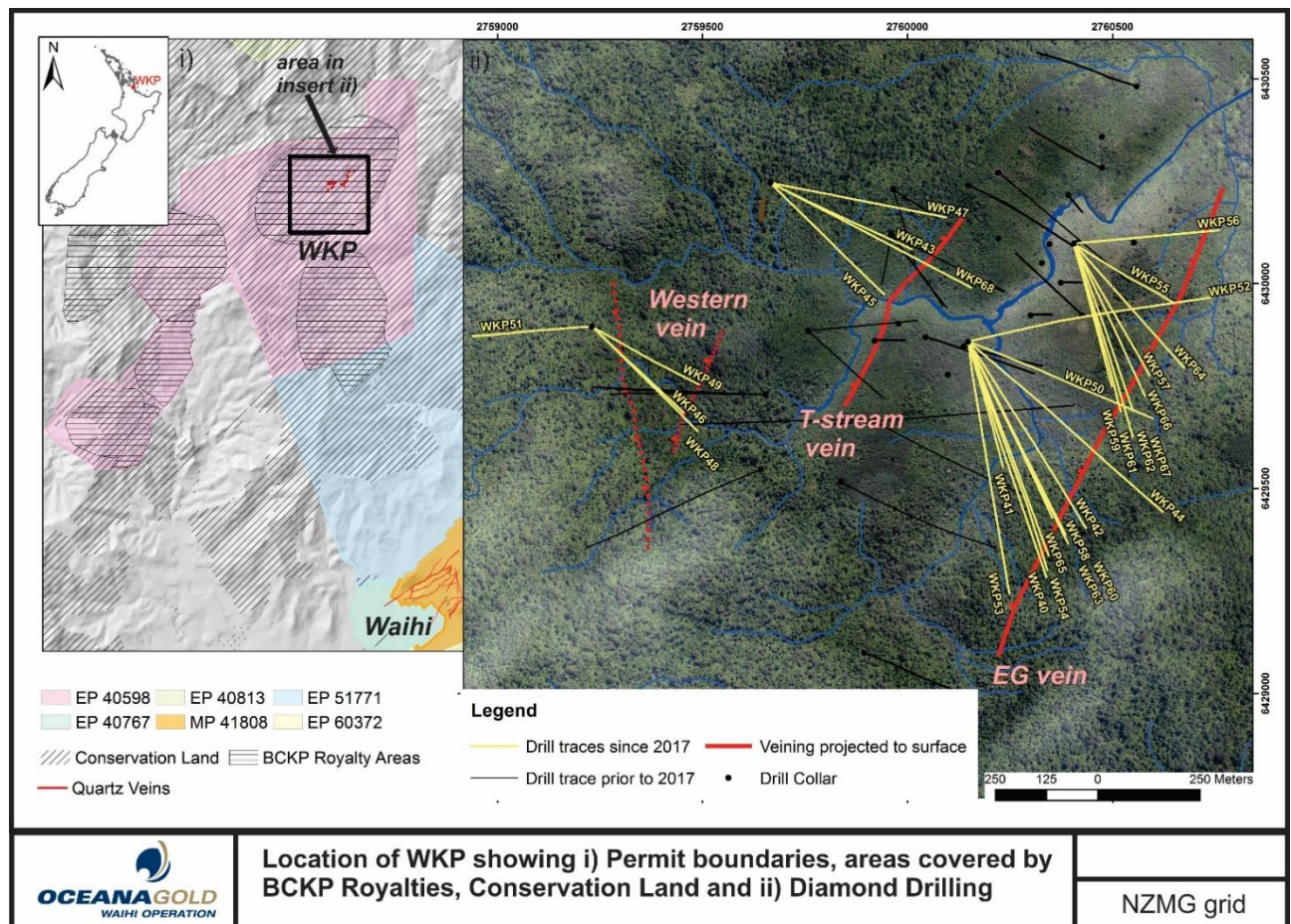
In general, there are very few sulphides other than pyrite in the WKP veins. Major structures strike NNE and dip steeply to the west with extensional linking vein sets striking in a more northerly direction. Vein textures and geopotential indicators logged in drill core suggest south eastward tilting since vein formation.

Many characteristics of veins can be recognised in the logging and from core photos such as mineralogy, vein textures, vein contacts and the presence and relative timing of mineral phases within the vein zones. Domain-specific grade and geological continuity are defined by a geological model and representative 3D wireframes of vein structures. The geological interpretation process utilised in construction of the WKP model incorporates drill log data, assay data, digital core photos and where available oriented core measurements of vein contacts, structure or bedding. Surface geological mapping is also incorporated into the geological modelling process. These are all systematically collected and validated.

Geological models are integrated with regional geology and detailed surface topographic models (LiDAR). Geological models and concepts have been routinely reviewed by internal and external reviewers.

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

Figure 1-1: Project Plan



Gold mostly occurs as electrum in the Waihi epithermal vein deposits and has a particle size between <5 to 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 32,000m has been drilled in 67 core 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.

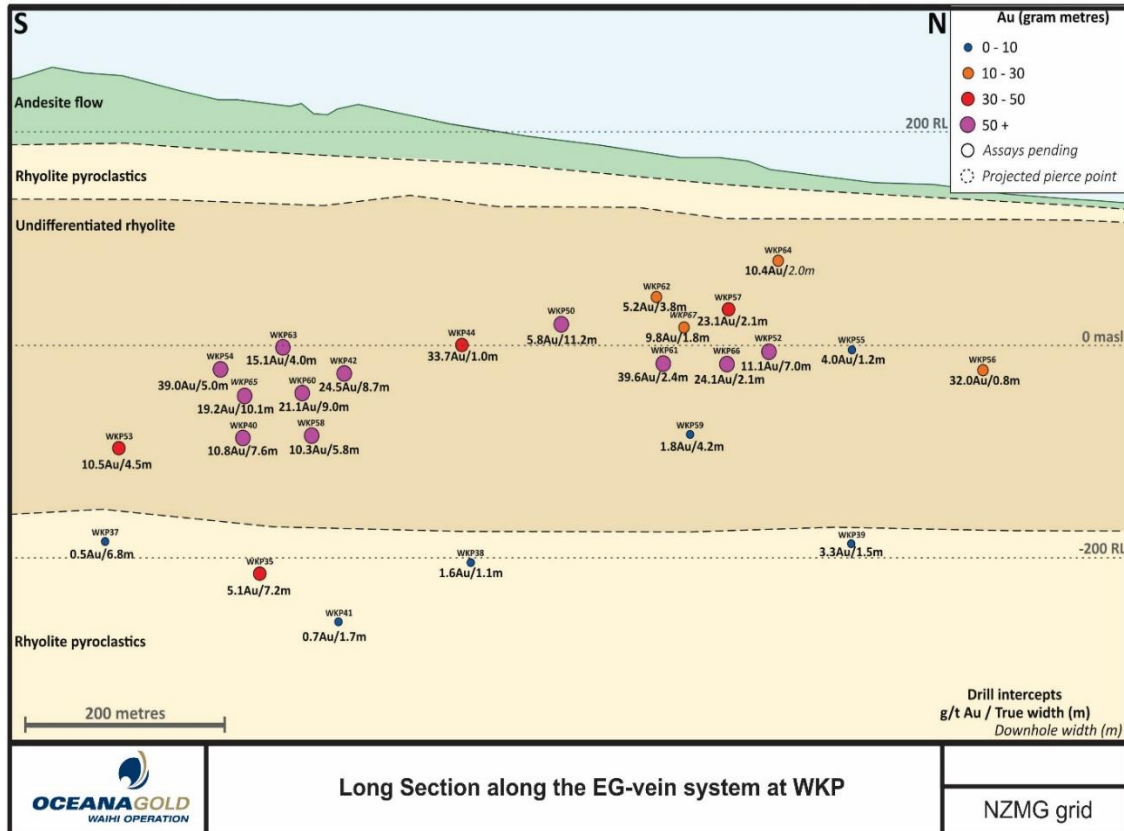
Drill hole data is initially captured in an Access Database used for drill hole planning and management. That data is validated during data-entry. And imported from Access into the main Acquire database interface.

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

Current standardised sample preparation procedures are:

- Jaw crushing to 80% passing 3.3mm.
- 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 30 gram 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 inverse distance methods within vein wireframes dependent on data density. Dry bulk densities ranging between 1.8 and 2.5 t/m³ are assigned by rock type.

Estimation is completed using inverse distance weighting to the second (ID2), 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 a single pass using the diamond drilling dataset.

Gold grades are top capped and length-composited within the vein wireframes and lithological unit.

Estimates of tonnage are prepared on a dry basis

6.0 Resource Classification

The resource classification is based on average drill hole spacing. The ranges employed in classification of the WKP scoping resource model are slightly greater than ranges used in classification of other vein zones currently being mined within the larger Waihi operation, based on the demonstrated continuity of the EG vein over approximately 1,000 metres along strike.

Indicated resource is defined using an average distance to the three closest drill holes of 50 metres, at this point only the EG vein has been considered for classification as indicated resource.

There is significant local experience in mining and assessing the continuity of epithermal mineralisation with the nearby veining in Waihi. The vein style mineralisation present at WKP similar to that observed at Waihi, it also has a strong visual control and a demonstrated continuity over significant ranges.

An estimation calculated using 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 forms the basis for the drill hole spacing and therefore the resource classification. Polygons are developed based on the results of this estimation pass for coding into the block model for the higher confidence category zones to overcome spotty distribution of classification criteria. At present no material in the veins other than the EG vein has been considered for classification as indicated resource category.

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

Resource Classification	Average distance to 3 closest holes	
	EG Vein Zone	All Other Vein Zones
Measured	—	—
Indicated	0 to 50 m	
Inferred	50 to 82.5 m	0 to 70 m

7.0 Cut-off Grade

The Resource is calculated above a cut-off grade of 3.0 g/t Au based on the assumptions provided below. Silver was not included in the cut-off grade calculation due to its small

contribution to the value of the mineralization. Parameters used to calculate the cut-off grade were derived from the nearby Waihi operation with additional costs allowed for surface and underground haulage of the Resource to the Waihi process plant.

- Metal recovery (%): 90
- Operating cost (NZD\$/t): 170
- Gold price (NZD\$/oz): 2,142

8.0 Mining, Metallurgy and other modifying factors

No Mining Factors were applied to the Resource calculation.

To date a total of 5 samples from the WKP EG structure have been metallurgically tested by ALS Metallurgy, Perth.

The average total gold cyanide leach recovery from the EG structure is 91.42%. Both WKP 42 and composite 1 are ~89% whilst WKP40 was 95%. The gold recovery of the main EG structure is therefore classed as 'Free-milling' at this stage.

The cyanide leach recovery of gold in the hanging wall and footwall veins are borderline refractory and refractory respectively. It is not yet known if they are sulphide refractory or silicate refractory.

Composite #		1	2	3	WKP42	WKP40
Location		EG	F/W	H/W	EG	EG
Head Grade (calc.)	g/t	9.78	5.09	4.46	28.69	7.96
Au: Ag		1:1.4	1:1.6	1:4	1:1.2	1:1.2
Grind P80	um	53	53	53	53	106
Gravity	%	25	8.09	12.45	15.06	35.09
CN	%	64.26	57.52	68.51	74.45	60.39
Total	%	89.2%	66.4%	80.9%	89.5%	95.4%

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.

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. Mr. Church is a member 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. Mr. Church has 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'. Mr. Church consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

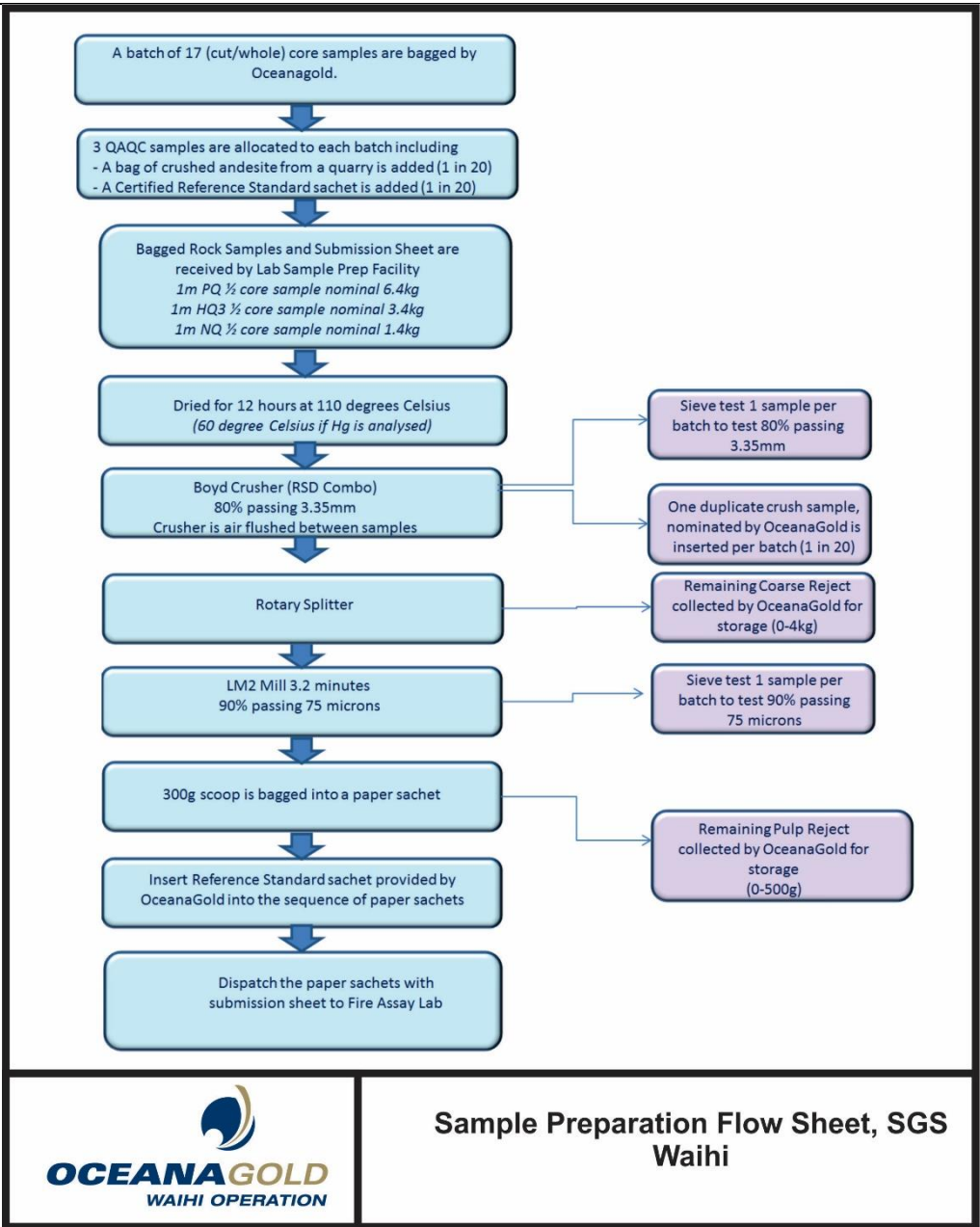
JORC TABLE 1: WHAREKIRAUPONGA (WKP) INITIAL RESOURCES

WHAREKIRAUPONGA (WKP)	
Criteria	Status
Section 1 Sampling Techniques and Data	
Sampling Techniques	<ul style="list-style-type: none"> • All data used in the Mineral Resource estimate is from Diamond Drill Core of PQ3, HQ3 and NQ3 size diameter. • Sample intervals are guided by logged geological boundaries and vary in length between 0.3 and 1.3m in length. Where possible, a discrete vein will have a sample start point along the uphole contact and sample end point along the downhole contact of the structure. • Checks used to verify sample representivity include the collection and analysis of duplicates of coarse crushed material.
Drilling techniques	<ul style="list-style-type: none"> • All drilling is triple tube wireline diamond core drilling from surface. PQ, HQ and NQ core diameters are used in the Mineral Resource estimate. All drill core is routinely oriented either by plasticine imprint or using Ezimark, Reflex or TruCore core orientation tools.
Drill Sample Recovery	<ul style="list-style-type: none"> • Recovery is estimated by measuring the recovered core length against the drilled length which is uploaded to an Acquire Database. • Recovery data has been systematically recorded for all holes drilled since 2010 (WKP24 onwards) with the exception of WKP32A. • Core recovery in veined intervals (>40% quartz vein) averages 96.2% within the WKP Project, however core recoveries as low as 0% have been recorded in portions of some vein zones. • There is no relationship between core recovery and grade.
Logging	<ul style="list-style-type: none"> • Prior to 2010, all WKP diamond core was logged on paper sheets and entered manually into an Acquire database at a later date. • Between 2010 and 2015 all drill log data was entered into Visual Logger (a Newmont proprietary logging software package) and either uploaded into an Acquire or online database. • In 2015 all existing geological logging data from WKP was migrated to an Acquire database. All subsequent geological logging was entered into Microsoft Excel and uploaded to an Acquire Database. • Log intervals are based on geological boundaries or assigned a nominal length of one metre. • For all recent drilling (2009 onwards) the logging has been validated using inbuilt validation tables and has been checked for consistency throughout the history of the project. • A complete digital photographic record is maintained for all drill core. • Unsampld drill core is stored in a core shed. • A total of 67 diamond drill holes (plus 5 redrills along portions of holes) totaling 31907.0m were used to inform the WKP block model (up to and including WKP67).
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • Once the core is logged, photographed and sample intervals allocated, it is cut in half length ways. If a vein is present, the cut line is preferentially aligned to intercept the downhole apex of the structure. Within each sample interval, one half of the core is bagged for sampling and the other is kept in storage. Whole core has been sampled on an occasion where there was significant core loss coupled with visible electrum. • Labelled calico bags containing the core samples were either transported to the local Waihi SGS Laboratory or the Westport SGS laboratory on the South Island (only holes WKP40-WKP45) for crushing and sample preparation. Refer to the sample preparation flow sheet illustrated below.

WHAREKIRAUPONGA (WKP)

Criteria

Status



Sample Preparation Flow Sheet, SGS Waihi

Quality of assay data and laboratory tests

- Analyses of sample pulps were undertaken at the ALS laboratory in Brisbane, the ALS laboratory in Townsville and SGS laboratory in Waihi.
- All drill samples are assayed for gold by 30g Fire Assay with AAS finish. Silver is assayed using a 0.3g Aqua Regia digest with AAS/ICPMS finish. Over range Au results of >100g/t are re-assayed using an increase in dilution for the acid digest prior to AAS finish. Some drillholes (WKP1-55) have undergone additional analyses for As, Sb, Cu, Pb, Sb and Zn. A selection of holes have undergone additional 42 element ICP-MS geochemical analyses at ALS in Brisbane.
- Representivity of samples was checked by sieving of crushed material, duplication at the crush stage and insertion of Certified Reference Materials (CRMs) and blanks into sample batches.
- Results from the blank, duplicate and CRM samples are reviewed prior to uploading results in the AcQuire database and again on a monthly basis. The Waihi protocol requires CRMs to be reported to within 2 standard deviations of the certified value. The criterion for preparation duplicates is that they have a relative difference (R-R1/mean RR1) of no greater than 10%. Blanks should not exceed more than 4 times the lower detection method of the assay method. Failure in any of these thresholds triggers an investigation and re-assay.

WHAREKIRAUPONGA (WKP)	
Criteria	Status
Verification of sampling and assaying	<ul style="list-style-type: none"> • There are visual indicators at WKP for high grade mineralisation observed in drill core such as quartz veining with a range of textures that typically carry Au – Ag mineralisation and locally electrum and Ag sulphides are visible. Significant grade intersections are visually validated against logging, core photos and at times remaining half core. These are additionally checked by team geologists. • A total of 170237 samples were analysed for Au since January 2017 (i.e. WKP40 to WKP67), including approximately 1204 blanks and standards. Results from the blanks and standards returned with a 98.3% pass rate. • 12 drill holes (1186 samples) have been subject to umpire analysis by an alternate laboratory to SGS. • To date no holes have been twinned. • All laboratory result files are uploaded directly into an Acquire database with no manual data entry. • Below level detection limit assay results are stored in the database as (negative) half the detection limit. No other modification of the assay results is undertaken.
Location of data points	<ul style="list-style-type: none"> • New Zealand Map Grid (NZMG) is used for all drill data, which is in the NZGD1949 projection. False northing 6,023,150m north; False easting 2,510,000m east. • Drill collars are currently located using a handheld GPS with an accuracy of +/- 5m for x and y coordinates. Drill pads have been surveyed using a total station, however individual collars within each drill pad still require survey pickups. Plans to more accurately survey the individual hole collars using a total station are in place for the near future, therefore there will be some minor collar adjustments at a future date. • A topographical surface was created in Leapfrog using Light Detection and Ranging (LIDAR) survey data. This surface was used to generate the elevation of drill collars which is within +/-2m accuracy. • Down hole surveys are recorded at 30m intervals by using a Reflex digital downhole survey camera tool.
Data spacing and distribution	<ul style="list-style-type: none"> • The WKP project area contains 67 diamond drill holes (plus 5 redrills along portions of holes) at the time of writing this report. The bulk of recent drilling has been targeted toward the East Graben Vein Zone. • The East Graben Vein zone has been intersected in drilling over a strike length of ~1km, this structure is larger than those typically encountered in the Waihi project area and on this basis the average drillhole spacing required for classification as an inferred resource has been increased by 15% to 80 metres average distance to the three closest drillholes. All other mineralisation has been classified using a distance threshold of 70 metres to the three closest drillholes for classification as inferred. • Diamond Drill samples are not composited prior to being sent to the laboratory.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> • Mineralised veining varies between structures, but the dominant structures are predominantly NNE trending and moderately dipping towards the west which are linked by N to NNW trending and moderately west dipping splay veins. • Drill holes are designed to intersect perpendicular to known mineralized structures as much as is practicable given the availability of drilling platforms. • All drill core is oriented downhole to assist modelling and interpretation of Mineralised structures. • Sample intervals are selected based upon observed geological features.
Sample security	<ul style="list-style-type: none"> • Sampling personnel are adequately trained and supervised on site employees • Measures to provide sample security include but are not limited to: <ul style="list-style-type: none"> • drill core is stored on site with controlled site access and secure facilities • site employees transport samples to the analytical lab • the laboratory facilities are secured
Audits or reviews	<ul style="list-style-type: none"> • No external audits or reviews of sampling techniques and data related specifically to WKP have been performed in the last 3 years. • The SGS laboratory in Waihi has been audited on a quarterly basis by site personnel and the Competent Person when possible. No sampling risks have been identified during these visits. No lab audits of the ALS laboratory in Brisbane or SGS laboratory in Westport have been undertaken.
Section 2 Reporting of Exploration Results	
Mineral tenement and land	<ul style="list-style-type: none"> • The Wharekirauponga prospect is in the Hauraki District of the Waikato region of New Zealand, situated approximately 10km north of Waihi within EP 40598 (refer to 'Figures' section of this table). • The prospect is contained within exploration permit EP 40598 covering an area of 3762.94 hectares which is held (100%) by OceanaGold. The current term of the exploration permit expires in May 2021 and confers rights to exchange the EP within that time for a mining permit upon meeting certain criteria specified in the Crown Minerals Act 1991 (CMA) (available at

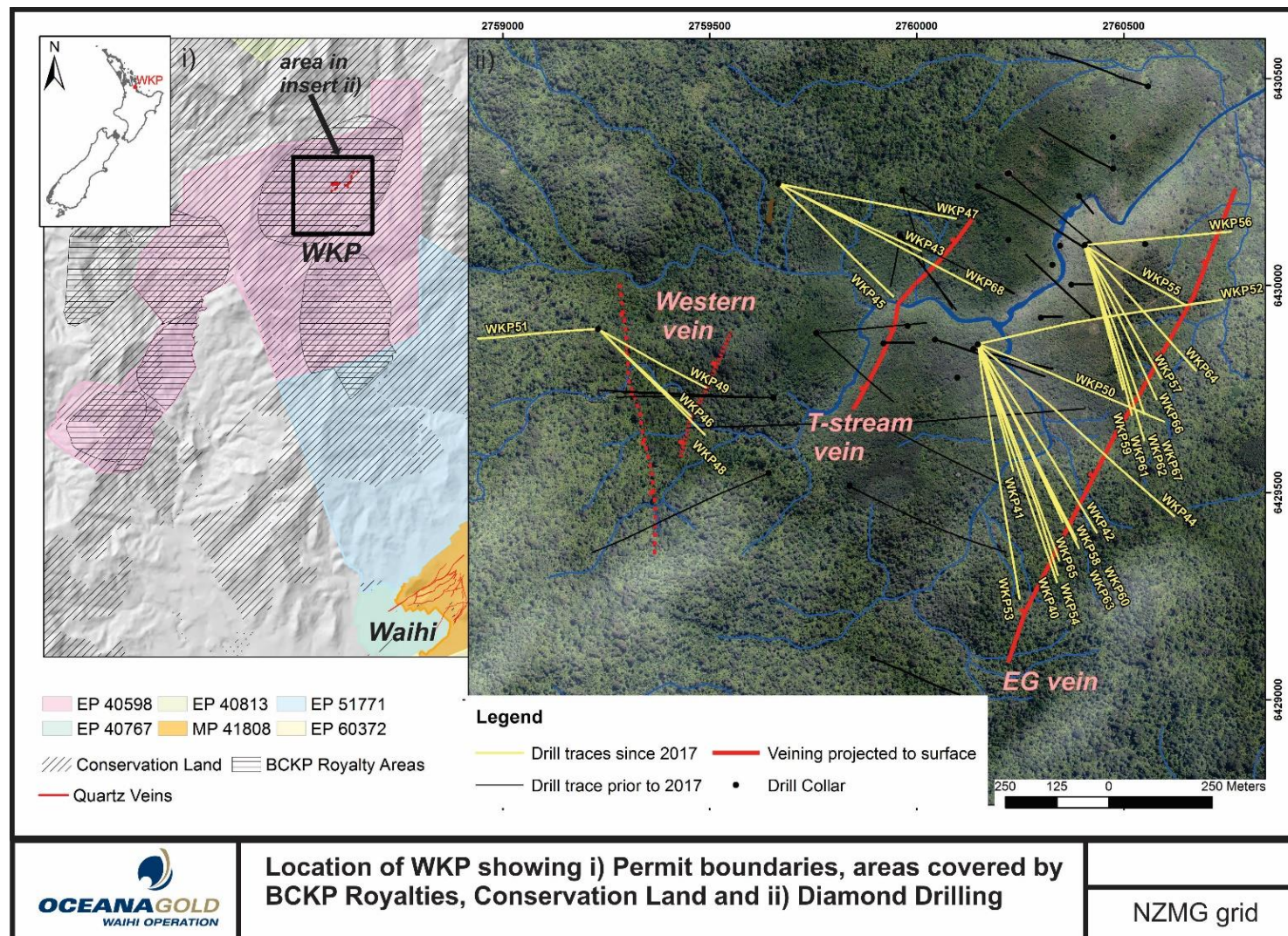
WHAREKIRAUPONGA (WKP)

Criteria	Status
tenure status	<p>http://www.legislation.govt.nz/act/public/1991/0070/latest/whole.html#DLM246338.</p> <ul style="list-style-type: none"> The current EP is in good standing. Third party rights to receive an interest in the project are confined to a Crown royalty of 1% of the turn over or 5% of the accounting profits whichever is higher and a 2% royalty payable to BCKP Ltd (acquired from Geoinformatics) with respect to certain “target” areas. In both cases the royalties are fixed and quantifiable for the purposes of inclusion in the business plan. The prospect is situated on state-owned land administered by the NZ government through the Department of Conservation and generally open to public use for amenity purposes OceanaGold has received an Access Arrangement granted under the CMA , for the term of the EP, giving surface rights to conduct exploration drilling within a defined footprint of 428.44 hectares and under conditions that protect the conservation (biodiversity and amenity) values of the land. The company has also received resource consents granted by local authorities under the Resource Management Act 1991 (RMA), under which environmental effects of exploration drilling are authorized and managed within the framework of that Act in keeping with the high environmental values of the permit location. Any development of the prospect for the purposes of advancing beyond exploration would require applications at that time under the RMA and (for surface impacts only) the CMA. The RMA applies land use designations (zoning) that allow underground mining on a discretionary basis and surface impacts in limited circumstances dependent on meeting a range of objectives and policies including protecting and enhancing the biological diversity and outstanding landscape character values of the permit area and minimising ground surface disturbance. Changes to NZ government policy restricting access to mine on conservation land have been proposed, subject to a statutory consultation process that has not yet commenced. The precise nature of any proposal is not currently known.
Exploration done by other parties	<ul style="list-style-type: none"> During the 1980s and 1990s Amoco, BHP Minerals, Cyprus and ACM completed geological mapping, surface geochemistry, aeromagnetic and diamond drilling (5515m in 23 holes; holes WKP1-23) programs throughout the WKP prospect, focusing on exposures of sheeted stockwork veins in stream channels. In 2009-2013, Newmont in joint venture with Glass Earth continued exploration of the WKP area, providing additional geological mapping and surface sampling (drainage, soils and rocks), airborne EM and CSAMT resistivity. Several structures with economic potential were identified and drilled (holes WKP24 - WKP39; 9035.85m), some of which contained significant Au and Ag mineralisation. The Newmont/Glass Earth interest was subsequently purchased by OceanaGold in 2016. Exploration activity continued, including geological mapping and surface sampling, CSAMT resistivity and diamond drilling (holes WKP40 – WKP67; 15756.16m). Holes WKP68-70 are currently drilling or waiting on results.
Geology	<ul style="list-style-type: none"> Low sulphidation epithermal quartz veins at WKP are hosted in a rhyolite flow dome complex with overlying and interfingering lithic lapilli tuffs which are in turn partially overlain by post-mineral andesites. The rhyolites have undergone pervasive hydrothermal alteration, often with complete replacement of primary mineralogy by quartz and adularia with minor illite and/or smectite clay alteration. The veining is confined to 1 to 1.5km wide, NNE trending magnetic low, which may be defined by a combination of lithology (weakly magnetic) and a magnetite-depleted hydrothermal alteration cell. The well-defined edges of this magnetic-low to the SE and NW suggests it represents a NE trending district-scale graben. Gold mineralization occurs in association with quartz veining developed along two types of structurally-controlled vein arrays. The principal veins occupy laterally continuous, NE trending (025-47°), moderately dipping (60-65°) district-scale graben step faults, reaching up to 10m in width. Subsidiary, extensional veins (1-100cm wide) are developed between or adjacent to the principle fault hosted veins. These veins often form significant arrays are moderate to steeply dipping with a more northerly to NNE strike and appear to lack lateral and vertical continuity compared to the fault hosted veins. In general, there are very few sulphides other than pyrite in the WKP veins.
Drill hole Information	<ul style="list-style-type: none"> The Mineral Resource is based on information from 67 diamond drill holes (plus 5 redrills along portions of holes) (31307.07m). No individual drillhole is material to the Mineral Resource estimate, therefore this geological database is not supplied.
Data aggregation methods	<ul style="list-style-type: none"> No compositing of primary samples is undertaken. Samples are selected on the basis of geology. Compositing of data for grade estimation is within distinct geological boundaries, typically within modelled veins. Grade that cannot be modelled between holes in a vein wireframe has not been included in the resource estimate. The grades are compiled using length weighting. Grades are not cut in the database, however appropriate statistically derived top-cuts (cut to 98th percentile) are assigned by domain in the estimation process.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> No Exploration Results are being presented in this report. 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.

WHAREKIRAUPONGA (WKP)

Criteria Status

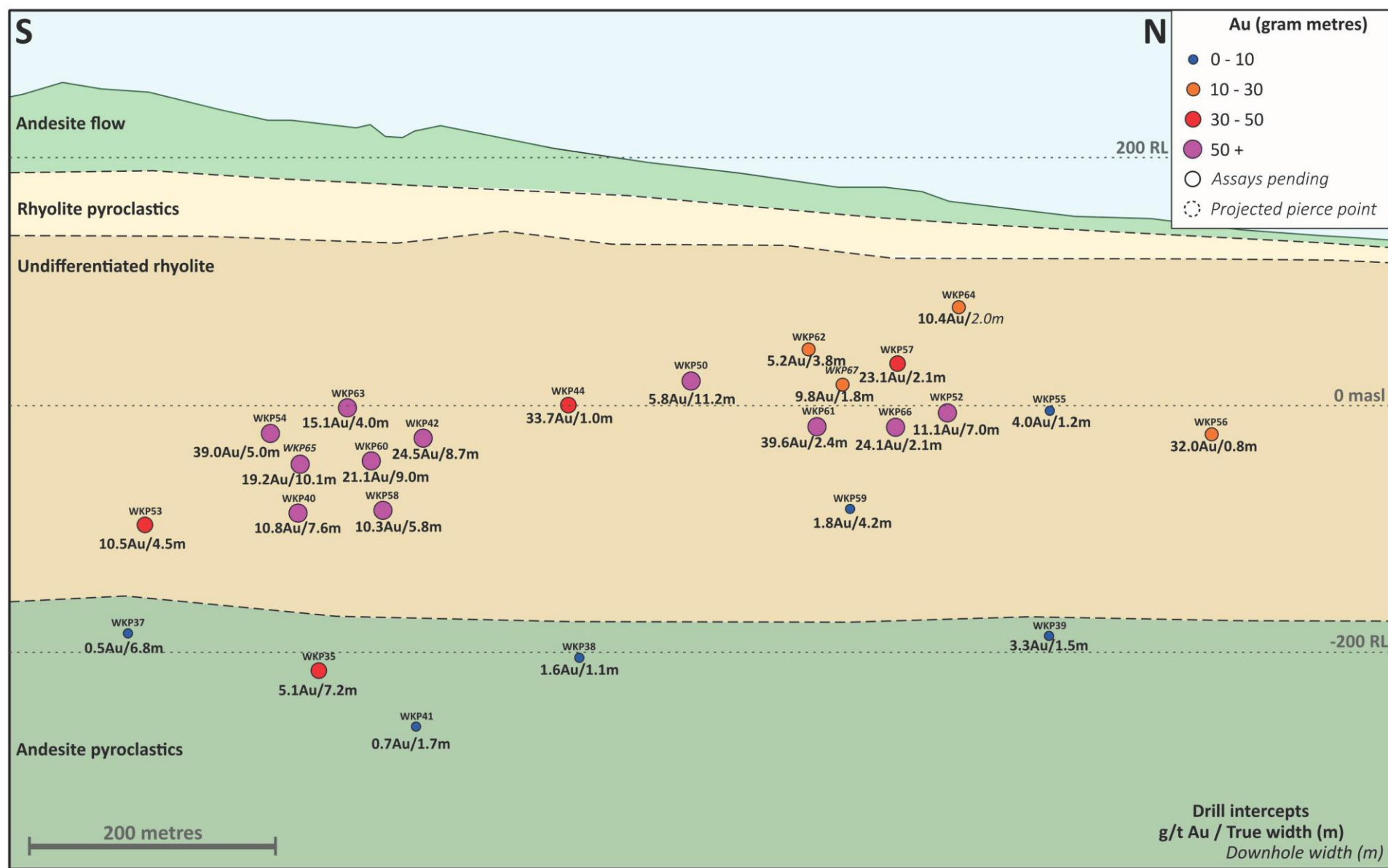
Diagrams



WHAREKIRAUPONGA (WKP)

Criteria

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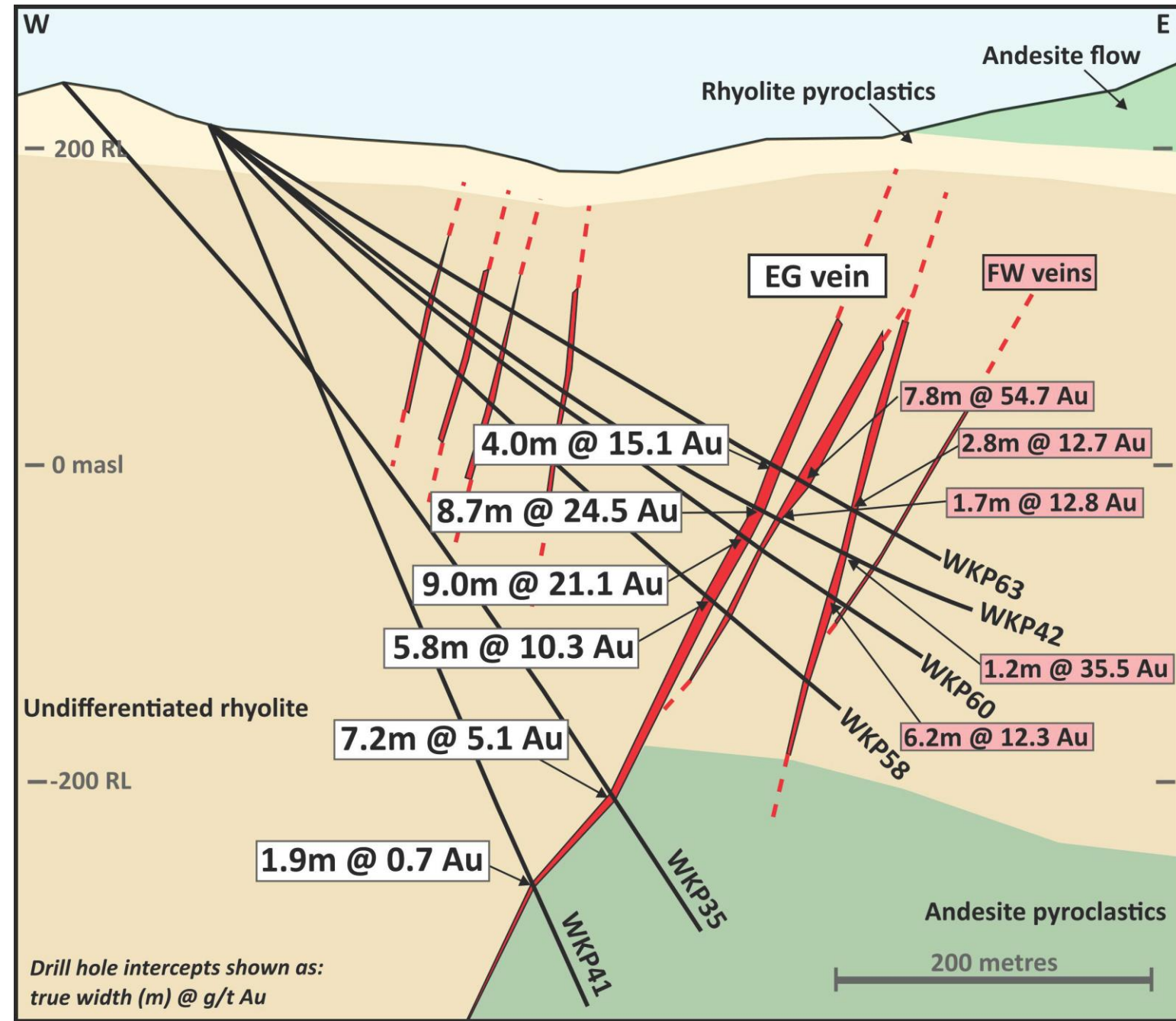


Long Section on the East Graben Vein

WHAREKIRAUPONGA (WKP)

Criteria

Status



Cross Section on the East Graben Vein System

Balanced reporting

- No Exploration Results are being presented in this report, rather this report is focused on an advanced project that has a well-defined geological model and associated resource estimate completed.

Other substantive exploration data

- Exploration drilling is continuing within the WKP prospect with two diamond drill rigs currently dedicated to the area.
- Preliminary metallurgical test work has been completed by ALS Metallurgical lab in Perth on selective high-grade intercepts along drillholes WKP40 and WKP42 which returned with recoveries of 95% and 83% respectively.

Further work

- Exploration and delineation drilling continues at WKP including definition drilling along the EG, T Stream and Western Veins.

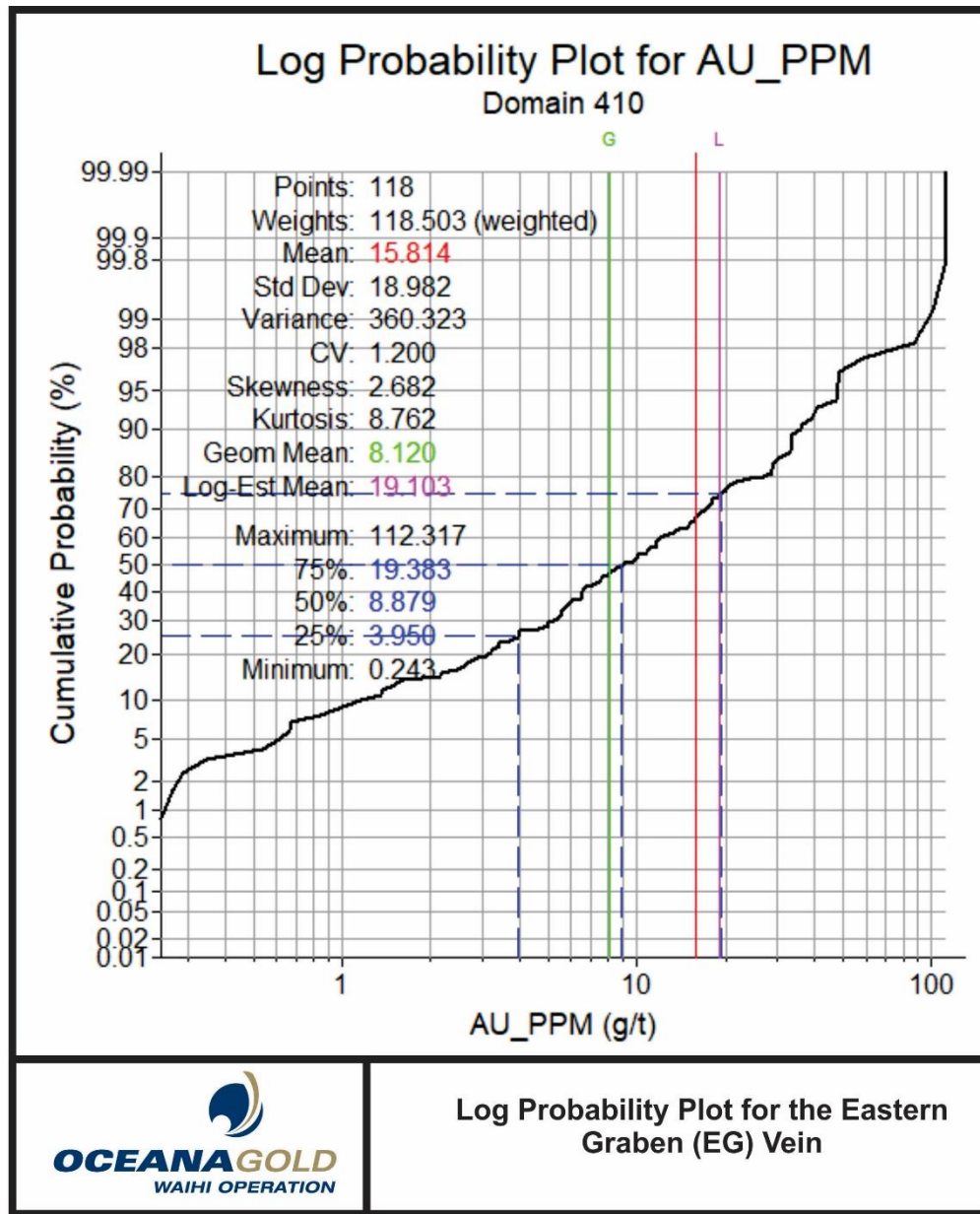
WHAREKIRAUPONGA (WKP)

Criteria	Status																												
Section 3 Estimation and Reporting of Mineral Resources - WKP																													
Database integrity	<ul style="list-style-type: none"> Drill hole collar and survey 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. Geology drill logs and assays are directly imported into AcQuire through a QAQC validation process. 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	<ul style="list-style-type: none"> Peter Church has been employed at the operating Waihi gold mine since 2011. He is employed in the role of Principal Resource Geologist with responsibility for resource estimation. In preparation for the WKP model, OceanaGold Group Geologist Tim O'Sullivan was consulted with regards some technical considerations in the construction of the model. 																												
Geological interpretation	<ul style="list-style-type: none"> The Wharekirauponga (WKP) Au-Ag prospect in the Hauraki Goldfield is a narrow vein, high grade, low sulphide epithermal deposit hosted within a rhyolite dome complex (Miocene). The controls in mineralisation are not dissimilar to those of the other epithermal vein hosted deposits of the Thames Coromandel goldfield. Major structures strike NNE and dip steeply to the west with extensional linking vein sets striking in a more northerly direction. Many characteristics of veins can be recognised in the logging and from core photos such as mineralogy, vein textures, vein contacts and the presence and relative timing of mineral phases within the vein zones. Domain-specific grade and geological continuity are defined by a geological model and representative 3D wireframes of vein structures. The geological interpretation process utilised in construction of the WKP model incorporates drill log data, assay data, digital core photos and where available oriented core measurements of vein contacts, structure or bedding. Surface geological mapping is also incorporated into the geological modelling process. These are all systematically collected and validated. Geological models are integrated with regional geology and detailed surface topographic models (LiDAR). Geological models and concepts have been routinely reviewed by internal and external reviewers. 																												
Dimensions	<ul style="list-style-type: none"> Block Model Dimensions – WKP0219_USC.bmf <table border="1"> <thead> <tr> <th>Variable</th> <th>X</th> <th>Y</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td>Origin</td> <td>2759150</td> <td>6429410</td> <td>-345</td> </tr> <tr> <td>Extents (m)</td> <td>1400</td> <td>1640</td> <td>620</td> </tr> <tr> <td>Block Size (Parent)</td> <td>5</td> <td>10</td> <td>10</td> </tr> <tr> <td>No. of Blocks (Parent)</td> <td>280</td> <td>164</td> <td>62</td> </tr> <tr> <td>Sub Block Size</td> <td>0.5</td> <td>0.5</td> <td>0.5</td> </tr> <tr> <td>Orientation</td> <td>+100 degrees</td> <td>X axis around Z</td> <td></td> </tr> </tbody> </table>	Variable	X	Y	Z	Origin	2759150	6429410	-345	Extents (m)	1400	1640	620	Block Size (Parent)	5	10	10	No. of Blocks (Parent)	280	164	62	Sub Block Size	0.5	0.5	0.5	Orientation	+100 degrees	X axis around Z	
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Sub Block Size	0.5	0.5	0.5																										
Orientation	+100 degrees	X axis around Z																											
Estimation and modelling techniques	<p><u>Estimation / Interpolation Methods</u></p> <ul style="list-style-type: none"> Veins for the WKP deposit model were interpreted using Leapfrog software. Vein and geology wireframes were then utilised to construct a block model within Vulcan. The WKP estimate is prepared using a sub-blocked model, Drilling data is then length composited within the vein wireframes and lithological units. 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; grade interpolation is via inverse distance weighting to the second power (ID2) No previous estimates for the WKP project are available for comparative assessment <p><u>Variography</u></p> <ul style="list-style-type: none"> 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. <p><u>Grade Capping</u></p> <ul style="list-style-type: none"> Reconciliation history for the Waihi project has demonstrated that some level of high grade restriction is necessary to limit the influence of outliers on grade estimates for the epithermal veins that have been mined during the operations history. Statistical assessment of the input data is undertaken by domain, typical top-cut selection is based on the assessment of the population distribution characteristics and for inverse distance estimates cutting at the 98th percentile on the log probability distribution has been a long-standing methodology that has produced acceptable results. For the WKP project the approach of 																												

Criteria

Status

cutting to the 98th percentile is considered appropriate.



Moisture

- Estimates of tonnage are prepared on a dry basis.

Cut-off parameters

- The Resource is calculated above a cut-off grade of 3.0 g/t Au based on the assumptions provided below. Silver was not included in the cut-off grade calculation due to its small contribution to the value of the mineralization. Parameters used to calculate the cut-off grade were derived from the nearby Waihi operation with additional costs allowed for surface and underground haulage of the Resource to the Waihi process plant.
 - Metal recovery (%): 90
 - Operating cost (NZD\$/t): 170
 - Gold price (USD\$/oz): 1,500

WHAREKIRAUPONGA (WKP)

Criteria	Status																																																								
Mining factors or assumptions	<ul style="list-style-type: none"> No Mining Factors were applied to the Resource calculation. 																																																								
Metallurgical factors or assumptions	<ul style="list-style-type: none"> To date a total of 5 samples from the WKP EG structure have been metallurgically tested by ALS Metallurgy, Perth. The average total gold cyanide leach recovery from the EG structure is 91.42%. Both WKP 42 and composite 1 are ~89% whilst WKP40 was 95%. The gold recovery of the main EG structure is therefore classed as 'Free-milling' at this stage. The cyanide leach recovery of gold in the hanging wall and footwall veins are borderline refractory and refractory respectively. It is not yet known if they are sulphide refractory or silicate refractory. <table border="1" data-bbox="1003 514 2220 783"> <thead> <tr> <th>Composite #</th> <th></th> <th>1</th> <th>2</th> <th>3</th> <th>WKP42</th> <th>WKP40</th> </tr> <tr> <th>Location</th> <th></th> <th>EG</th> <th>F/W</th> <th>H/W</th> <th>EG</th> <th>EG</th> </tr> </thead> <tbody> <tr> <td>Head Grade (calc.)</td> <td>g/t</td> <td>9.78</td> <td>5.09</td> <td>4.46</td> <td>28.69</td> <td>7.96</td> </tr> <tr> <td>Au: Ag</td> <td></td> <td>1:1.4</td> <td>1:1.6</td> <td>1:4</td> <td>1:1.2</td> <td>1:1.2</td> </tr> <tr> <td>Grind P80</td> <td>um</td> <td>53</td> <td>53</td> <td>53</td> <td>53</td> <td>106</td> </tr> <tr> <td>Gravity</td> <td>%</td> <td>25</td> <td>8.09</td> <td>12.45</td> <td>15.06</td> <td>35.09</td> </tr> <tr> <td>CN</td> <td>%</td> <td>64.26</td> <td>57.52</td> <td>68.51</td> <td>74.45</td> <td>60.39</td> </tr> <tr> <td>Total</td> <td>%</td> <td>89.2%</td> <td>66.4%</td> <td>80.9%</td> <td>89.5%\$</td> <td>95.4%</td> </tr> </tbody> </table>	Composite #		1	2	3	WKP42	WKP40	Location		EG	F/W	H/W	EG	EG	Head Grade (calc.)	g/t	9.78	5.09	4.46	28.69	7.96	Au: Ag		1:1.4	1:1.6	1:4	1:1.2	1:1.2	Grind P80	um	53	53	53	53	106	Gravity	%	25	8.09	12.45	15.06	35.09	CN	%	64.26	57.52	68.51	74.45	60.39	Total	%	89.2%	66.4%	80.9%	89.5%\$	95.4%
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Bulk density	<ul style="list-style-type: none"> Density measurements are routinely collected during logging of diamond drill core. A field in the Acquire database is setup to automatically calculate the specific gravity (SG) from these density measurements using the formula: $SG = \frac{W(\text{air})}{W(\text{air}) - W(\text{water})}$, where $W(\text{air})$ = weight of sample in air and $W(\text{water})$ = weight of sample in water. <table border="1" data-bbox="617 1094 1507 1222"> <thead> <tr> <th></th> <th>Sample Count</th> <th>Mean SG</th> </tr> </thead> <tbody> <tr> <td>Waste Rock</td> <td>156</td> <td>2.45</td> </tr> <tr> <td>Vein</td> <td>79</td> <td>2.54</td> </tr> <tr> <td>Global Average</td> <td>235</td> <td>2.50</td> </tr> </tbody> </table>		Sample Count	Mean SG	Waste Rock	156	2.45	Vein	79	2.54	Global Average	235	2.50																																												
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WHAREKIRAUPONGA (WKP)

Criteria Status

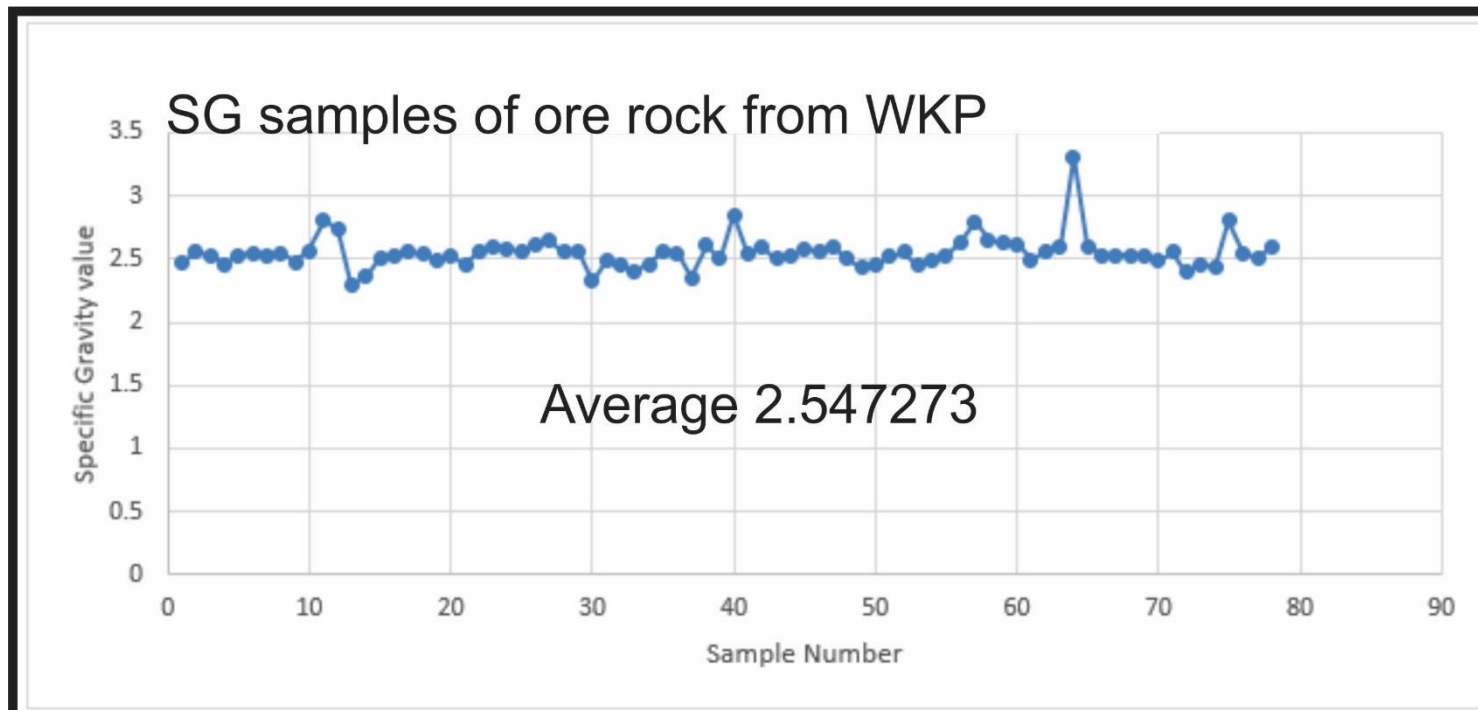
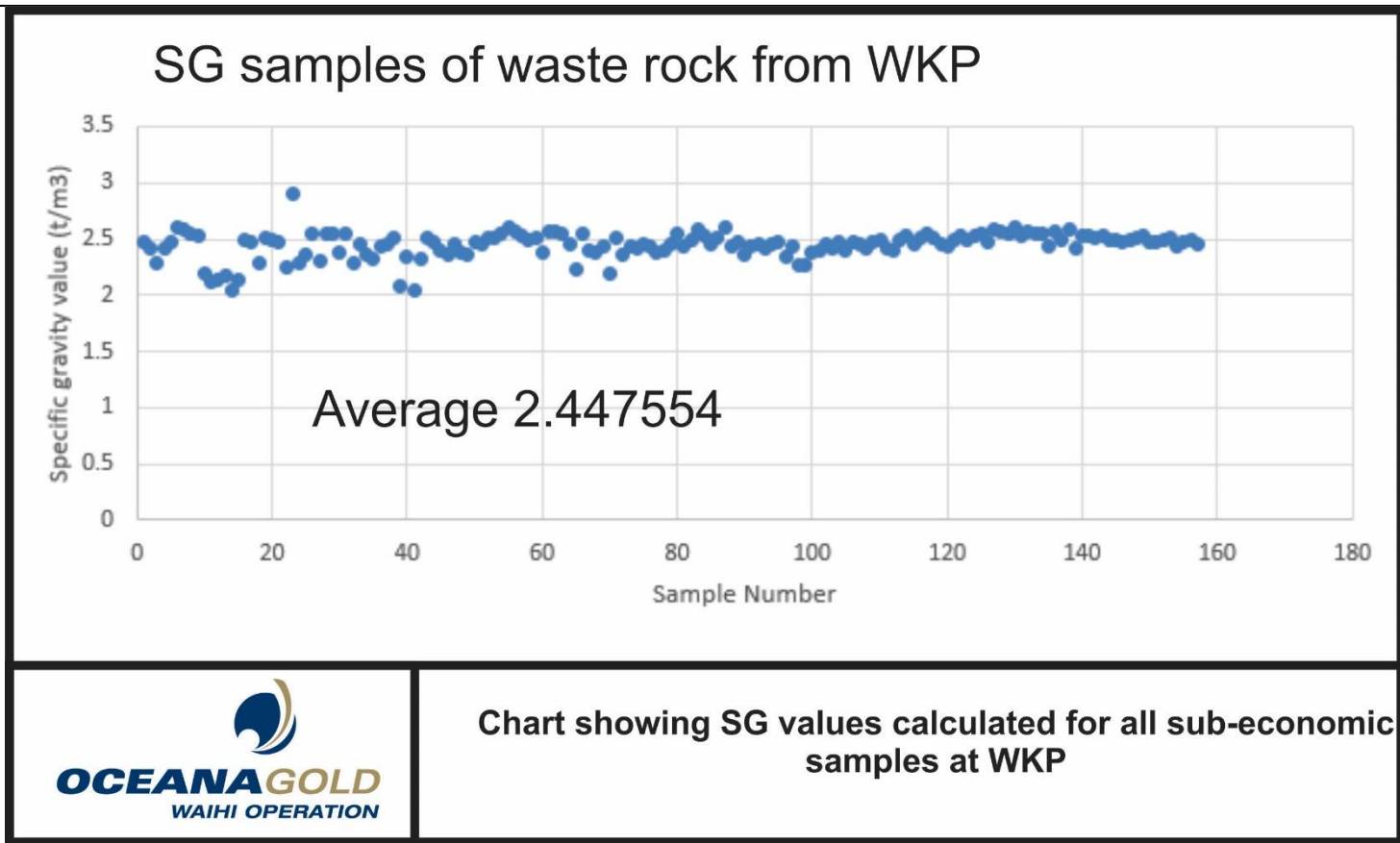


Chart showing SG values calculated for ore grade samples only from WKP

WHAREKIRAUPONGA (WKP)

Criteria

Status



Classification

- The resource classification is based on average drill hole spacing. The ranges employed in classification of the WKP scoping resource model are slightly greater than ranges used in classification of other vein zones currently being mined within the larger Waihi operation, based on the demonstrated continuity of the EG vein over approximately 1,000 metres along strike.
- Indicated resource is defined using an average distance to the three closest drillholes of 50 metres, at this point only the EG vein has been considered for classification as indicated resource.
- There is significant local experience in mining and assessing the continuity of epithermal mineralisation with the nearby veining in Waihi. The vein style mineralisation present at WKP is not too different from Waihi, it also has a strong visual control and a demonstrated continuity over significant ranges.
- An estimation calculated using a maximum of three drillholes with a single sample per drill hole was undertaken storing the average distance to the three drillholes used to estimate the block. This forms the basis for the drillhole spacing and therefore the resource classification. Polygons are developed based on the results of this estimation pass for coding into the block model for the higher confidence category zones to overcome spotty distribution of classification criteria. At present no material in the veins other than the EG vein has been considered for classification as indicated resource category.
- The resource estimate outlined in this document appropriately reflects the Competent Person's view of the deposit.

Resource Classification	Average distance to 3 closest holes	
	EG Vein Zone	All Other Vein Zones
Measured	—	—
Indicated	0 to 50 m	—
Inferred	50 to 82.5 m	0 to 70 m

Audits or reviews

- The models are regularly cross checked by OceanaGold Corporation employees, including OceanaGold Group Geologist - Tim O'Sullivan who is familiar with the resource estimation practices employed on site.
- SRK have been engaged to undertake an independent assessment of this WKP resource estimate

Discussion of relative accuracy/

- The WKP0219_USC model has been generated utilising processes consistent with those routinely employed to model all other epithermal vein deposits at the Waihi site. These methods have been developed on the back of many years of operational experience and have been demonstrated to be appropriate across several deposits.

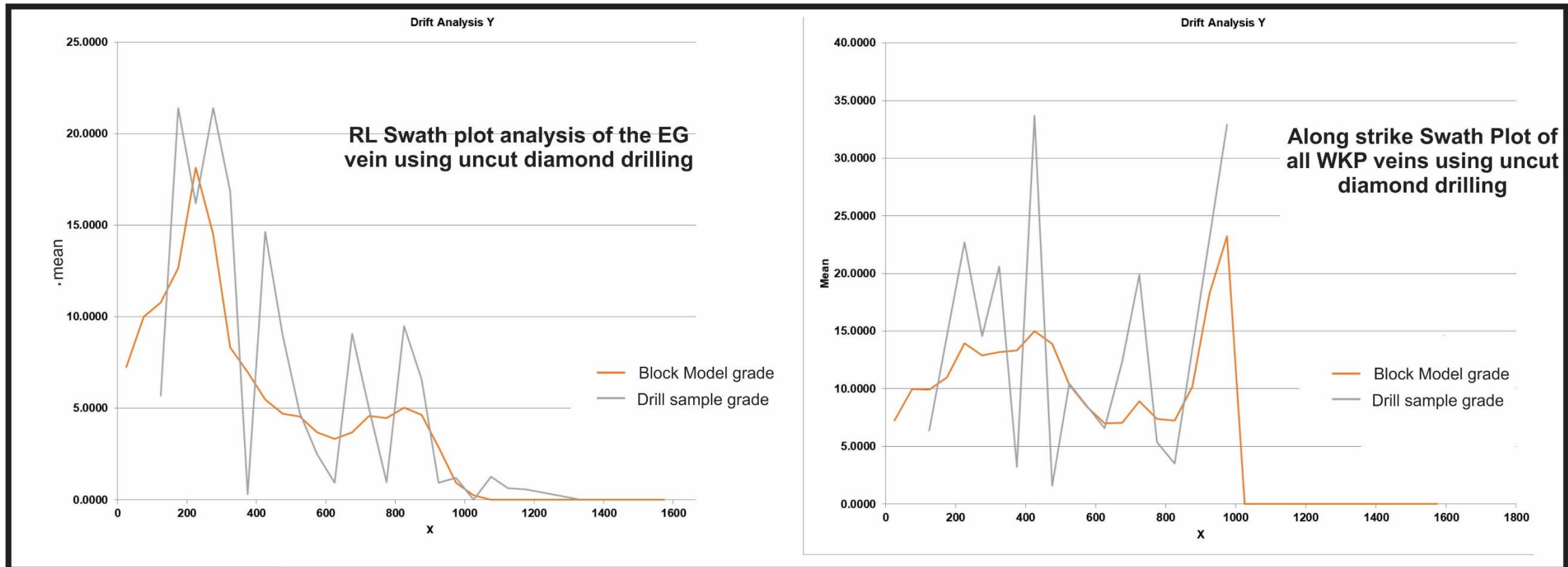
WHAREKIRAUPONGA (WKP)

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Status

confidence

- In reviewing the nature of the WKP deposit it is considered appropriate to employ the same modelling and estimation work flows to estimate the insitu resource for this deposit. This opinion is formed on the basis of the geologic knowledge and also the detailed statistical evaluation of the data obtained through drilling.
- Numerous methods have been used to validate the integrity of the WKP0219_USC resource model. The validation has included:
 - validation of the new data,
 - a review of the interpretation, including classification shapes,
 - a review of the methodology,
 - a review of the exploratory data analysis (EDA), including variography and search neighbourhoods,
 - global grade and tonnage comparisons with the previous model
 - a visual sectional validation of the block model with interpretation and drilling, and
 - Swath plots are generated using the Vulcan drift analysis tools



SWATH Plots produced using Vulcan software showing the 'EG Vein only' and 'All WKP veins' using uncut diamond drilling assays.