31 March 2022

TABLE 1 - 2012 JORC: Haile Gold Mine

OceanaGold Corporation (**TSX: OGC**) (**ASX: OGC**) (the “Company”) refers to the announcement released by the Company dated 31 March 2022 titled “OCEANAGOLD REPORTS MINERAL RESOURCES AND RESERVES FOR THE YEAR-ENDED 2021” and hereby encloses TABLE 1 - 2012 JORC: Haile Gold Mine relating to the announcement.

SUMMARY OF TABLE 1 - 2012 JORC: Haile Gold Mine

A Material Information Summary pursuant to ASX Listing Rules 5.8 and 5.9 is provided below for the Haile Gold Mine (HGM). which includes both open pit and underground mining, ore processing and a single economic analysis based on combined open pit and underground Ore Reserves as at 31 December, 2021. The Assessment and Reporting Criteria in accordance with JORC Code 2012 is presented in Appendix 1.

The Project is controlled by OceanaGold Corporation through its wholly owned subsidiary Haile Gold Mine Inc. OceanaGold is listed on the Toronto and Australian stock exchanges under the code "OGC" and is the Issuer of this Technical Report

1.0 Haile Gold Mine

Haile is currently being mined using conventional open pit methods with development for the underground mine scheduled to begin in April 2022. First production from the stopes is scheduled to occur in September 2023 and will last through May 2028 based on the current Mineral Reserves.

Open pit ore processed averages approximately 3 Mtpa while the underground is operating, increasing to 3.8 Mtpa once underground mining has been completed. Total open-pit fleet material movement, including rehandle, averages between 40 Mtpa and 45 Mtpa, reducing toward the end of the mine life. The mine life currently extends to 2034.

1.1 Geology and Mineralisation

Gold mineralisation at Haile is hosted in laminated siltstones and minor volcanic rocks of the Upper Persimmon Fork Formation and is dissected by barren NNW-striking diabase dikes. Deformation includes brittle and ductile styles with ENE-trending foliation, faults, brecciation, and isoclinal folds. Sedimentary rocks are folded within an ENE-trending anticlinorium with a steep SE limb and a gentle NW limb. Quartz-sericite-pyrite alteration is overprinted by regional greenschist facies metamorphism with carbonate-chlorite-pyrite alteration.

1.2 Drilling, Sampling and Analysis

Drilling totals 3,367 holes for 698,536m, including 1,098 core holes for 277,270m and 2,269 RC holes for 421,266m. Resource drilling since 2012 has been exclusively by diamond core methods.

All drilling, sample preparation and analytical methods are considered to meet industry standards.

Diamond drilling utilises wireline methods with HQ and NQ sized. Core logging and core cutting are conducted by OceanaGold employees at the Exploration core shed. Since 2017 half core has been delivered by truck to the sample preparation facilities at ALS in Tucson, Arizona. Prior to that at Kershaw Mineral Lab (KML) in Kershaw, SC. Half core is dried, jaw crushed, split and pulverised, then fire assayed.

Reverse circulation samples were typically collected at approximate 1.5m intervals and rotary split. RC samples were prepared at either the KML or the AHK Geochem (AHK) preparation facility in Spartanburg, SC. Samples were weighed and poured through a Jones riffle splitter to reduce the size to roughly 2.7kg for shipment to the sample lab. Alternatively, samples were staged at the Haile site and placed in containers for direct shipment to KML or AHK. Samples were dried, jaw crushed, split and pulverised, then fire assayed for gold.

1.3 Estimation Methodology

Mining from 2016 to 2021 has tested and confirmed the veracity of the estimations which are based on the drill hole data.

The Mineral Resources at Haile comprise both open pit and underground mining scenarios for which separate block models were generated. Grades were estimated with Vulcan™ modelling software.

For the open pit, gold estimation was constrained within implicitly modelled grade shells, approximating a 0.065g/t gold indicator. Metasediment/metavolcanic contacts were not used to constrain gold estimation. Gold grades were estimated into 10mE x 10mN x 5mRL blocks using 2.5m bench composites. Gold grade estimation was via Multiple Indicator Kriging (MIK) to produce E-Type estimate. MIK is well suited to estimating positively skewed grade distributions. Moreover, the top indicator class was capped at 50g/t Au.

For the underground, gold estimation was constrained within implicitly modelled grade shells, approximating a 1.0 g/t and 0.8 g/t gold indicators for Horseshoe and Palomino respectively. Metasediment / metavolcanic contacts were not used to constrain gold estimation. Gold grades were estimated into 10mE x 10mN x 10mRL blocks (sub-blocked to 5mE x 5mN x 5mRl for Horseshoe and 2,5mE x 2.5mN x 2.5mRl for Palomino) for both Horseshoe and Palomino, using 3m down-hole composites, gold grade estimation was via Ordinary Kriging (OK). A top cap of 100g/t Au was used for Horseshoe, whilst no top cap was used for Palomino because the maximum grade was 31g/t Au.

For both the open pit and underground, ordinary kriging was used for silver, sulphur and carbon estimates. Densities were based upon core analyses and averaged values were assigned by rock type.

Post-mineralisation dikes were assigned zero gold grade.

1.4 Resource Classification:

Open pit classification is based upon a combination of estimation pass, average distance of samples and number of drill holes.

- Measured: Blocks estimated within first pass, the maximum average distance of sample was 14m, and at least 4 drill holes used for estimations.
- Indicated: Blocks estimated within second pass or less, the maximum average distance of sample was 36.8m, and at least 2 drill holes used for estimations. Typical drill spacing for Indicated is less than 40m x 40m.
- Inferred: Blocks estimated within third pass or less.

Horseshoe underground classification is based upon a combination of drill density, geological interpretation and estimation parameters.

- Indicated: 25m x 25m spacing.
- Inferred: 35m x 35m spacing,

Palomino classification is based upon a combination of drill density, geological interpretation and estimation parameters.

- Indicated: 25m x 25m spacing.
- Inferred: 35m x 35m spacing.

1.4 Mining and Metallurgical methods, parameters and other modifying factors in the Ore Reserve

Inputs to the calculation of the cut-off grades for the open pit and underground mines include mining costs, metallurgical recoveries, treatment and refining costs, general and administration costs, royalties, and commodity prices. All costs and gold price assumptions are reviewed annually.

As part of the pit design process the geotechnical stability of proposed open pit stages are reviewed by Call & Nicholas geotechnical consultants of Arizona. The parameters they derive are incorporated into pit optimisation and subsequent designs.

The tailing storage facility (TSF) and waste overburden storage areas (OSA) have been designed by Newfields consultants. They have also contributed to the hydrogeology and groundwater management on site.

The open pit is mined using conventional hydraulic excavator and rigid dump truck methods. Bulk waste is mined on 10 m benches with the excavators in face-shovel configuration. The ore is generally selectively mined on 3.3 m flitches with the excavators in back-hoe configuration to manage ore loss and dilution. Front-end loaders may be used in either application when other units are unavailable. The haul truck fleet is a mix of 175 t and 140 t payload units.

Underground mining at Horseshoe is planned to use long-hole stoping methods with cemented rock backfill (CRF). The stopes are planned to be 20m wide and length will vary based on mineralisation grade and geotechnical considerations. A spacing of 25m between levels is planned. The CRF will have sufficient strength to allow for mining adjacent to backfilled stopes. The mineralisation is divided into three production areas that will be mined bottom up.

HGM owns and operates the open pit mining fleet, and mining costs and productivities are updated annually. The planned underground mine is at the project execution level and is planned to commence in 2022.

Gold is recovered at the operational processing plant which utilises a conventional flowsheet as developed in the feasibility study, comprising:

- Primary jaw crushing.
- Conventional SABC grinding circuit.
- Flash flotation on the cyclone underflow.
- Rougher flotation.
- Two stage concentrate regrind with a tower-mill followed by an Isa-mill.
- CIL leaching of reground concentrate and flotation tailings.
- Carbon stripping, electrowinning and smelting of bullion.
- Cyanide destruction.

Additional equipment was installed in some areas of the processing plant between 2018-2020 to achieve the expanded capacity of 3.8 mtpa.

The processing plant has an established skilled workforce and management team in place. Process costs, throughput assumptions and processing recoveries are reviewed annually.

1.5 Mineral Resources

The underground, stockpile and combined Mineral Resource estimates in the tables below, are reported and classified in accordance with the JORC 2012 Code and the CIM Definition Standards for Mineral Resources and Mineral Reserves.

– **Table: Haile Combined Open Pit, Stockpile and Underground Resource Statement December 31, 2021**

Type	Class	Tonnes (Mt)	Au Grade (g/t)	Contained Au (Moz)	Ag Grade (g/t)	Contained Ag (Moz)
Open Pit	Measured	2.68	1.30	0.11	2.54	0.22
	Indicated	43.0	1.55	2.14	2.41	3.33
	Measured & Indicated	**45.6**	**1.54**	**2.25**	**2.42**	**3.55**
	Inferred	5.7	1.0	0.2	1.3	0.2
Stockpiles	Measured	1.83	1.10	0.06	1.10	0.06
	Indicated	0.0	0.00	0.0		
	Measured & Indicated	**1.83**	**1.10**	**0.06**	**1.10**	**0.06**
	Inferred	0.0	0.0	0.0		
Underground	Measured	0.0	0.0	0.0		
	Indicated	5.48	4.12	0.73		
	Measured & Indicated	**5.48**	**4.12**	**0.73**		
	Inferred	5.6	3.1	0.6		
Combined	Measured	4.51	1.22	0.18		0.28
	Indicated	48.5	1.84	2.87		3.33
	Measured & Indicated	**52.9**	**1.79**	**3.04**		**3.61**
	Inferred	11	2.0	0.7		0.2

Source: OceanaGold, 2022

- Cut-off grades for the open pit, Horseshoe underground, and Palomino underground are 0.45 g/t / 0.55 (primary / oxide), 1.35 g/t and 1.39 g/t Au respectively, based on a gold price of US$1,700/oz.
- No cut-off applied to reported mined stockpiles
- Open pit resource is reported within a US$1,700/oz optimized shell. Palomino is constrained within a conceptual stope design and Horseshoe underground is spatially constrained within the 1 g/t Indicator shell.
- Mineral Resources include Mineral Reserves and are reported on an in situ basis.
- There is no certainty that Mineral Resources that are not Mineral Reserves will be converted to Mineral Reserves.
- All figures are rounded to reflect the relative accuracy and confidence of the estimates and totals may not add correctly.

1.6 Mineral Reserves

The combined Ore Reserves for the Underground and Open Pit are summarised in **Error! Reference source not found.** below and are reported and classified in accordance with the JORC 2012 Code and the CIM Definition Standards for Mineral Resources and Mineral Reserves

Table 0-1: Reserve Statement for OceanaGold's Haile Gold Mine as of December 31, 2021

Type	Category	Tonnes (Mt)	Au Grade (g/t)	Ag Grade (g/t)	Au Contained (Moz)	Ag Contained (Moz)
OP	Proven	4.4	1.26	1.98	0.18	0.28
	Probable*	37.6	1.62	2.44	1.96	2.95
	Proven + Probable	42.0	1.58	2.39	2.14	3.23
UG	Proven		-	-		-
	Probable	3.42	3.78	-	0.42	-
	Proven + Probable	3.42	3.78	-	0.42	-
OP + UG	Proven	4.4	1.3	2.0	0.2	0.3
	Probable	41.0	1.8	2.2	2.4	2.9
	Proven + Probable	45.4	1.8	2.2	2.6	3.2

*Includes1.8 Mt of stockpile material grading 1.1 g/t Au and 1.1 g/t Ag
Source: OceanaGold

- Mineral Reserves are based on a gold price of US$ 1,500/oz.
- Metallurgical recoveries are based on a recovery curve for primary material of (1-(0.2152*Au grade^-0.3696)) with +0.025 uplift applied to material > 1.7 g/t Au. Recovery for oxide material is applied at 67%. This equates to an overall recovery of 81% for the open pit material and 88% for the underground material.
- Open pit reserves are stated using a 0.5 g/t Au cut-off for primary and 0.6 g/t Au cut-off for oxide material. Open pit reserves include variable dilution and mining recovery that has been applied in the mine schedule to the upper benches of each pit stage to account for assumed mining by face shovel excavator in these areas.
- Open pit reserves are converted from resources through the process of pit optimization, pit design, production schedule and supported by a positive cash flow model.
- Underground reserves are stated using a 1.53 g/t Au cut-off. The reserve estimate is based on a mine design using an elevated cut-off grade of 1.67 Au g/t, with adjacent lower grade stopes included in the design. Incremental material is included in the reserves based on an incremental stope cut-off grade of 1.37 g/t Au and an incremental development cut-off grade of 0.46 g/t Au. Mining recovery ranges from 94% to 100% depending on activity type. Sill levels use a 75% recovery. Mining dilution is applied using zero grade. The dilution ranges from 2% to 10% depending on activity type.
- Mineral Reserves are inclusive of Mineral Resources. All figures are rounded to reflect the relative accuracy of the estimates. Totals may not sum due to rounding.
- Mineral Reserves have been stated on the basis of a mine design, mine plan, and cash-flow model.

The updates of Mineral Resources for Haile open pit and underground have been verified and approved by, or are based on information prepared by, or under the supervision of, J. G. Moore. The updates of Mineral Reserves for Haile open pits have been verified and approved by, or are based on information prepared by, or under the supervision of, G. Hollett and the Mineral Reserves for Haile underground have been verified and approved by or are based upon information prepared by, or under the supervision B. Drury.

1.7 Competent Persons

Mr Moore is a member and Chartered Professional of the Australasian Institute of Mining and Metallurgy. Mr Hollett is a Professional Engineer (P.Eng) registered with Engineers and Geoscientists of British Columbia

(EGBC). Messrs Hollett and Moore are full time employees of the Company's subsidiary, OceanaGold Management Pty Limited. Ms Drury is a Registered Member with the Society of Mining, Metallurgy & Exploration and a full time employee of the Company's subsidiary, Haile Gold Mine.

Mr Moore, Mr Hollett and Ms Drury have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'

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

Section 1 Sampling Techniques and Data

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

Criteria	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 (eg 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g 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.*	Diamond drill hole and reverse circulation have been used to inform the Mineral Resource estimations. The drilling totals 3,367 holes for 698,536m, including 1,098 core holes for 277,270m and 2,269 RC holes for 421,266m. Drilling since 2012 has been exclusively by diamond core methods. No drilling was conducted at Haile from 1996 to 2007. Sample procedures applied to historical drilling from 1975 to 1995 were not well documented. Historical drilling accounts for less than 20% of the data by drill metres; 54% of the historical holes were shallower than 50m and have largely been mined out. The sample procedures applied to the historical drilling were not well documented. Drilling and sampling techniques described in this section reflect the procedures applied by Romarco from 2008-2015 and OceanaGold from 2015 to current. All drilling, sample preparation and analytical methods are considered to meet industry standards. Diamond drilling utilises wireline methods with HQ and NQ sized core at 63.5mm and 48mm diameter, respectively. Core orientation for structural measurements has been conducted in about 30% of the diamond holes. Core logging and core cutting are conducted by OceanaGold employees at the Exploration core shed. Core recoveries typically range from 95-100% in unweathered rock. Core recoveries in the uppermost 1-15m of each hole range from 0-60% due to soft, crumbly saprolite in the weathered zone. There is no observed relationship between core recovery and grade. <u>Reverse Circulation Drilling</u> Reverse circulation drilling at Haile typically used 16cm drill bits. Sample intervals were predominantly 1.5m. RC rigs were equipped with a cyclone and a rotary splitter. Most RC drilling at Haile was in wet conditions. Water injection was typically 15-19ltr/min above the water table and decreased to 3-5ltr/min when groundwater was encountered. Wet samples were bagged, drained and allowed to settle (aided by flocculent) before being transported to a storage facility for drainage and drying. Dry sample weights ranged from 9-14kg and represented a 11-17% split of the total sample mass. Representative lithological chip samples are retained in chip trays, labelled with the drill hole number and depth intervals in permanent marker. Each 2 x 4cm compartment of a chip tray represents 1.8m of drilling. RC drilling has not been conducted at Haile since 2015.

Criteria	JORC Code Explanation	Commentary
		Diamond Drilling Diamond core drilling has been the sole drilling method for gold assays at Haile since 2015. Diamond drilling utilises wireline methods with HQ and NQ size core 63.5mm and 48mm core. Core is transferred from the core barrels to plastic core boxes at the drill rig by the driller. Core orientation for structural measurements is collected in about 30% of the holes. Core is broken to fill the boxes which each contain about 3m of core. Drill intervals are marked on the core boxes and interval marker blocks are labelled and placed in the core box, usually on 3.05m intervals. Whole core is transported to the core shed for logging and cutting by OceanaGold Corporation (OceanaGold) personnel. Drilling, logging and sample intervals are recorded in feet based on 10-foot long drill rods. Data are converted to metric units in the database. **Sample Preparation & Analysis** Core Samples The core is cleaned, measured, logged, photographed and cut at the Haile OceanaGold core shed in Kershaw, South Carolina. All samples are handled and managed by OceanaGold employees. Geotechnical and geologic logging are completed on the whole core. Rock Quality Data (RQD), hardness, joint condition and core recovery are recorded as part of the geotechnical suite of data. Sample preparation for both the diamond core and RC samples is considered appropriate for sample representivity. Half core samples are cut by rotary diamond saw or, if too soft, are cut by knife. The saw is cleaned between each sample. The cooling water for the saw is not recycled. Sample lengths of 1-3m lengths produce bagged sample weights of 2-5kg. These are considered adequate for the style of mineralisation. Although coarse gold has been observed in drill core, it is rare and is not representative of the bulk of the mineralisation to be mined. Geologists log the core for structure, rock type, mineralogy and alteration using tablets with drop down menus in Excel. The logging geologist assigns the sample intervals and sample numbers based on geology. The geologist inserts standards and blanks. Check assays are submitted to a second lab on a regular basis. Half core is delivered by truck to the sample preparation facilities at ALS in Tucson, Arizona. Sample preparation step include: 1) Inventory and log samples into the laboratory LIMS tracking system. 2) Print worksheets and envelope labels. 3) Dry samples at 93 degrees C.

Criteria	JORC Code Explanation	Commentary
		4) Jaw crush samples to 70% passing 10 mesh (2 mm). 5) Clean the crusher between samples with barren rock and compressed air. 6) Split sample with a riffle splitter to prepare the sample for pulverizing. 7) pulverise a 450g sample (+/- 50 gm) to 85% passing 75 mesh. 8) Clean the pulveriser between samples with sand and compressed air. 9) Approximately 225g of pulp sample is retained for fire assay. Coarse rejects and reserve pulps are returned to Haile for storage.
Drilling techniques	- *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	Drilling at the Haile property commenced in 1975 and continued intermittently until 1995 by Cyprus, Piedmont, AMAX and Nicor using core and reverse circulation (RC) methods. Drilling by Romarco from 2008 to 2015 was by RC and core methods. All drilling used in estimation since 2015 has been with core.
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.*	RC drilling was conducted prior to OceanaGold's ownership. No primary RC sample weights were recorded so RC recoveries cannot be directly calculated. A total of 34,000 rotary split RC sub-samples were weighed by Romarco Minerals. Splitter ratio settings ranged from 8-17% and on the basis of back-calculating the range of likely total sample weights, RC recoveries are thought to have been largely acceptable. As a precautionary measure, where RC recoveries are estimated to be low on the basis of sub-sample mass (ie assumed recoveries below 90%), and sampled at depth (>200m), factors have been applied to gold grades. These will remain until such time as they are replaced by diamond samples. Sensitivity analysis shows the impact on the estimated gold ounces to be very low (a few percent globally). At depth the ratio of RC versus diamond samples decreases significantly. Core recoveries typically range from 95-100% in unweathered rock, where 97% of the mineralisation is contained. There is no observed relationship between core recovery and grade. Core recoveries are 0-60% in the uppermost 1-15m of each hole due to soft, crumbly saprolite in the surficial weathering zone. Coarse gold (50-150µm) is present but rare at Haile. The sampling methodology is believed to be appropriate for the style of mineralisation.
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.*	All drilled intervals are logged on site by staff geologists at Haile Gold Mine. Geotechnical and geologic logging are completed on washed whole core in the OceanaGold core shed. Geologic logging includes rock type, structure, alteration, mineralogy, comments and assay sample intervals. Logs are hand-plotted on 60m spaced paper cross sections to assess spatial context and relationship to adjacent holes. Logging is reviewed on a weekly basis by the senior geologist and/or exploration director for completeness, consistency and accuracy. Logging is recorded by geologists with tablets in standardised Excel files with pull down menus for log fields. A separate file is created for each drill hole. The data are stored on site and backed

<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>up daily. Excel files with geology logs are uploaded to the acQuire database, which is managed by the database specialist in Macraes, NZ. Rock Quality Data (RQD), hardness, fracture frequency and joint condition rating and core recovery are recorded as part of the geotechnical suite of data. All core is photographed by box (approx. 3m each) using a mounted digital camera, labelled by hole ID and depth, and stored on the Haile network. Core photos are routinely reviewed by geologists when assays are received or when select core photo relogging programs are conducted.</td></tr>
<tr><td>Sub-sampling techniques and sample preparation</td><td>
<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>
<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>
<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>
<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>
<i>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</i>
<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>
</td><td>On Site Sample Preparation

Multiple laboratories have been used for Haile gold analysis to inform the Mineral Resource model. Some holes have also been assayed for silver, carbon and sulphur. The labs used are listed below in chronological order. Sample preparation and analytical methods have been to industry standards. Since July 2017 all Haile core samples have been prepared at the ALS lab in Tucson, Arizona, and analysed at the ALS lab in Reno, NV. Samples are pulverised from a 450g sample to 85% passing 75µm. A 30g charge is used to analyse for gold via fire assay.

<i>Haile drilling campaigns by year, owner and lab</i>
<table>
<tr><th>start hole ID</th><th>end hole ID</th><th>hole type</th><th>start yr</th><th>end yr</th><th>owner</th><th>lab</th></tr>
<tr><td>DDH0001</td><td>DDH0031</td><td>core</td><td>1975</td><td>1977</td><td>Cyprus</td><td>CMS, Cyprus, Union</td></tr>
<tr><td>DDH0032</td><td>DDH0098</td><td>core</td><td>1985</td><td>1990</td><td>Piedmont</td><td>Piedmont, NE Geochemical</td></tr>
<tr><td>DDH0099</td><td>DDH0288</td><td>core</td><td>1991</td><td>1995</td><td>AMAX</td><td>Bondar Clegg</td></tr>
<tr><td>DDH0289</td><td>DDH0341</td><td>core</td><td>2008</td><td>Aug 2015</td><td>Romarco</td><td>Inspectorate</td></tr>
<tr><td>DDH0342</td><td>DDH0431</td><td>core</td><td>2008</td><td>2009</td><td>Romarco</td><td>Alaska</td></tr>
<tr><td>DDH0432</td><td>DDH511</td><td>core</td><td>2009</td><td>Sep-11</td><td>Romarco</td><td>KML</td></tr>
<tr><td>DDH512</td><td>DDH596</td><td>core</td><td>Oct-11</td><td>Jun-17</td><td>OceanaGold</td><td>KML</td></tr>
<tr><td>DDH0597</td><td>DDH1059</td><td>core</td><td>Jul-17</td><td>ongoing</td><td>OceanaGold</td><td>ALS</td></tr>
<tr><td>NHD0001</td><td>NHD0037</td><td>core</td><td>1985</td><td>1988</td><td>Nicor</td><td>Cone Geochemical</td></tr>
<tr><td>NRH0001</td><td>NRH0054</td><td>RC</td><td>1987</td><td>1988</td><td>Nicor</td><td>Cone Geochemical</td></tr>
<tr><td>RC0001</td><td>RC0031</td><td>RC</td><td>1985</td><td>1986</td><td>Piedmont</td><td>Union</td></tr>
<tr><td>RC0032</td><td>RC0183</td><td>RC</td><td>1986</td><td>1987</td><td>Piedmont</td><td>NE Geochemical</td></tr>
<tr><td>RC0184</td><td>RC1230</td><td>RC</td><td>1987</td><td>1990</td><td>Piedmont</td><td>Bondar Clegg, NE Geochemical</td></tr>
<tr><td>RC1231</td><td>RC1303</td><td>RC</td><td>1990</td><td>1992</td><td>Piedmont</td><td>Bondar Clegg</td></tr>
<tr><td>RC1304</td><td>RC1501</td><td>RC</td><td>1992</td><td>1994</td><td>AMAX</td><td>Bondar Clegg</td></tr>
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Criteria	JORC Code Explanation	Commentary

RC1502	RC1527	RC	2008	2009	Romarco	Inspectorate
RC1528	RC2083	RC	Jan-10	Jan 2011	Romarco	Alaska
RC2084	RC2122	RC	Jan-11	Sep-11	Romarco	Acme, Chemex, KML
RC2123	RC2235	RC	Oct-11	Jun-15	Romarco	KML
RCT0001	RCT0157	RC/core	Apr-10	Jan-11	Romarco	Alaska
RCT0158	RCT0178	RC/core	Jan-11	Sep-11	Romarco	Acme
RCT0179	RCT0211	RC/core	Oct-11	Dec-12	Romarco	KML

Reverse circulation (RC) Samples

RC sampling was carried out prior to OceanaGold's ownership. The bagged reverse circulation samples were transferred to the Haile sample handling facility where they were prepared for shipment to a lab. RC samples were prepared at either the Kershaw Mineral Lab (KML) in Kershaw, SC or the AHK Geochem (AHK) preparation facility in Spartanburg, SC. Samples followed one of two paths. Samples were weighed and poured through a Jones riffle splitter to reduce the size to roughly 2.7kg for shipment to the sample lab. Alternatively, samples were staged at the Haile site and placed in containers for direct shipment to KML or AHK.

Core Samples

Haile has good visual indicators of mineralisation observed in drill core based on intensity of silicification and pyrite content. Assay intervals for sampling are recorded in the Excel geology log after the hole has been logged. Assay interval lengths range from 1-5 m. Interval breaks selected by the geologist are indicated by green, pre-numbered cards placed in the core boxes. Refer to sampling techniques section and the Quality of Assay data section for more detail.

Half core samples are cut by rotary diamond saw or, if too soft, are cut by knife. Half core is placed in a bar-coded, labelled sample bag and the other half is returned to the core box. Sample preparation for both the diamond core and RC samples is considered appropriate. Sample lengths of 1-3 metre lengths produce bagged sample weights of 2-5 kg. These are considered adequate for the style of mineralisation, which are primarily of the finely disseminated sediment-hosted style. Although coarse gold has been observed in drill core, it is rare and is not representative of the bulk mineralisation that will be mined.

Off Site Sample Preparation

The AHK sample preparation and assay facility is independent of HGM. The KML sample preparation and assay facility was owned and operated by the Haile Gold Mine, but as of 2019 has

Criteria	JORC Code Explanation	Commentary
		been operated by SGS. AHK Geochem (AHK) After the samples arrived at AHK in Spartanburg, the following procedures were applied: Sample Preparation: Dry samples at 65.5 degrees C, Jaw crush samples to 80% passing 2 mm, Split sample with a riffle splitter to prepare the sample for pulverizing, pulverise a 250 gm sample to 90% passing 150 mesh (0.106 mm), Ship about 125 gm of sample pulp for assay, Typically 30g for fire assay. Kershaw Mineral Laboratory (KML) After the samples arrived at KML, the following procedures were applied: Sample Preparation: Dry samples at 93 degrees C, Jaw crush samples to 70% passing 10 mesh (2 mm), Split sample with a riffle splitter to prepare the sample for pulverizing, pulverise a 450 gm sample (+/- 50 gm) to 85% passing 140 mesh (0.106 mm), Approximately 225 gm of pulp sample is sent for fire assay, Coarse rejects and reserve pulps are returned to Haile for storage. Typically 30g for fire assay. ALS Since July 2017 all Haile core samples have been prepared at the ALS lab in Tucson, Arizona, and analysed at the ALS lab in Reno, NV. Samples are pulverised from a 450g sample to 85% passing 75 mesh. Approximately 225g of pulp sample is used for fire assay. Assays are based on a 30g fire assay aliquot for gold with Atomic Absorption finish <3 g/t Au and gravity finish >3 g/t Au. Some holes are composited and analysed for carbon, sulphur and multi-elements using LECO and ICP-OES methods. ALS labs used for Haile OceanaGold samples are ISO 17025 certified.
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*	Blanks and standards are inserted every 20th sample. Check assays are submitted to the SGS lab in Kershaw, SC for 5% of the intervals each quarter. ALS samples show no evidence of contamination or instrument drift. Precision and accuracy of CRMs compared to expected values have been consistently with 5% RSD and often within 3%. Graphs showing expected values and two standards of deviation have been produced and evaluated. Barren marble and sand are inserted as blanks every 20th sample. Certified reference materials from Rock-Labs are inserted every 20th sample. All blanks and CRMs are handled by the Geotech Supervisor and are stored in the locked OceanaGold office.

Criteria	JORC Code Explanation	Commentary
	(eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	
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.*	During Romarco Minerals and OceanaGold's involvement numerous checks have been completed, including: • Database checks in 2011 by IMC for Romarco Minerals. • Database translation from EXCEL to AcQuire on transition to OceanaGold's ownership. • 5% assays for paper records and certificates versus database entry in 2019. • 100% assay check for intervals >10g/t Au. • 100% check of collar coordinates and downhole surveys. • Core photo relogging for lithology and structure. Dozens of old RC holes drilled from 1975 to 1995 have been twinned with core holes since 2016. Assay comparisons are generally within 20% over distances of < 5m. A -5% adjustment has been made to pre-Romarco RC drill hole sample grades as a precautionary measure due to their clustered distribution (approximately 2% globally). Over time, as mining progresses, this adjustment may be discontinued. Where RC recoveries are low (based upon back-calculated rotary splitter weights) and sampled at depth (>200m) below the water table, factors ranging from -10% to -40% have been applied to gold grades until such time as they are replaced by diamond drill hole samples. Sensitivity analysis shows the impact to the global Mineral Resource to be low (approximately 2%).
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.*	Drill hole collars are currently surveyed with differential GPS with sub-centimetre accuracy. The historic Amax and early Romarco holes were surveyed by a South Carolina licensed surveyor using conventional ground methods. Frequent check surveys have been completed during the project. The drill hole locations and the project coordinate system are in NAD 83 UTM Zone 17N. Down-hole survey control for RC holes prior to Romarco Minerals was generally poor. However, these holes were typically shallow, so the cumulative down hole deviation is unlikely to be large. Given the typical 30m x 40m drill hole spacing, this is not considered to be a material issue for the open pit estimation. The underground estimations are based on diamond core drilling with good survey control. All holes drilled since 2008 are surveyed for deviation using OceanaGold-owned tools manufactured by Reflex. Downhole survey tools are calibrated weekly by OceanaGold geologists and annually at the Reflex factory in Tucson, AZ. Holes are surveyed by drill supervisors using a Reflex multi-shot camera every 5m. Down hole survey data are reviewed and verified by an OceanaGold geologist for deviation and magnetic intensity. All holes have been accepted for deviation and uploaded to the acQuire database.

Criteria	JORC Code Explanation	Commentary
		Topographic control has been established from contour maps with 0.6m contour intervals. During 2018 and 2019 there was focus on refining historical (pre-Romarco Minerals) open pit mining and underground void depletion volumes. These have been incorporated into the estimations. Underground workings only apply to the Haile pit and impact <2% of the global Mineral Resource. Dense drilling (10-20 m), underground maps and a downhole camera survey have been collated to model 3D void shapes. Further refinements are unlikely to be significant.
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.*	Drill hole spacing for the Haile open pits ranges from 30-40m in most areas. Environmentally protected wetlands and two old leach pads necessitated collaring a number of angled holes off single pads resulting in fanned drill hole distributions. The estimation has mitigated the impacts of irregular drill hole spacing. The low-grade above a 0.1g/t Au envelope is relatively uniform and continuous compared to the drill hole spacing. High-grade pods >3g/t Au exhibit local grade variability on a 5-10m scale. This has resulted is some short-term reconciliation disparities (positive and negative), but the impact diminishes over periods greater than 4-6 months. Drill data used in estimations was composited. MIK is well suited to this style of mineralisation and, despite variable spacing, has provided acceptable estimates for periods of greater than 4-6 months. The Mineral Resource classification fairly reflects the underlying drill hole spacing and mineralisation characteristics. For the open pit: Measured: approximately 25m x 25m, Indicated: approximately 42m x 42m, Inferred greater than 42m x 42m. The drilling coverage for the underground estimates is appropriate and reflected in their Mineral Resource classification. For Horseshoe underground: Indicated: 25m x 25m, Inferred: 35m x 35m. For Palomino underground: Indicated: approximately 25m x 25m,and Inferred: 35m x 35m.
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 and the orientation of key*	The orientation of gold mineralisation generally parallels the foliation of the host metasediments. Structural analyses of foliation, faults, veins and bedding have been conducted using stereonets for oriented core data and from pit mapping. The metasediments and mineralised zones typically strike east-northeast and dip 30-60^0 northwest in the north and central portions of the district. The southern areas have mineralised zones that also strike ENE but dip steeply SSE along the southeast limb of a regional anticlinorium. Drill holes are mostly angled to the southeast at 40-70^0 from horizontal to

Criteria	JORC Code Explanation	Commentary
	mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	intercept rocks roughly perpendicular to mineralised trends. Core intersection angles with foliation are mostly 50-80^0. Drill holes deviate clockwise perpendicular to the northwest-dipping foliation at a rate of 1-3^o per 30m drilled. Drilling improvements in 2018 using new diamond bits have reduced hole deviation to <1^o of azimuth and dip per 100m drilled. There is no evidence of orientation-related sample bias.
Sample security	• *The measures taken to ensure sample security.*	All drill hole samples are handled and transported from the drill rigs to the fenced Haile Exploration warehouse by OceanaGold personnel. Access to the property is controlled by locked doors and cameras monitored by OceanaGold security. The main gate requires an electronic employee badge to enter. Samples are packaged at the Haile Exploration warehouse by the Geotech Supervisor and geotechnicians. Samples are trucked in sealed plastic barrels by certified couriers with submittal forms that are verified during sample pick-up and delivery to ALS. No sample shipments have been recorded as missing or tampered with. Collar, survey, geology, density, water and assay data are stored in a secure acQuire database. Data are stored as received with no adjustment made to the raw assays.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	During Romarco Minerals and OceanaGold's involvement numerous checks have been completed, including: • Database and QAQC checks in 2011 and 2015 by IMC for Romarco Minerals • Database translation from EXCEL to AcQuire on transition to OceanaGold's ownership • A large number of spot checks of paper records versus database entries in 2018 / 2019 • OceanaGold internal data and model audits have been conducted by the OceanaGold Chief Geologist and in November 2018 by an OceanaGold and SRK audit committee. Collar coordinates, downhole surveys and assay certificates have been confirmed for drill hole data reported herein.

Section 2 Reporting of Exploration Results

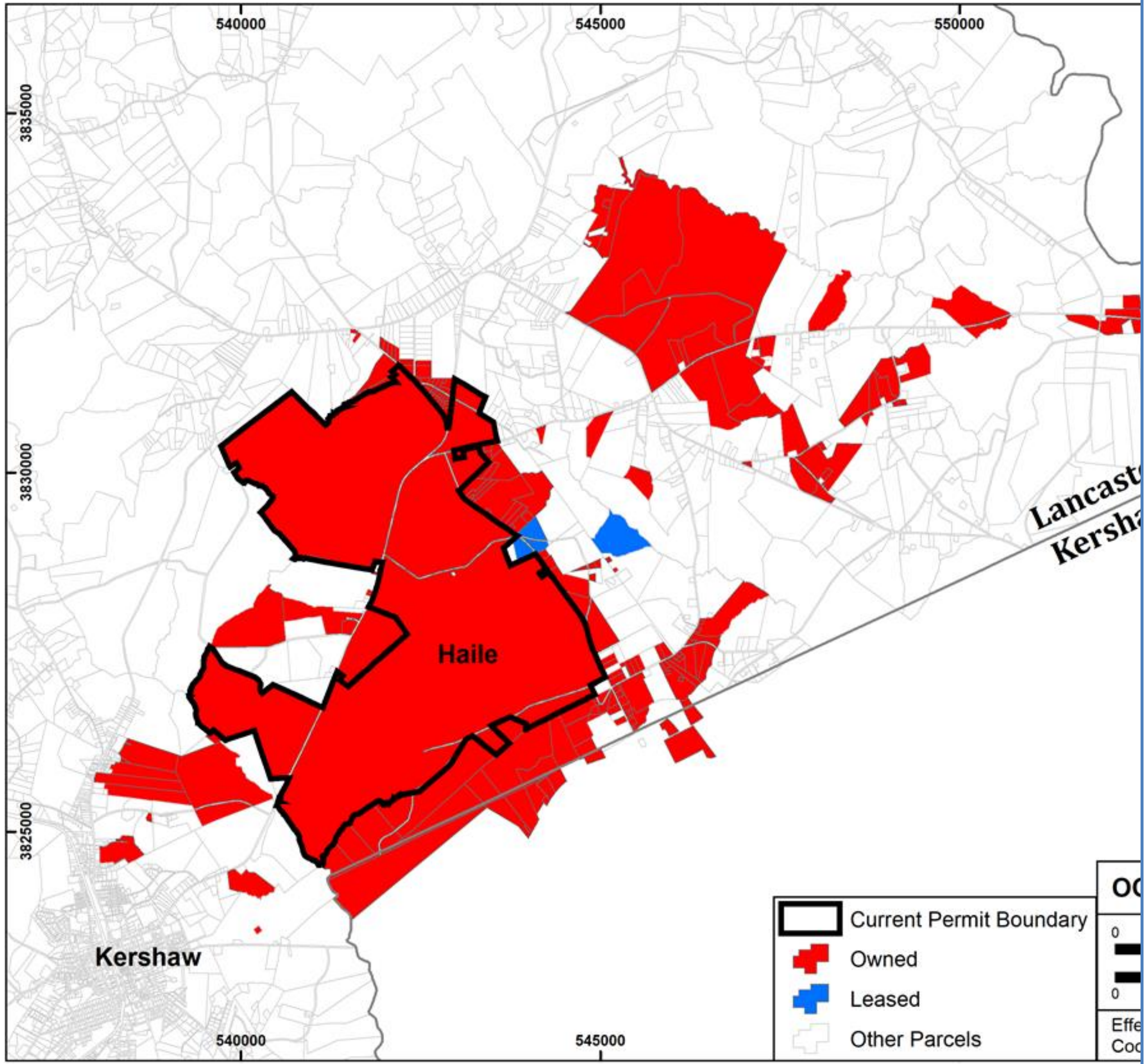
(Criteria listed in the preceding section also apply to this section.)

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*	The Haile gold mine is located 5 km northeast of Kershaw in southern Lancaster County, South Carolina, USA, in the north-central part of the state. Haile is 27 km southeast of Lancaster, the county seat, and is 80 km northeast of Columbia, the state capital. The geographic centre of the mine is at 34° 34' 46" N latitude and 80° 32' 37" W longitude. Mineralised zones at Haile lie within an area extending from UTM NAD83 zone 17N coordinates 540000mE to 544000mE and 3825500mN to 3827500mN. The figure below shows a site map of the Haile Gold Mine. The areas included in the Project comprise the following:

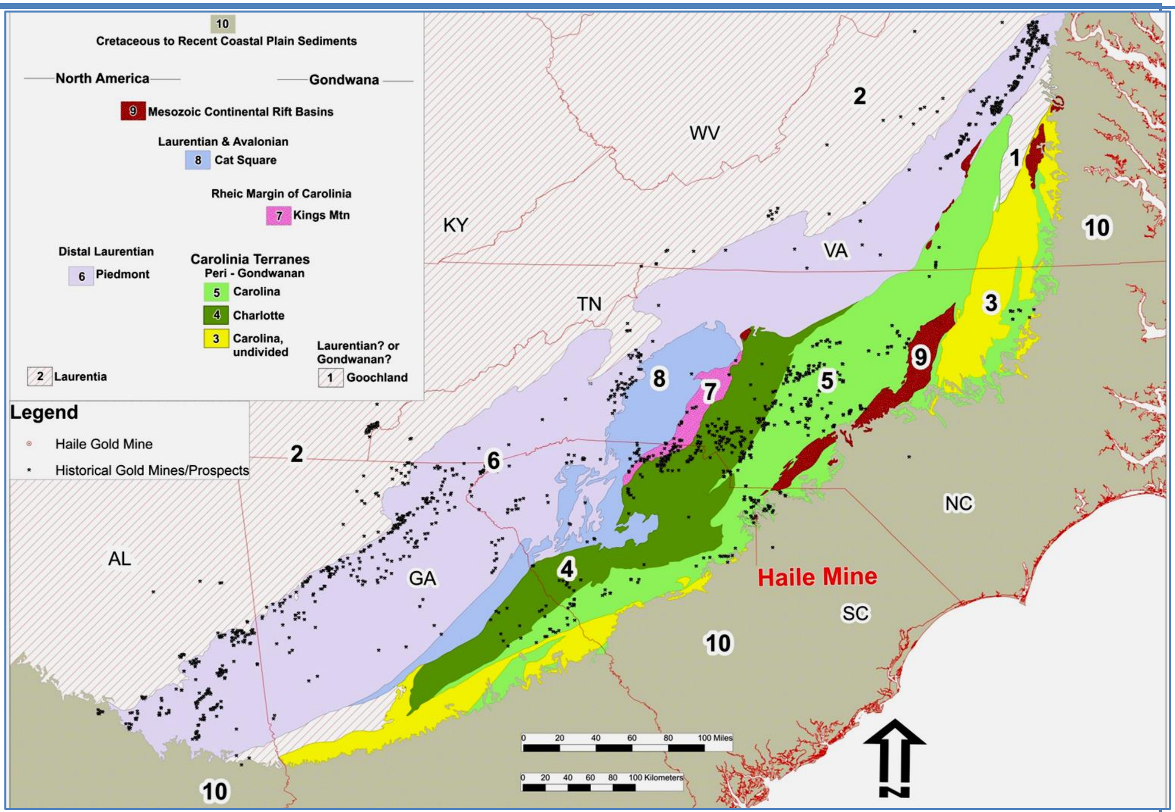
Criteria	JORC Code Explanation	Commentary
	reporting along with any known impediments to obtaining a licence to operate in the area.	• Haile Open Pit Mine. • Horseshoe Underground Mine (planned). • Palomino underground (not planned). • Processing Plant. • Tailings Storage Facilities.

		 *Site Map of the Haile Gold Mine. Background Imagery from March 22, 2019*

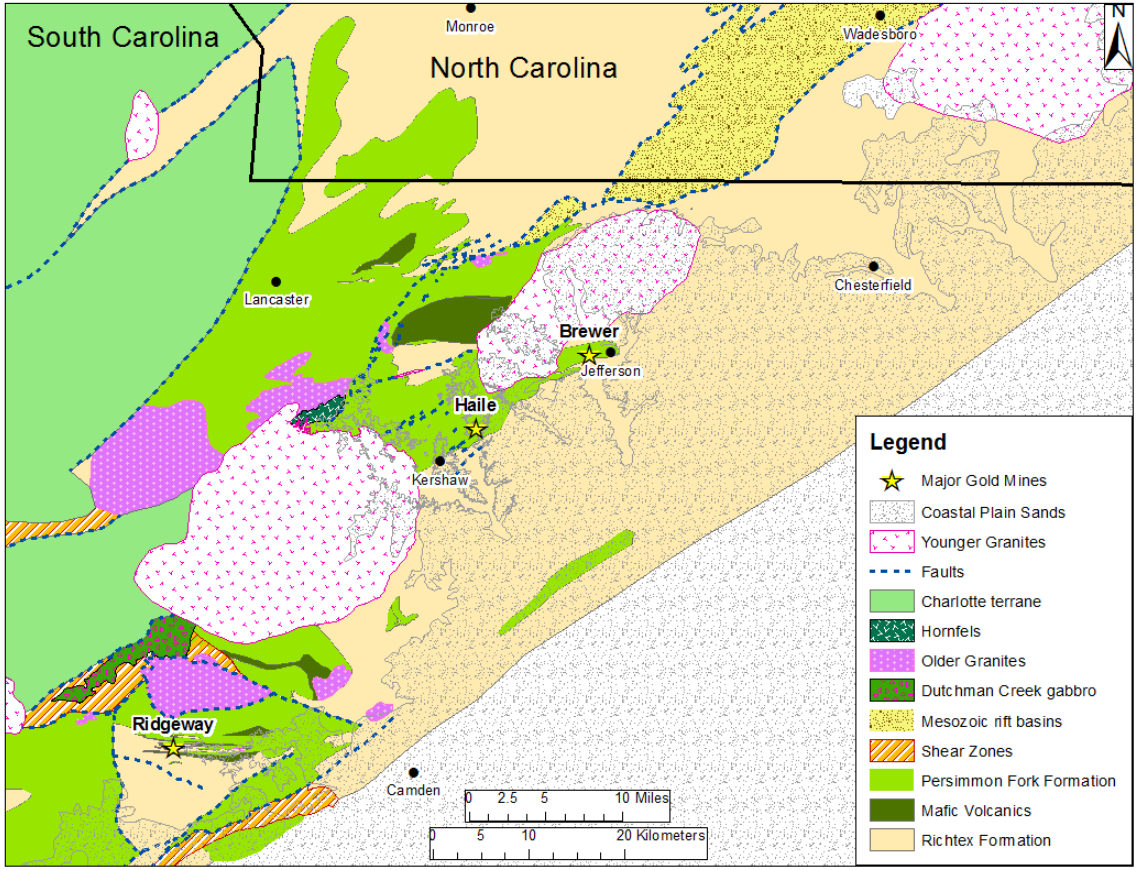
Criteria	JORC Code Explanation	Commentary
		Haile Gold Mine Inc. (HGM) is a wholly owned subsidiary of OceanaGold Corporation (OceanaGold). References in this document to OceanaGold refer to the parent company together with its subsidiaries, including HGM and Romarco Minerals Inc. As of December 31, 2021, HGM owns a total of 11,003 acres in South Carolina. Of this total, 4,552 acres are within the mine permit boundary. Proposed expansion in the Supplemental Environmental Impact Statement (SEIS) will increase the mine property to 5,469 acres. SEIS approval is expected in Q2 2022. The figure below shows the Land Tenure map with Fee Simple (OceanaGold owned) and leased properties, almost entirely in Lancaster County.

Criteria	JORC Code Explanation	Commentary
		 *Property Ownership Status*

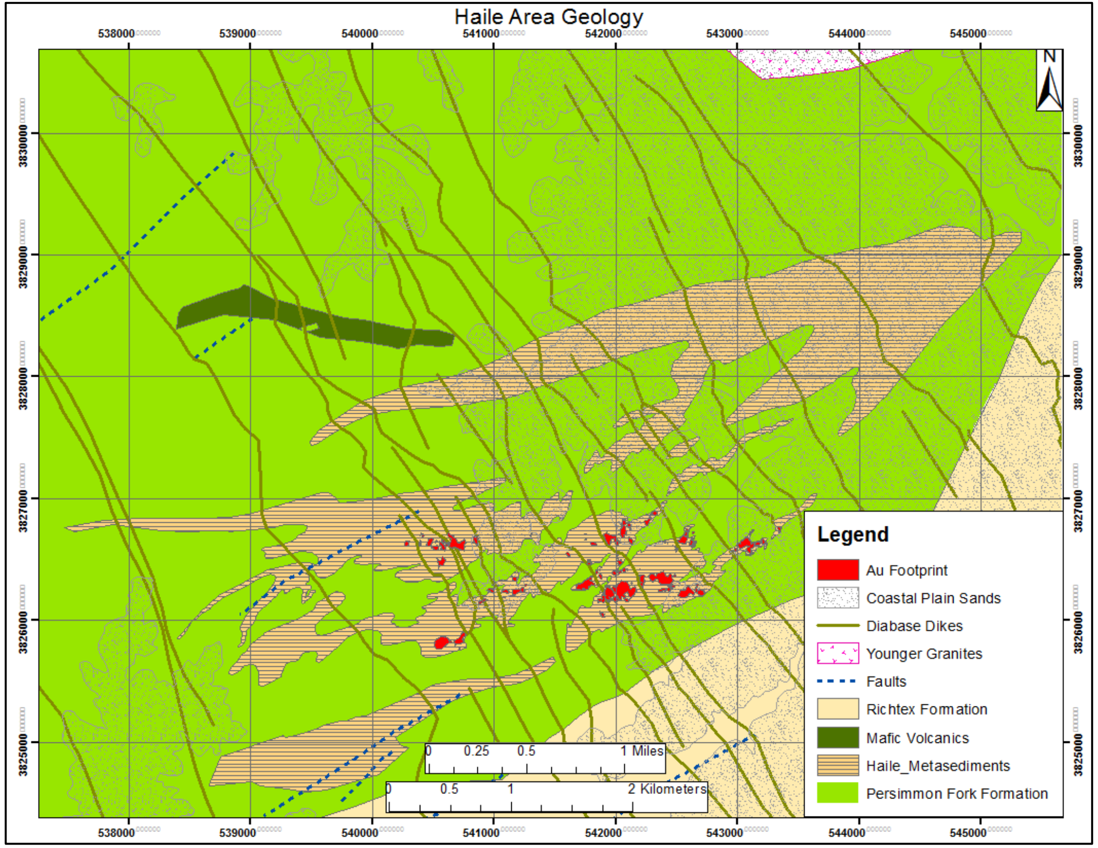
Criteria	JORC Code Explanation	Commentary
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Historic exploration was completed prior to acquisition of the Haile Gold Mine by Romarco, Cyprus Minerals, Amax, Piedmont, Westmont and others. Historical maps and data have been reviewed, confirmed and superseded by the drilling and geological interpretations completed at Haile by OceanaGold since 2015.
Geology	• *Deposit type, geological setting and style of mineralisation*.	Geologically, Haile is situated in the Carolina Terrane within the Carolina Slate Belt, which also hosts the past-producing mines at Ridgeway, Brewer and Barite Hill in South Carolina. Haile is the largest currently identified gold endowment (~5 M oz Au) in the eastern USA. It comprises nine en-echelon mineralised zones within a 3.5km by 1km area. Haile gold mineralisation occurs within a deformed ENE-trending structural zone at or near the contact between metamorphosed Neoproterozoic volcanic and sedimentary rocks. Haile is hosted in laminated siltstone capped by mostly barren volcanic tuffs of the upper Persimmon Fork Formation. Deformation displays brittle and ductile textures such as ENE-trending foliation, faults, brecciation, and isoclinal folds. Proximal quartz-sericite-pyrite alteration and distal carbonate-chlorite alteration are overprinted by regional greenschist facies metamorphism. Haile is interpreted as a disseminated and structurally controlled, sediment-hosted, intrusion-related gold mineralisation with proximal quartz-sericite-pyrite-pyrrhotite (QSP) alteration and distal sericite-chlorite alteration. Haile is hosted by reduced pyritic siliciclastic rocks confined by volcanic caprocks. The district is overprinted by regional greenschist facies metamorphism and cut by younger granites and diabase dykes.



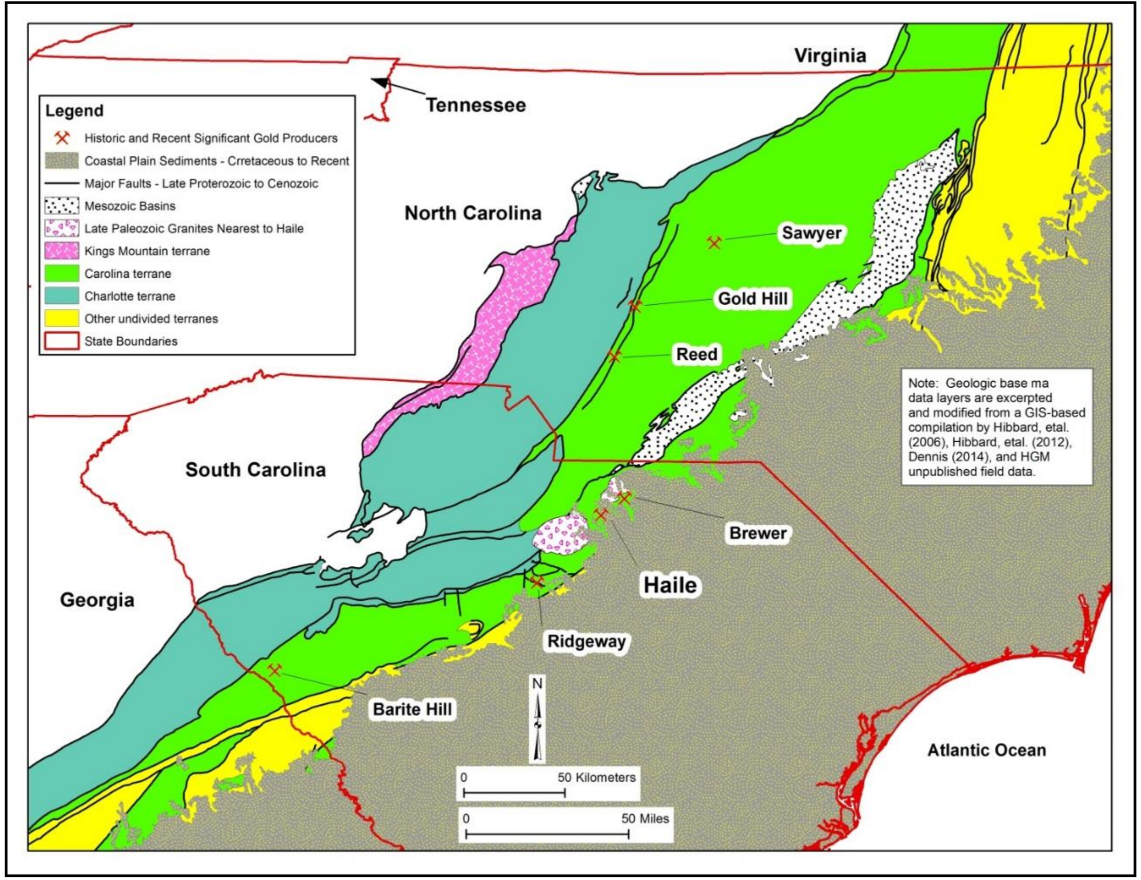
Location Map of the Haile Gold Mine

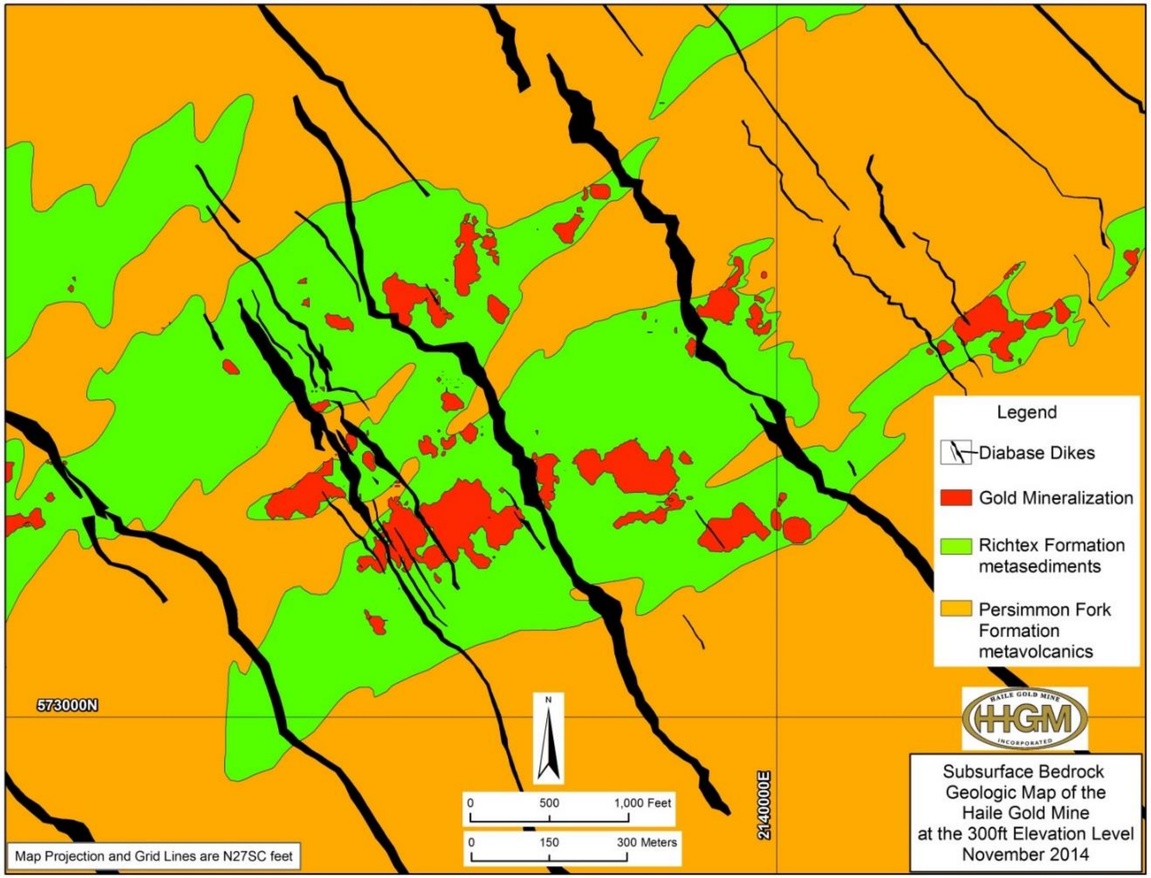


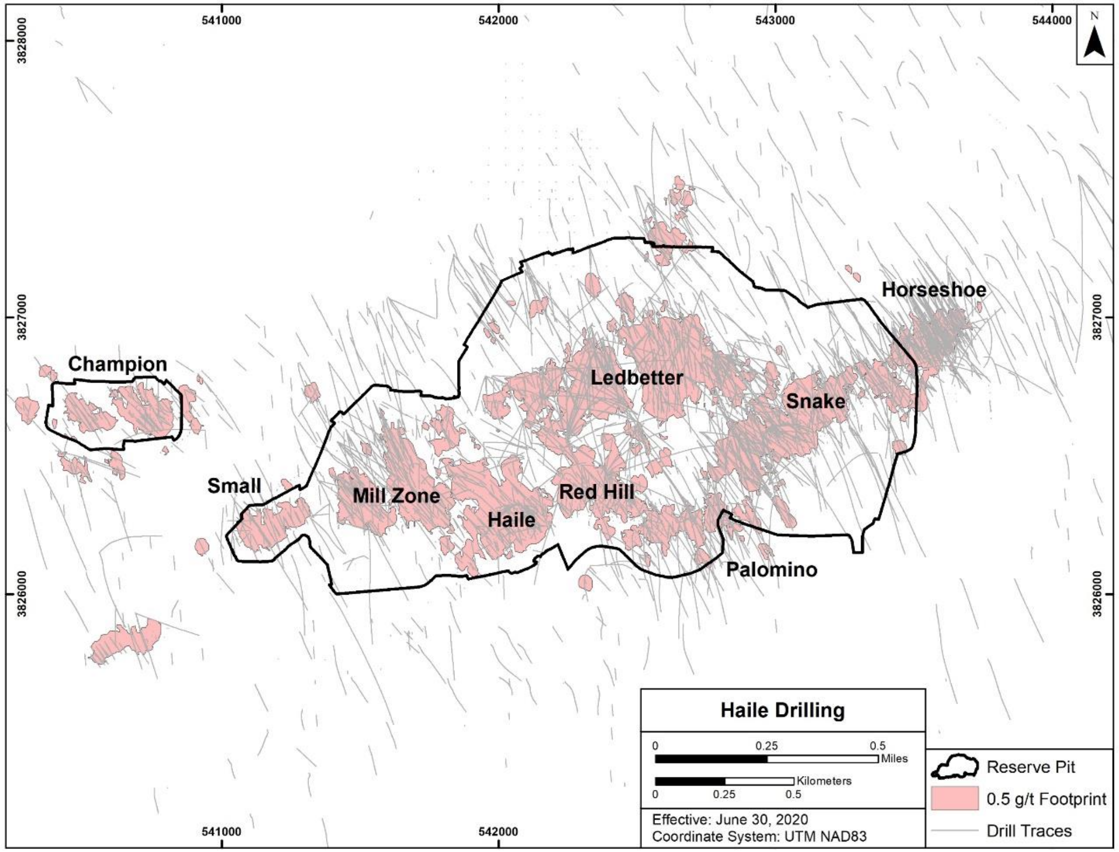
Simplified geology of north-central South Carolina

Criteria	JORC Code Explanation	Commentary
		 *Schematic Geologic Map of Haile Mine area*
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*	No Exploration Results are being presented in this document. This report is focused on an advanced project that has well defined geological models and associated Mineral Resource estimates completed. Drill hole data are stored in the acQuire database with hole ID, easting, northing, collar RL, azimuth, dip, intersect depth and downhole length. Paper drill hole data are stored by hole ID in folders and file cabinets in the OceanaGold Exploration office at Haile. Drill hole core is boxed and stored on the OceanaGold mine site.

Criteria	JORC Code Explanation	Commentary
	○ *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.*	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *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.*	No Exploration Results are being presented in this document. This report is focused on an advanced project that has well defined geological models and associated resource estimates completed.
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 (eg 'down hole length, true width not known').*	No Exploration Results are being presented in this document. This report is focused on an advanced project that has well defined geological models and associated Mineral Resource estimates completed.

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.*	 Note: Geologic base ma data layers are excerpted and modified from a GIS-based compilation by Hibbard, etal. (2006), Hibbard, etal. (2012), Dennis (2014), and HGM unpublished field data. *Gold Deposit Locations within the Carolina Terrane*

Criteria	JORC Code Explanation	Commentary
		 *Schematic Geologic Map of Haile Property, November 2014*

Criteria	JORC Code Explanation	Commentary
		 *Drill Hole Collar Locations*
Balanced reporting	- *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.*	No Exploration Results are being presented in this document. This report is focused on an advanced project that has well defined geological models and associated Mineral Resource estimates completed.

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.*	OceanaGold Corporation (OceanaGold) continues to drill in the district surrounding the Haile Gold Mine. However, no Exploration Results are being presented in this document. This report is focused on an advanced project that has well defined geological models and associated Mineral Resource estimates completed. The mineralisation style and key controls are described in the Geology section. Ore hardness characterisation for milling has been conducted on some core holes reported herein. The areas and style of mineralisation drilled are considered representative of what is being mined and processed at Haile. Mill recoveries >80% have been periodically achieved with these ore types.
Further work	- *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* - *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	OceanaGold continues to drill in the district surrounding the Haile Gold Mine. However, no Exploration Results are being presented in this document. This report is focused on an advanced project that has well defined geological models and associated Mineral Resource estimates completed.

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.*	During 2016, the Romarco Minerals drilling database was translated to OceanaGold's standard AcQuire database platform. Where available, original source assay and survey data were used for the AcQuire translation and database validation. There was a further internal database review in late 2018 to early 2019. No material errors were identified. Assays from six RC drill holes in the Snake pit did not agree with adjacent grade control sample grades and were not used in the estimation. These holes were drilled prior to Romarco Minerals ownership, had shallow inclinations and were collared adjacent to historical open pits. As a precautionary measure these RC drill holes and RC drill holes with similar characteristics were excluded from the Mineral Resource estimation.
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*	Jonathan Moore, MAusIMM(CP), is the Competent Person for open-pit Mineral Resources. Mr Moore is employed by OceanaGold Management Pty Ltd as Chief Geologist, based in Brisbane and has visited the Haile Gold Mine numerous times, most recently in January 2020.

Criteria	JORC Code Explanation	Commentary
	indicate why this is the case.	
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 and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	Mineralisation is hosted within a sheared and folded sequence of meta-sediments / meta-volcanics. The majority of mineralisation is interpreted to be hosted within the meta-sediments. The geometry of folding and the identification of fault and shear planes are important controls in modelling of the three-dimensional distribution of meta-sediments, and the meta-sediment / meta-volcanic boundary. Steeply dipping, NW-SE trending, post-mineralisation dolerite dikes cut the sequence. Accurate delineation of these dikes is critical for underground ore definition. Geologic surfaces were interpreted from drill logs and 3D lithological wireframes were constructed by Haile geology personnel. Sand, saprolite, metasediment, metavolcanic, dike, fill and the old tails and heaps were assigned to the block model. The geological interpretation is believed to be appropriate for purposes of estimation. Historical (pre-Romarco Minerals) open pit and underground void surfaces have also been interpreted and used to deplete the block model.
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 gold mineralisation at the Haile property occurs along a trend of moderately to steeply dipping ore bodies within a regional corridor which runs from the west-southwest (WSW) to the east-northeast (ENE). The corridor is approximately 1km wide (NNW to SSE) and over 3.4km long (WSW to ENE). Most of the mineralisation at Haile is hosted within the laminated metasiltstone of the Richtex Formation. Within this corridor, individual shoots tend to have dimensions of approximately 250m strike, 100m down-dip, and >50m thick. The mineralised zones at Haile are believed to be hosted along a gently northeast plunging antiform (trending approximately northeast to east-northeast). The interpreted dips of the ore zones range from 25° northeast at the western end of the property to steeply southeast at the eastern end of the known trend. In several areas, multiple mineralised zones exist.
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*	**<u>Open Pit Estimate</u>** Drillhole data available as of October 2020 were included in the HA1220OLM open pit resource estimate. A total of 1,700 historical drill holes were excluded on the basis of unknown quality; many of these are shallow auger and rotary air holes and some are 1970s era RC holes. The assay coverage for gold covers all core and RC drilling. However, carbon, sulphur and silver assay data are significantly sparser than gold, as shown in the table below. Sulphur and carbon data are primarily used for the prediction of waste classification types. Sulphur grades are also used

<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
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<td>
<i>estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i>

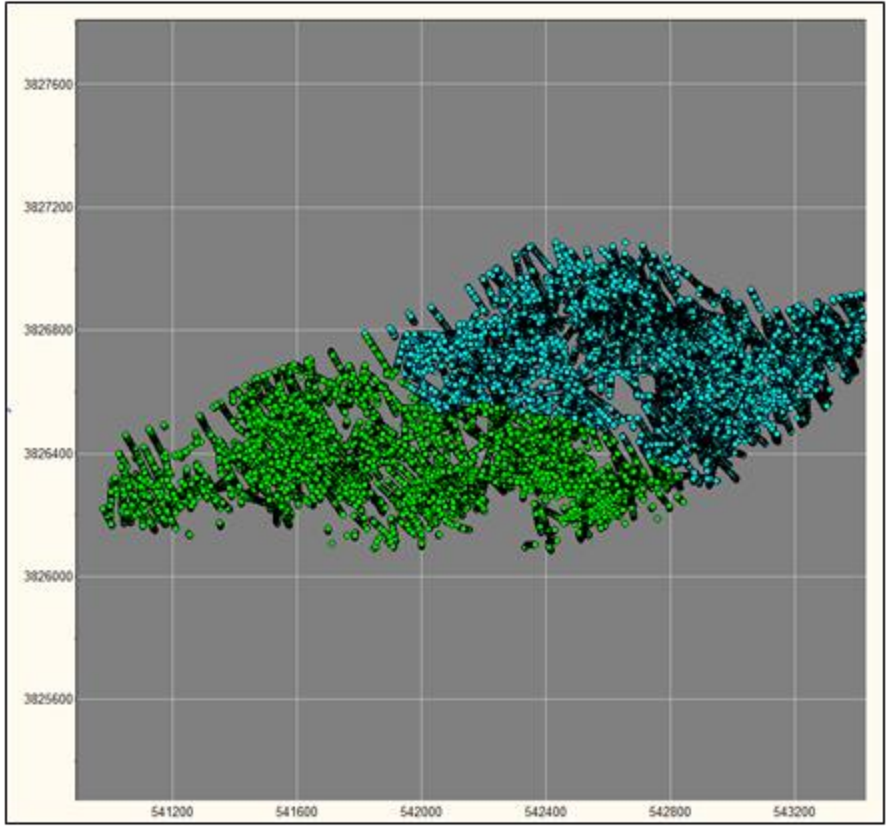
<i>The assumptions made regarding recovery of by-products.</i>
<i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i>
<i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i>
<i>Any assumptions behind modelling of selective mining units.</i>
<i>Any assumptions about correlation between variables.</i>
<i>Description of how the geological interpretation was used to control the Mineral Resource estimates.</i>
<i>Discussion of basis for using or not using grade cutting or capping.</i>
<i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i>

</td>
<td>
<p>for mill feed Sulphur estimates. Silver grades are provided for metallurgical considerations (carbon stripping and electro-winning) as well as for revenue estimation, albeit silver is a minor contribution relative to total revenue.</p>
<p><i>Sample Numbers for Gold, Sulphur and Carbon</i></p>
<table>
<tr><th></th><th>Au</th><th>S</th><th>C</th><th>Ag</th></tr>
<tr><td>Count</td><td>384,109</td><td>70,876</td><td>33,156</td><td>20,294</td></tr>
</table>
<p>Geologic Model Concepts</p>
<p>A detailed 3D lithological model, including base of weathering and oxidation, has been constructed. This model, which has evolved over time, has been used to assign variable densities to the block model. Faults have also been modelled. However, other than post-mineralisation dikes, and post-mineralisation erosion/deposition, there are few geological features that define mineralisation boundaries at the economic cut-off grade. Having said this, mineralisation is generally associated with silicification and sulphide presence, both of which can be identified in core.</p>
<p>Lithology</p>
<p>Lithologic codes used at Haile capture many geologic attributes including the primary rock type, presence of brecciation, silicification, lamination and numerous variations on the general rock unit. For the purpose of block modelling and estimating a Mineral Resource, these 150+ codes were reduced to a summary set of codes.</p>
<p>The majority of mineralisation is hosted within the metasediments. The main lithological units are as follows, from youngest to oldest:</p>

Fill - back-fill from historical mining
S - sand
Sap - saprolite
DB - diabase dikes
MS - metasediments
MV - metavolcanics

<p>Silicification</p>
<p>The progression of 'silicification increases from 0 (non-existent) to 3 (strong) and is logged visually by site geologists. The minor silicification (intensity 1) population has an average grade of about 0.5 g/t. The average grade of moderately silicified (intensity 2) rocks is 1.0g/t and the very silicified (intensity</p>
</td>
</tr>
</table>

Criteria	JORC Code Explanation	Commentary
		3) average grade increases to >2.0 g/t. The spatial gold to silicification relationship is strong, although silicification extends beyond the area of economic gold mineralisation. **Pyrite** Multiple morphologies of pyrite have been identified at Haile, ranging from finely disseminated hydrothermal to coarse cubic metamorphic pyrite. Based on ore microscopy it has been established that the fine-grained pyrite is commonly associated with mineralisation. **Grade Domain Construction** Although both silicification and pyrite occurrence are qualitatively associated with gold mineralisation, their relationships are not used for quantitative gold domain definition. Previous attempts to do so have been unsuccessful. Implicit modelling in Vulcan software was used to create a grade shell at a 0.065g/t gold threshold. The grade threshold selection was optimised, using sensitivity estimate comparisons against production data. The grade shell was then sub-divided into two domains based upon gold distribution and orientation, albeit the differences were not large between the two domains. The mineralised zones within domain 1 (blue in the figure below) have a typical dip direction of -40 toward 330, while in domain 2 (green) they typically dip -30 toward 335. .



Estimation Domains

Compositing

2.5m bench composites for carbon, gold and sulphur were calculated for estimation.

Due to the lack of data, carbon and sulphur were estimated directly from the sample grades which were collected intermittently down the hole, typically only one sample per 6.1m of drilling.

<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
<p>Assay Cap Values</p>
<p>Multiple Indicator Kriging (non-linear estimation) has been used for gold estimation which is better suited to positively skewed grade distributions than linear estimation methods. 2.5m composited gold grades were top capped to 50 g/t Au based on reconciliation to production data. This lowered the mean grade of the top indicator class.</p>
<p>Multiple Indicator Gold Class Thresholds and Means</p>
<p>Gold Indicator thresholds were set at cumulative frequencies of 10th, 20th, 30th, 40th, 50th, 60th, 70th, 80th, 85th, 90th, 95th, 97.5th and 99th. The table below summarises the indicator threshold grades and class means used for gold estimation.</p>
<p><i>Indicator Gold Class Thresholds and Means</i></p>
<table>
<tr><th rowspan="2">Cumulative Frequency</th><th colspan="2">Domain 1</th><th colspan="2">Domain 2</th></tr>
<tr><th>Threshold</th><th>Mean</th><th>Threshold</th><th>Mean</th></tr>
<tr><td>10</td><td>0.05</td><td>0.03</td><td>0.03</td><td>0.02</td></tr>
<tr><td>20</td><td>0.07</td><td>0.06</td><td>0.06</td><td>0.05</td></tr>
<tr><td>30</td><td>0.10</td><td>0.09</td><td>0.09</td><td>0.07</td></tr>
<tr><td>40</td><td>0.13</td><td>0.12</td><td>0.13</td><td>0.11</td></tr>
<tr><td>50</td><td>0.18</td><td>0.16</td><td>0.19</td><td>0.16</td></tr>
<tr><td>60</td><td>0.25</td><td>0.21</td><td>0.28</td><td>0.23</td></tr>
<tr><td>70</td><td>0.37</td><td>0.30</td><td>0.43</td><td>0.35</td></tr>
<tr><td>75</td><td>0.46</td><td>0.41</td><td>0.55</td><td>0.48</td></tr>
<tr><td>80</td><td>0.59</td><td>0.52</td><td>0.71</td><td>0.62</td></tr>
<tr><td>85</td><td>0.79</td><td>0.68</td><td>0.97</td><td>0.82</td></tr>
<tr><td>90</td><td>1.17</td><td>0.96</td><td>1.48</td><td>1.18</td></tr>
<tr><td>95</td><td>2.07</td><td>1.55</td><td>2.71</td><td>1.89</td></tr>
<tr><td>97.5</td><td>3.05</td><td>2.51</td><td>4.16</td><td>3.32</td></tr>
<tr><td>99</td><td>6.00</td><td>4.14</td><td>9.20</td><td>5.64</td></tr>
<tr><td>Max</td><td>50.00</td><td>11.34</td><td>50.00</td><td>12.90</td></tr>
</table>
</td></tr>
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<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
Variogram Analysis and Modeling

Variograms were estimated for gold for each indicator threshold. Variograms for carbon and Sulphur were estimated globally.

Block Model

The block model was constructed in Vulcan and the parameters in the table below are based on a Parent block size of 10 m x 10 m x 5 m in x, y, z respectively and is not sub-blocked or rotated.

<i>Block Model Dimensions</i>
<table>
<tr><th>Variable</th><th>East</th><th>North</th><th>RL</th></tr>
<tr><td>Minimum</td><td>539810</td><td>3825575</td><td>-800</td></tr>
<tr><td>Maximum</td><td>544510</td><td>3827725</td><td>200</td></tr>
<tr><td>Block Size (Parent)</td><td>10</td><td>10</td><td>5</td></tr>
<tr><td>No. of Blocks (Parent)</td><td>470</td><td>215</td><td>200</td></tr>
</table>

Estimation Methodology Gold, Sulphur and Carbon

Gold estimation was completed using Multiple Indicator Kriging while carbon and sulphur were estimated using ordinary kriging. Carbon and sulphur values are used for classification of waste material. There were insufficient data to directly estimate silver although a silver estimate was completed using stepwise simulation prior to ordinary kriging (see section below)

For gold estimation, two domains were used:

Domain 1 (Mill Zone, Haile/Red Hill, Champion) .
Domain 2 (Snake, Ledbetter).

Each domain area was estimated in three passes, with each subsequent search ellipse larger than the previous. Each of the main two open pit domain areas has unique search parameters based upon indicator variogram models for 14 different Au cut-offs.
</td></tr>
</table>

Block Search Parameters

Domain	Area	Search Orientation			Search Radius				Sample Thresholds		
		Bearing Plunge Dip			Pass	Major Semi		Minor	Min	Max Max/Hole	
1	Mill Zone, Champion, Red Hill/Haile	335	-30	0	1	30	30	10	4	16	3
1	Mill Zone, Champion, Red Hill/Haile	335	-30	0	2	60	60	15	4	16	3
1	Mill Zone, Champion, Red Hill/Haile	335	-30	0	3	90	90	20	1	12	3
2	Snake, Ledbetter	330	-40	0	1	30	30	10	4	16	3
2	Snake, Ledbetter	330	-40	0	2	60	60	15	4	16	3
2	Snake, Ledbetter	330	-40	0	3	90	90	20	1	12	3

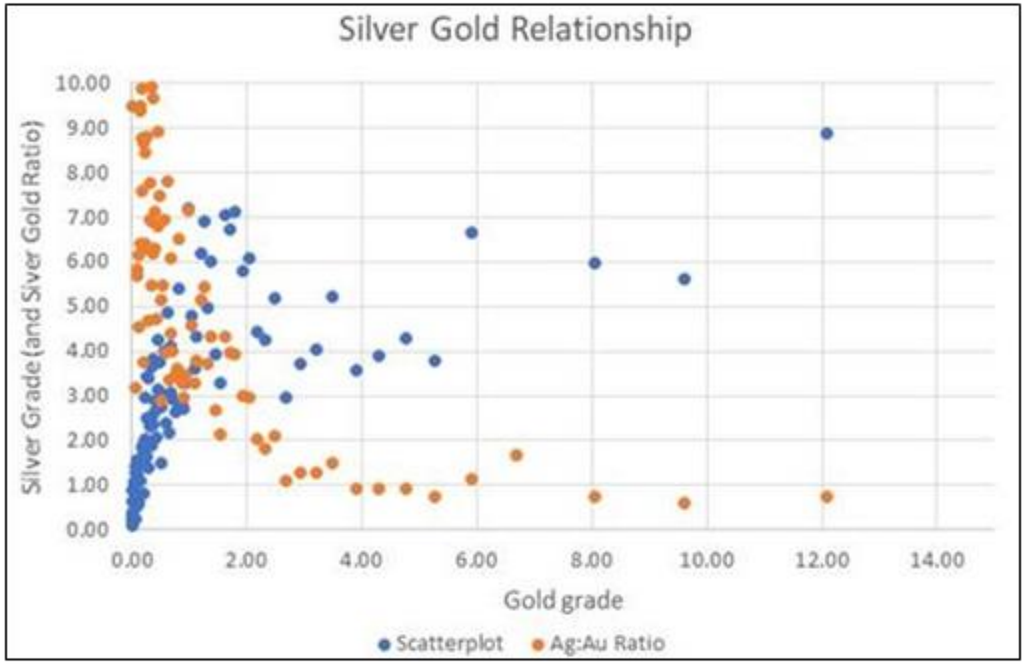
Estimation Methodology Silver

Silver estimates have been not been completed for the underground.

For the open pit, silver grade estimates are provided for metallurgical considerations (carbon stripping and electro-winning) as well as for revenue estimation, albeit silver contributes only about 1.5% of total revenue and so is not particularly material. Silver content is not used as a gold-equivalent input for cut-off calculation nor to guide mine design decisions.

The sample support basis for the open pit silver estimates is approximately 10% of that for gold (54,100 x 3m composites for gold versus 5,551 x 3m composites for silver). While the paucity of data reduces the local accuracy of silver estimates, it does not preclude providing silver estimates for revenue modelling given that silver is mined as a by-product and not used for ore delineation.

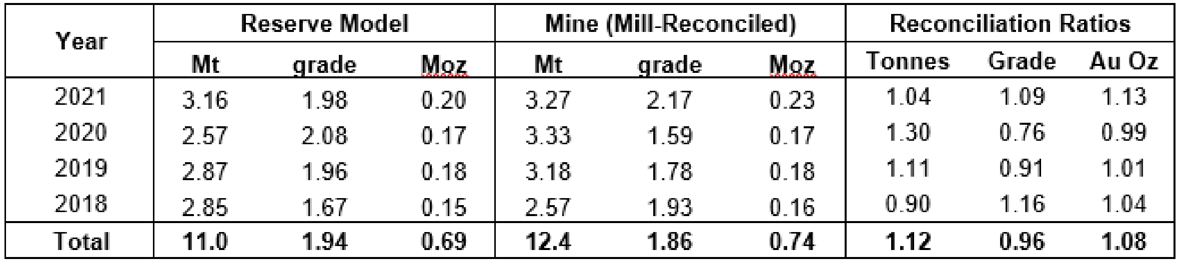
The selection of samples for silver assaying was undertaken retrospectively, based upon previously assayed gold grades. Previous sample selection for silver assaying tended to favour more strongly gold-mineralised intervals, leaving less intensely mineralised intervals, on the flanks of the mineralisation under-represented. In order to mitigate the impacts of the selection bias, simulation was implemented (using the "simulate missing data" program in GS3 proprietary software). This non-spatial simulation assigned silver grades to locations with gold assays, but no silver assays, based upon relationships between silver and gold in the assay database. The figure below shows gold-ranked silver and gold grades, averaged for each percentile to highlight the underlying silver gold

Criteria	JORC Code Explanation	Commentary
		relationship. The silver gold relationship changes with gold grade; lower gold grades show a significantly higher silver gold ratio. Overall, the assayed population showed a rank spearman correlation coefficient of 0.47, reflecting a moderate correlation between silver and gold. This relationship was captured in the simulation process. From the original 5,551 assayed samples with a mean silver grade of 2.36g/t a combined population of 54,100 assayed and simulated values (simulated silver values based on gold assay grades) with a mean silver grade of 1.84g/t resulted. The result confirmed that a selection bias was present and provided justification for the downward silver grade adjustment via simulation. A 95th percentile top cap value of 9.9g/t Ag was applied to both domains. The 95th percentile was selected to err on the side of conservatism.  *Silver Gold Relationship for Gold-Ranked Percentile-Averaged Grades* Silver domains and search orientations were the same as used for gold. Given the low number of original silver assays, ordinary kriging was used. For mining to-date the estimated silver to gold ratio is 1.15. Processing plant metallurgical accounting estimates a silver gold ratio of 1.04. The estimate is within acceptable limits (11%).

Criteria	JORC Code Explanation	Commentary
		The silver estimation methodology described above is considered to be appropriate for the purposes of silver by-product estimation. **Model Validation** Numerous methods have been used to validate the Mineral Resource model: • Cross-sectional checks on composite file and block model coding from lithological wireframes, domain area and grade shell. • Visual checks of estimated block grade on sections, plan and in 3D to ensure good correlation with composite data. • Swath plots comparing the gold estimates with the underlying composite grades. • Detailed comparisons to previous model at global and local scales. • Review of the methodology and validation of the scripts used. As a gold estimation methodology check, an independent large panel recoverable estimation using MIK was constructed and compared to HA1220OLM on a stage by stage and easting swath basis. The estimate did not require constraint by an implicitly derived grade shell for gold estimation, so provided a useful parallel estimate via alternative modelling assumptions. Globally, the two estimates are within 2% of each other in terms of tonnes, grade and contained gold. There were some local differences, most pronounced in Haile Pit and Red Hill Pit areas where the distribution of mineralisation is locally more complex. **Mineral Resource Reconciliation** The table below summarizes the open pit resource model reconciliations 2018 to 2021. The resource model to mill-adjusted mine reconciliation data for the four years to 2021 show variable performance from year to year albeit the long-term average performance for this period shows +12% for tonnes, -4% for grade and +8% for contained gold. Note that the four-year aggregated grade reconciliation is negatively skewed by low mining selectivity during 2020 which resulted in excessive mining dilution during that year. More selective mining practices re-introduced during 2021 have resolved this. While annual reconciliation fluctuations are expected to continue, the open pit resource estimates are believed to provide an acceptable basis for medium to long term mine planning purposes.

Criteria	JORC Code Explanation	Commentary

Table: ***Open Pit Model to Mill-Adjusted Mine Reconciliation***



Year	Reserve Model			Mine (Mill-Reconciled)			Reconciliation Ratios		
	Mt	grade	Moz	Mt	grade	Moz	Tonnes	Grade	Au Oz
2021	3.16	1.98	0.20	3.27	2.17	0.23	1.04	1.09	1.13
2020	2.57	2.08	0.17	3.33	1.59	0.17	1.30	0.76	0.99
2019	2.87	1.96	0.18	3.18	1.78	0.18	1.11	0.91	1.01
2018	2.85	1.67	0.15	2.57	1.93	0.16	0.90	1.16	1.04
Total	**11.0**	**1.94**	**0.69**	**12.4**	**1.86**	**0.74**	**1.12**	**0.96**	**1.08**

- Open pit resource models implicitly include mining selectivity.

Underground Mineral Resource

Horseshoe

The Horseshoe estimation is based on the current drill hole database, interpreted lithologies, geologic controls and current topographic data. The estimation is supported by drilling and sampling current to April 22, 2020.

Gold estimation was constrained within implicitly modelled grade shells, approximating a 1g/t gold indicator. The 1g/t Au threshold was selected to be sufficiently below the reserve reporting cut-off grade of 1.44g/t Au at the time of estimation to minimise conditional bias.. Model blocks with centroids outside the 1g/t shell were coded as unclassified and not reported (i.e. assigned zero grade). Modeled post-mineralisation dikes were assigned zero grade. Metasediment / metavolcanic contacts were not used to constrain gold estimation.

Gold grades were estimated with Vulcan™ modelling software into 10mE x 10mN x 10mRL blocks (sub-blocked to 5mE x 5mN x 5mRL) using Ordinary Kriging with 3m composites.

Bulk densities based upon core analyses were assigned by rock type.

Horseshoe General Geology and Geologic Model

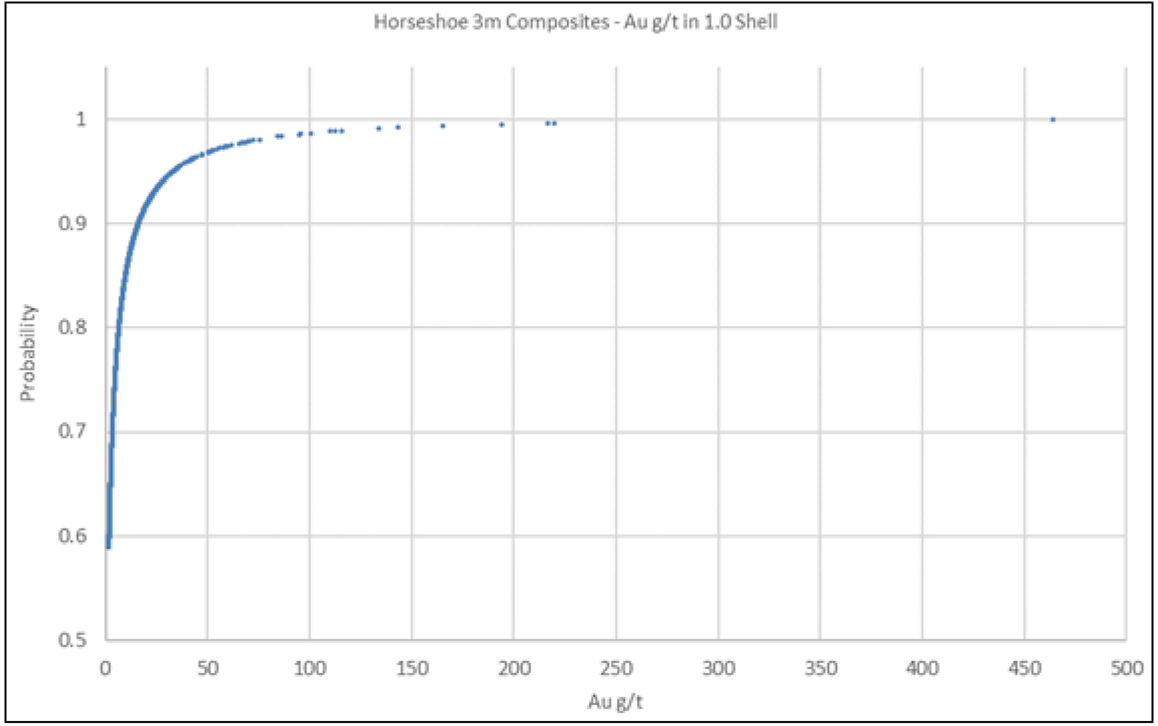
The Horseshoe mineralisation contains the highest grades on the Haile property and is located at the eastern end of the field. Mineralisation extends over a vertical distance of 350 m, however, the mineralisation footprint is only about 200m x 120 m. The top of the mineralisation is about 120 m below surface. Horseshoe is one of several siltstone-hosted mineralised zones located near the steeply SE-dipping contact with metamorphosed volcanic rocks of the upper Persimmon Fork Formation. Horseshoe is characterised by strong silicification, 1-5% pyrite, and a halo of 0.5-1%

Criteria	JORC Code Explanation	Commentary
		pyrrhotite. The rocks have been deformed by high strain, isoclinal folding and shearing with a pervasive foliation striking 060^{0}E and dipping 40-60^{0}NW. All units are cut by post mineralisation diabase dikes striking 330^{0} with near-vertical dips. OceanaGold has constructed a geologic model which includes the siltstone, volcanics, diabase dikes, saprolite and sand. Siltstone is significantly mineralised. These five rock types constitute the lithologies coded in the block model. This has resulted in a detailed, 3D geologic model created by Leapfrog®. **Horseshoe Geologic Model and Controls on Gold Mineralisation** Mineralisation is concentrated in two main zones based on vertical position which form a “horseshoe” geometry over a vertical distance of 350 m. Both zones strike NE adjacent to the siltstone-dacite contact, however, the upper zone dips about 40^{0}NW and the lower zone is near-vertical. The upper zone NW-dipping high-grade lenses of mineralisation are focused along bedding-parallel foliation with intense silicification. The Horseshoe fault (NE strike, 40^{0}NW dip) juxtaposes the hanging wall of upper Horseshoe against barren dacite with a sill-like geometry. This geometry extends southwestward into the nearby Snake pit. The steeply dipping Lower Zone is adjacent to the sub-vertical contact with barren dacite. Compared to the upper zone, gold grades are lower, silicification is less intense, and pyrite contents are lower. Extents of economic mineralisation in lower Horseshoe have not been fully delineated by drilling. **Horseshoe Sample Database** The April 22, 2020 database contains information from 3,285 diamond core and RC drill holes see the table below. Romarco discovered Horseshoe in 2011 and drill widely spaced holes at 30-60m apart. OceanaGold have continued with focused diamond core drilling at Horseshoe since 2016. A total of 90 drill holes for 31,873m were used within the Horseshoe area. Of these, 74 drill holes intersected the 1g/t grade shell and, the remainder were outside the shell. **Horseshoe Compositing and Top Capping** Compositing was completed in Vulcan software to 3m downhole lengths with no breaks at lithologic contacts. The 3m length was chosen to reflect the low degree of mining selectivity and the absence of any visual features that coincide with the 1g/t cu-off. It also reduced noise in the data which was resulting in irregular implicit shell geometries and smoothed assay values across two 1.5 samples. The table below summarises the statistics of 3m composites within the 1g/t Au indicator shell. Sample localities without gold assays were assigned 0.0 grades unless belonging to drill holes with pending assays results.

		Basic Statistics for 3m Composites Within 1g/t Au Indicator Shell **Sample Stats** / **Au** Count: 1,194 Min: 0.005 Max: 149 Mean: 4.63 CV: 2.13 Statistical analysis of the original drill hole sample data has resulted in a capping value of 100g/t for the composites used in the estimation. The results of the cumulative distribution plot are presented in the figure below. Compositing was completed in Vulcan software to 3m downhole lengths with no breaks at lithologic contacts. The 3m length was chosen to reflect the low degree of mining selectivity and the absence of any visual features that coincide with the 1g/t cu-off. It also reduced noise in the data which was resulting in irregular implicit shell geometries and smoothed assay values across two 1.5 samples.

Basic Statistics for 3m Composites Within 1g/t Au Indicator Shell

	Sample Stats
	Au
Count	1,194
Min	0.005
Max	149
Mean	4.63
CV	2.13



Log Normal Cumulative Distribution Plot of Gold Assays Above 2 g/t

Horseshoe Block Model

In July 2019, an 030-rotated local grid was created for Horseshoe. This rotated grid facilitated Mine Design due to alignment of the primary 060^{0} mineralisation direction with the long axis. Details of the rotation, and block model limits of the model are listed below. The block model coordinates are referenced to a rotation about the UTM NAD83 coordinate system and are are based on a compromise between the average drill hole spacing, a typical underground stope selective mining unit and the variability of the mineralisation.

The HUG local grid is based on a 30° clockwise rotation around 3,824,000m N and 541,000m E, with a 1,000m adjustment to elevations as shown in the table below. Elevations were increased by 1000m relative to sea level to remove negative values.

HUG Grid Transformation Details

	Haile Surface Grid			**Horseshoe UG Local Grid**		
	Easting	**Northing**	**RL**	**Easting**	**Northing**	**RL**
Origin	541,000	3,824,000	0	0	0	1,000
Point 1	543,431	3,826,789	0	3,500	1,200	1,000
Point 2	542,732	3,825,000	0	2,000	0	1,000

Horseshoe Estimation

Gold estimation was constrained within implicitly modelled grade shells, which were implemented as hard boundaries. The shells were generated in Leapfrog® software at a 0.8 g/t Au threshold guided by interpreted trend planes of mineralisation. The trend planes were developed by digitizing section profiles of gold continuity which were then triangulated into 3D planes of gold continuity. The upper zone of mineralisation utilised two trend planes which essentially represent the hanging wall and footwall of mineralisation. The lower zone utilised two additional trend planes.

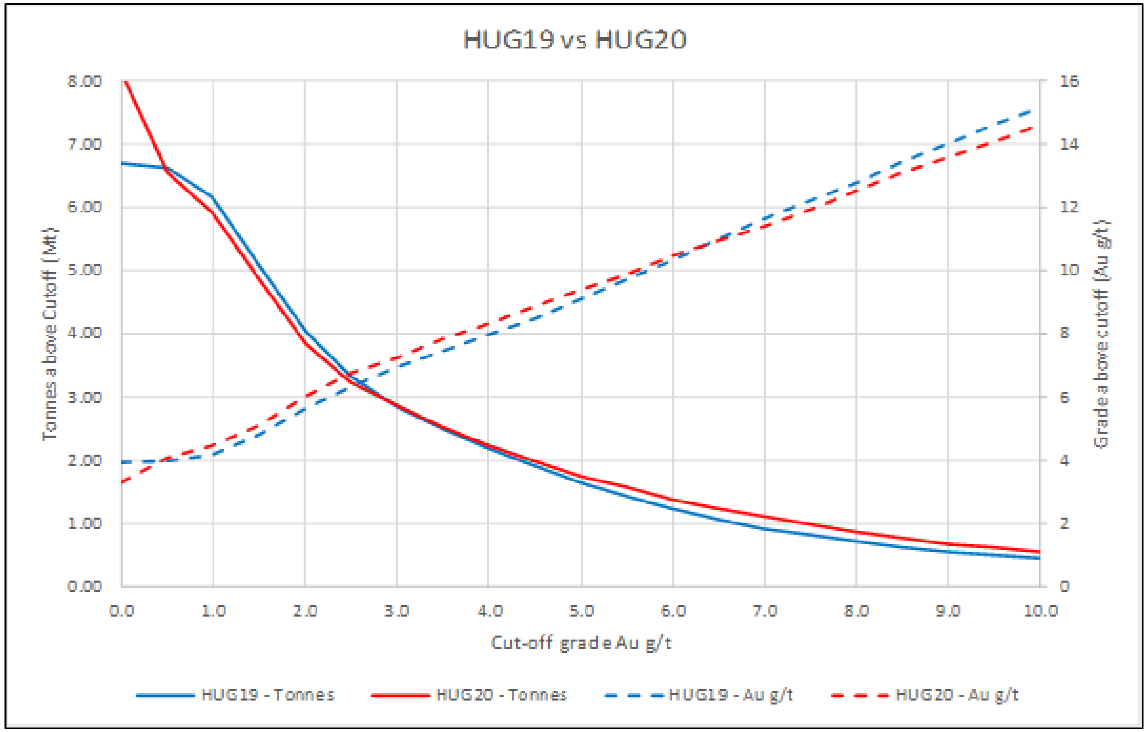
As described above, the gold mineralisation is hosted in two domains each with a unique orientation. For each zone, the trend planes used to guide the grade shells construction were translated outward to capture all model blocks enclosed by the grades shell. These translated planes were then used to guide a dynamic search orientation utilised in the ordinary kriging gold grade estimation.

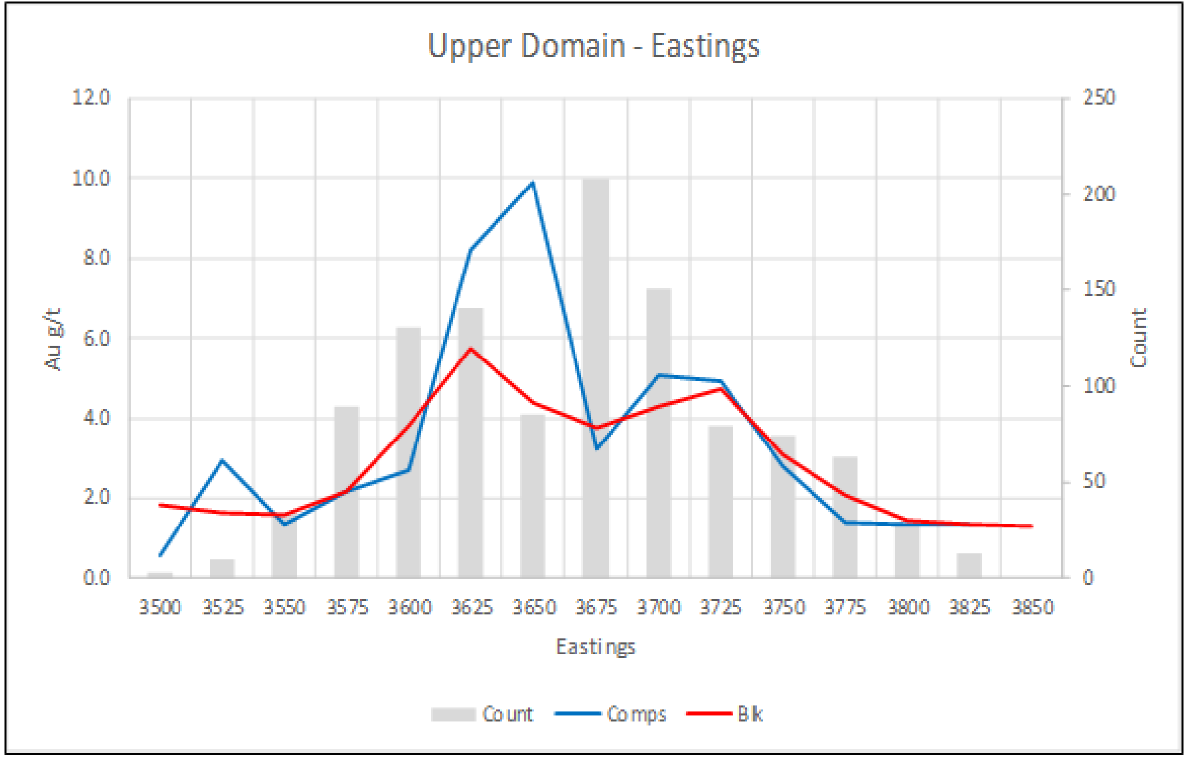
The grade estimations utilise a two-pass sample search strategy with each pass searching longer distances than the previous. The search distances and variogram parameters are listed in the two figures below, respectively. For all estimations, the following criteria were used:

- Dynamic search orientation essentially parallel to the plane of gold continuity for each zone.
- Minimum of two composites and maximum of twelve composites to estimate grade.
- Sample length weighting to account for any short composites located at the ends of drill holes.
- Composites from a minimum of two drill holes.
- Composites from a minimum of two octants.

Horseshoe Model Validation

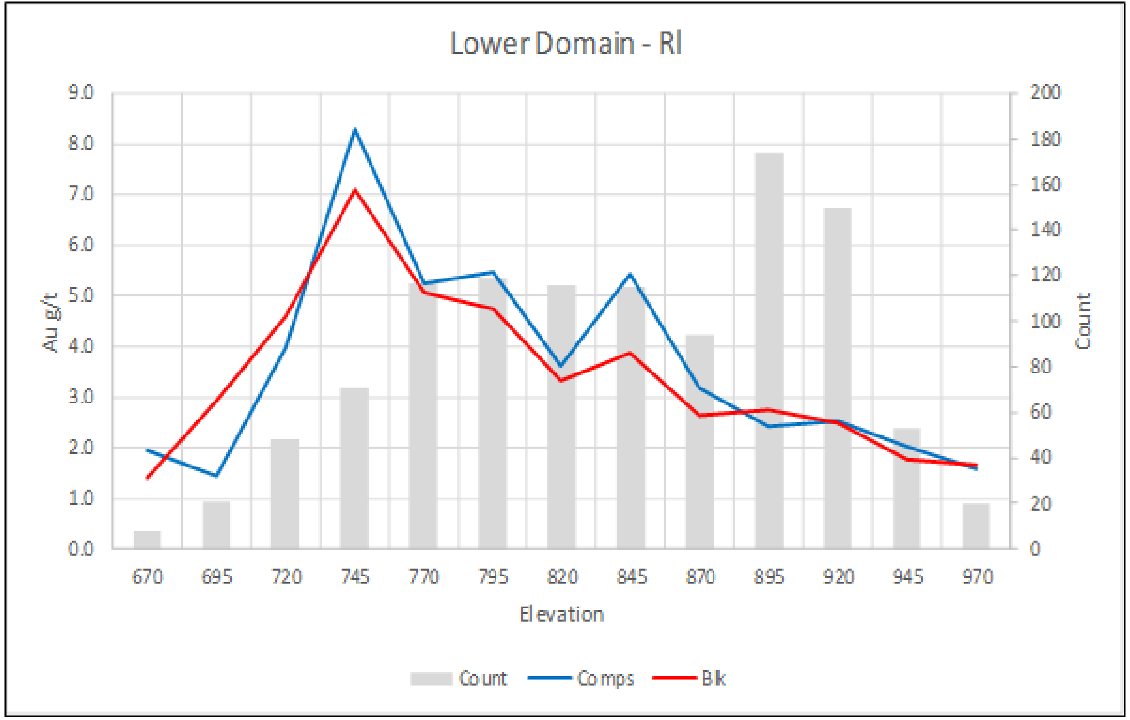
Several techniques were used to evaluate the validity of the block model. All new drilling and lithological mapping data were visually validated. QA/QC was performed on drilling data as per database procedures, and visual validation of lithological logging was performed on new drill holes. A visual review of all generated wireframes, including implicitly modelled mineralisation wireframes, was performed, to compare with previous versions and to drill hole lithological logging. The methodology

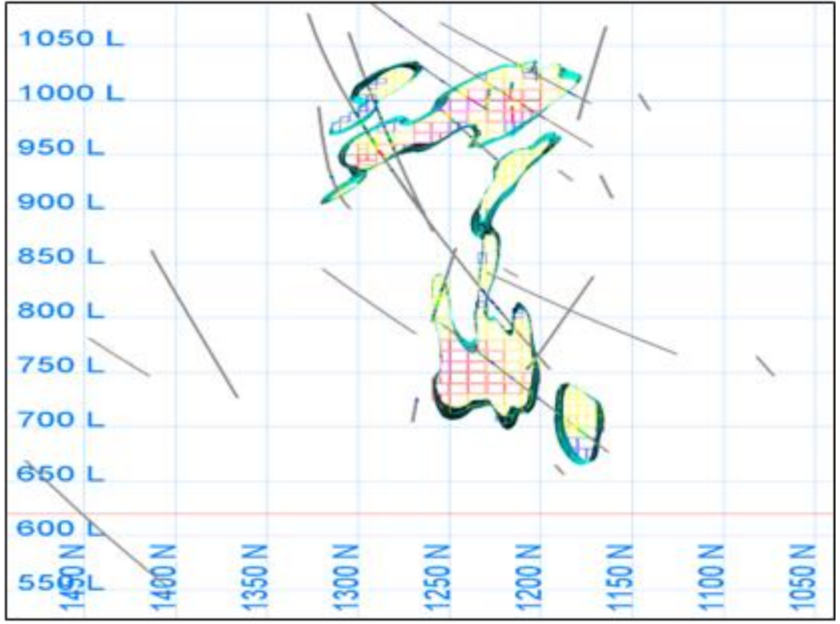
Criteria	JORC Code Explanation	Commentary
		used for the block modelling was reviewed, to ensure standard processes and assumptions were used. A review of all macros used in the estimation process was performed, to ensure all appropriate files are used, and correct naming conventions were followed. Model estimation parameters were reviewed to evaluate the performance of the model with respect to supporting data. This included the number of composites used, number of drill holes used, average distance to samples used, and the number of blocks estimated in each pass. Comparisons were made to the previous 2019 Mineral Resource model (HUG19), in terms of grade, tonnages and contained metal. The figure below compares estimates and reveals very little change.  *Global Grade Tonnage Comparison between 2019 and 2020 Models* Swath plots were used to compare the estimation with underlying composite grades for each domain. The figure below shows an acceptable correlation between the composites and the block estimation grade for the Upper Domain. The deterioration at 3650mE is related to the relatively low number of composites at that easting.



Upper Domain Easting Swath Plot

The figure below shows the Lower Domain and shows an acceptable correlation between the composites and the block estimation grades. The last validation involved a visual validation of the final block model to both domain limits and composite grade comparison.

		 *Lower Domain RL Swath Plot* The figure below show a representative cross section of the gold estimation results.

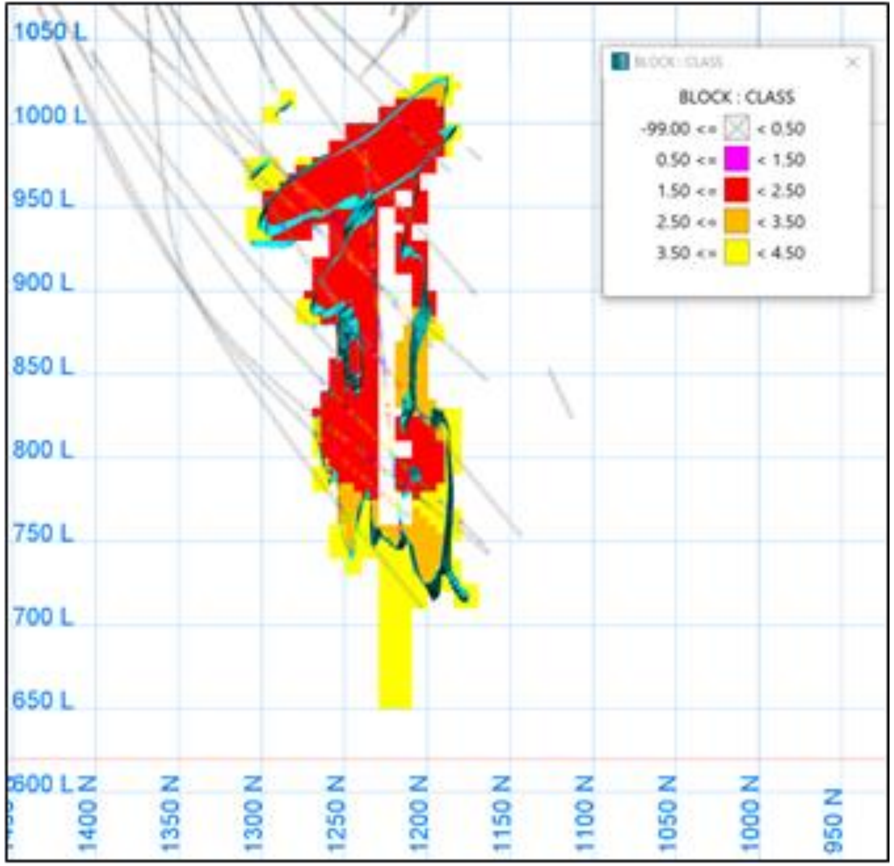


Representative Cross Section with Estimated Au Grades (Viewing E90°)

Based on the results of the various model validations, the OK estimate was chosen as the final Mineral Resource estimation. All reporting tables are based on this estimation.

Horseshoe Mineral Resource Classification

Mineral Resources are classified as Indicated and Inferred in accordance with JORC (2012) Code. There are no Measured Mineral Resources. Classification of the Mineral Resources reflects the relative confidence of the grade estimates and the continuity of the mineralisation. This classification is based primarily on the sample spacing and geological complexity. No single factor controls the Mineral Resource classification, rather each factor influences the end result. A wireframe solid was constructed around the areas where the majority of the blocks were estimated in the first pass of the estimation. These wireframe solids were used to assign the Indicated Mineral Resource classification. All blocks outside of the Indicated wireframes were classified as Inferred Mineral Resources. The figure below shows a representative cross section showing the classifications, with Indicated in red and Inferred in orange. Yellow blocks are unclassified. Blue is the 1.0g/t grade shell.



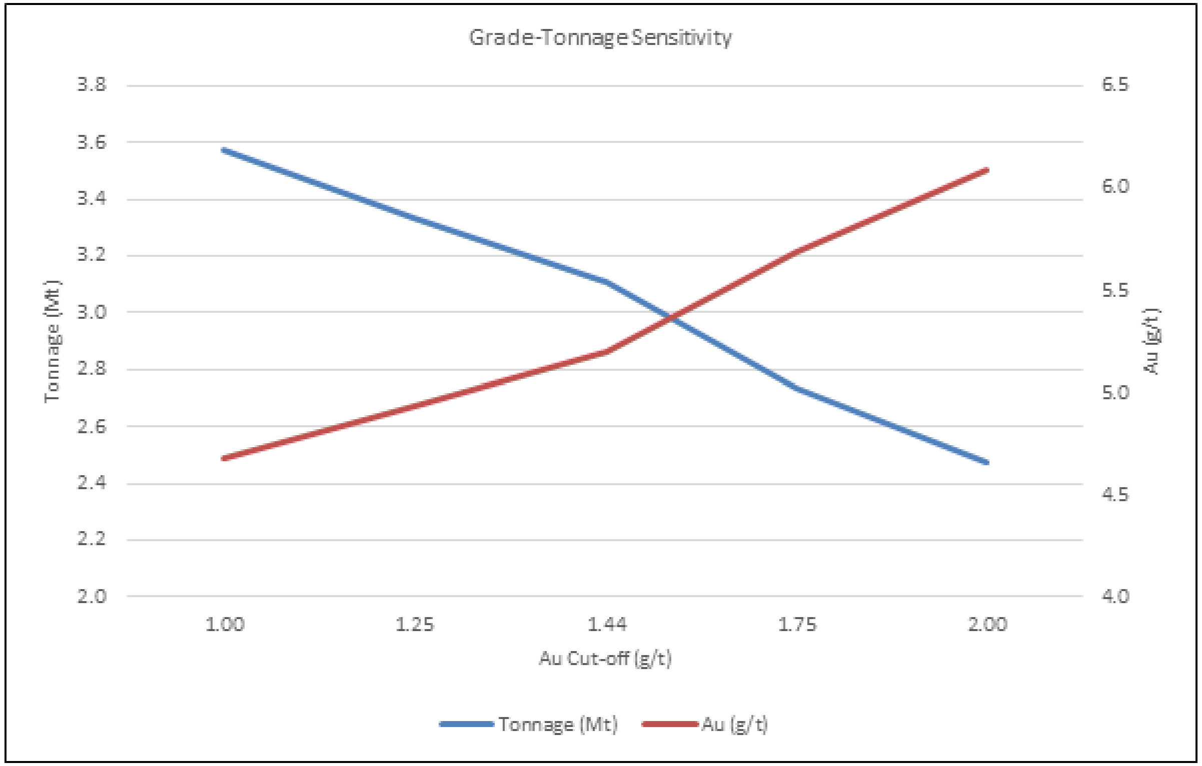
Representative Cross Section Showing Mineral Resource Classification (Viewing N90°E)

Horseshoe Mineral Resource Sensitivity

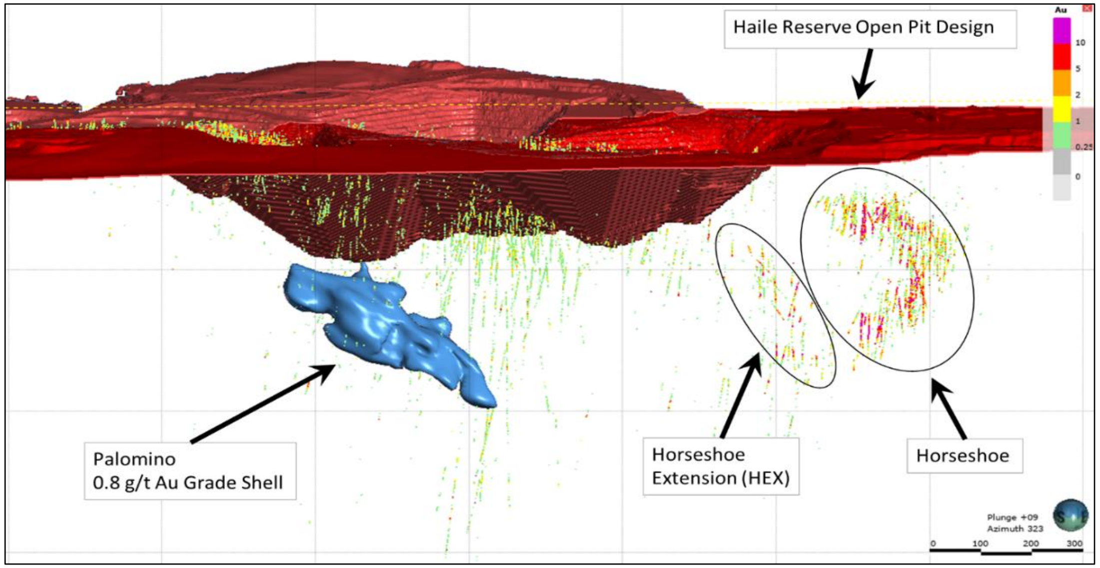
The Mineral Resources are presented at a range of Cut-off grades, subdivided by classification (see table below). Graphical representations of the grade and tonnage sensitivities of the Indicated Mineral Resource are presented in the figure below. They are reported to a a 1.35 g/t cut-off within a volume broadly guided by conceptual mine designs.

Mineral Resource Sensitivity

Indicated			
Cut-off	**Au**	**Tonnes**	**Au**
	(g/t)	**(Mt)**	**(koz)**
1	4.68	3.58	538
1.26	4.95	3.32	529
1.5	5.28	3.04	516
1.75	5.69	2.73	500
2	6.08	2.48	484



Sensitivity of Indicated Resource Tonnes and Grade to Cut-off

Criteria	JORC Code Explanation	Commentary
		Palomino The Palomino deposit is a medium grade deposit, located approximately 650 m southwest of the Horseshoe, and 300 m below surface. The Palomino resource estimation is based on the current drillhole database, interpreted lithologies, geologic controls and current topographic data. The Palomino resource estimation is based on the current drillhole database, interpreted lithologies, geologic controls and current topographic data. The resource estimation is supported by drilling and sampling completed in 2021 although final assays were received on January 17, 2022. The effective reporting date is recorded as 31 December 2021 to match the site-wide Haile mining depletion date. No mining has occurred at Palomino.  Gold estimation was constrained within implicitly modeled grade shells, approximating a 0.8 g/t gold indicator. Post-mineralization dikes were assigned zero grade. Metasediment / metavolcanic contacts were not used to constrain gold estimation. Gold grades were estimated into 10 m E x 10 m N x 10 m RL parent blocks with Vulcan™ modeling software using Ordinary Kriging on 3 m composites. Sub-blocking was to 2.5 m E x 2.5 m N x 2.5 m RL for better volumetric determination, estimation was into the parent block. A probability Kriging approach was used within the 0.8 g/t grade shell, with a 0.3 g/t Au indicator employed to account for a lower bimodal population. On a block-by-block basis, the grade and probability of the higher and lower grade indicators were estimated by Ordinary Kriging and weight-averaged to generate a final block grade. Densities, based upon core analyses, were assigned by rock type.

Criteria	JORC Code Explanation	Commentary
		The Mineral Resources reported for the Palomino deposit are classified as Indicated and Inferred Mineral Resources, based primarily on drillhole spacing and geological understanding but guided also by kriging variance and slope regression. The Palomino Mineral Resource is constrained within a conceptual stope design based on a gold price of US$1,700/oz, approximating a 1.39 g/t cut-off. Due to the diffuse nature of the grade boundaries, all unclassified material within the conceptual design was assigned zero grade for the purposes of reporting.
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.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	Open pit cut-off grade is 0.45g/t is based on actual and anticipated costs, prices and metallurgical recoveries. Underground Cut-off grades of 1.35g/t Au and 1.39g/t Au for Horseshoe and Palomino Mineral Resources respectively are based on a gold price of US$1,700/oz. The reader is cautioned that the Mineral Resources that do not qualify as Ore Reserves are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorised as Ore Reserves. There is no certainty that these Mineral Resources will be realised or that they will convert to Ore Reserves.

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.*	The open pit Mineral Resource is the material that is contained within a computer generated Lerchs-Grossmann shell based upon a US$1,700/oz gold price. No additional mining dilution is applied to the open pit Mineral Resource because the recoverable block model estimation process approximates mining selectivity. Mining modifying factors have been applied to the underground model. The underground estimate for Horseshoe however is reported undiluted. The Palomino underground Inferred Mineral Resource is reported within a conceptual mine design.
Metallurgical factors or assumptions	- *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	All open pit and underground Ore Reserves are expected to be treated at the existing Haile processing plant. Extensive processing testing was completed for detailed design and engineering of the process plant.
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 green-fields project, may not always be well advanced, the status of early consideration of these potential environmental impacts*	Waste material is classified and routed based on lithology, percent sulphur, and the calculated Net Neutralizing Potential (NNP) of the block. NNP is the ratio of acid neutralizing potential to acid generation potential. Based on the NNP, waste material is categorised into green (non-acid generating), and yellow and red waste (PAG – Potentially Acid Generating) types. Red waste stored in dedicated, lined PAG storage facilities, while class-yellow material can be stored either in the PAG facilities or as backfill in mined-out pits, at least 5 m below final water table. Whilst there may be delays in receiving the permits, these are not expected to materially impact the reported resource estimates.

<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr><td></td><td><i>should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</i></td><td></td></tr>
<tr><td><i>Bulk density</i></td><td>

<i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i>
<i>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vughs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.</i>
<i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i>

</td><td>
<p>In situ dry bulk density (BD) determinations have been carried out by OceanaGold personnel at regular intervals of 10-20m on drill core. The BD database contains over 44,000 measurements. The immersion/displacement method involves weighing the sample both in air and in water. Scales are calibrated daily.</p>
<p>Average measurements were used for each lithology. BD values were assigned to model blocks based on geological coding rather than estimated as a continuous variable. BD data has been evaluated and grouped based on rock type and oxidation.</p>
<p>The following dry densities were assigned to each rock type in all block models:</p>
<p><i>BD Assignment</i></p>
<table>
<tr><td colspan="8" rowspan="3">BD Assignment Criteria</td><td colspan="4">Criteria for Ore vs. Waste</td></tr>
<tr><td colspan="4">Ore = Inside Gold Shell</td></tr>
<tr><td colspan="4">Waste = Outside Summary Shell</td></tr>
<tr><td colspan="12">BD Assignment Criteria for the open pit model</td></tr>
<tr><td>Sand</td><td>Saprolite</td><td>Dike</td><td colspan="2">Meta Volcanics</td><td colspan="4">Meta Sediments</td><td>Pag Fill</td><td>Tails</td><td>Heap</td></tr>
<tr><td rowspan="3">2.06</td><td rowspan="3">2.18</td><td rowspan="3">2.88</td><td>Oxidised</td><td>Fresh</td><td colspan="2">Ore</td><td colspan="2">Waste</td><td rowspan="3">1.89</td><td rowspan="3">2.14</td><td rowspan="3">1.7</td></tr>
<tr><td rowspan="2">2.52</td><td rowspan="2">2.7</td><td>Oxidised</td><td>Fresh</td><td>Oxidised</td><td>Fresh</td></tr>
<tr><td>2.57</td><td>2.78</td><td>2.49</td><td>2.76</td></tr>
</table>
</td></tr>
<tr><td>Classification</td><td>

<i>The basis for the classification of the Mineral Resources into varying confidence categories.</i>
<i>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i>
<i>Whether the result appropriately reflects the Competent Person’s view of the deposit.</i>

</td><td>
<p>Open pit mineral resource classification was assigned based of combination of estimation pass, average distance of samples and number of drill holes as follow:</p>

Measured: Blocks estimated within first pass, the maximum average distance of sample was 14m, and at least 4 drill holes used for estimations.

<p>Indicated: Blocks estimated within second pass or less, the maximum average distance of sample was 36.8m, and at least 2 drill holes used for estimations. Typical drill spacing for Indicated is no more than 40m x 40m.</p>

Inferred: Blocks estimated within third pass or less.

</td></tr>
</table>

Criteria	JORC Code Explanation	Commentary
		Horseshoe Underground resource classification is based upon a combination of drill density, geological interpretation and estimation parameters. • Indicated: 25m x 25m with a minimum of 12 samples within a 1.0g/t Au grade shell. • Inferred: 35m x 35m with a minimum of 6 samples within a 1.0g/t Au grade shell. Palomino underground resource classification is based upon a combination of drill density, geological interpretation and estimation parameters. A wireframe solid was constructed around the areas where the majority of the blocks were estimated in the first pass of the estimation, and the mean distance of the samples used to estimate the blocks was 25 m or less. This was was also tested on other estimation parameters such as slope of regression, to confirm a consistent approach. This wireframe solid was used to assign the Indicated Mineral Resource classification. All blocks outside of the Indicated wireframes were classified as Inferred Mineral Resources • Indicated: 25m x 25m • Inferred: 35m x 35m
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	External audit reviews have been completed for the Haile open pit and Horseshoe underground estimates. No materials flaws were identified. Findings and recommendations for the Haile open pit estimate were: • Gold grade estimates have no bias overall and considered appropriate. • Drill spacing is adequate for the gold grade continuity and classification used. • Recommendation to consider simplifying process by using ordinary kriging rather than Multiple Indicator Kriging. Initial trials have not proven successful. However, it may be that by reconsidering the grade domaining strategy, ordinary kriging may eventually yield success. • Recommendation to look at ways to increase geological input. OceanaGold will continue to explore the potential to integrate alteration logging and/or structure data. To-date the

Criteria	JORC Code Explanation	Commentary
		use of logged alteration (silica and pyrite) to improve estimation domains has not been successful, despite an observable relationship with gold mineralization. • Recommendation was to review the degree of smoothing in the estimate. Kriging Neighbourhood Analysis was completed by OceanaGold in response to the recommendation and the search parameters were found to be appropriate. A sensitivity modeling analysis using exhaustive grade control data to generate multiple equiprobable resource sample patterns at 35m x 35m demonstrated that local sampling uncertainty alone can reproduce the magnitude of variation seen in annual reconciliation data. The key findings and recommendations for the Horseshoe underground estimate were: • the Horseshoe mineral resource estimate is consistent with good industry practice • the greatest risk associated with the Horseshoe estimate is the interpreted geometry and extent of the mineralisation. Multiple plausible interpretations are possible and, while these alternatives do not materially affect the global estimate, there are potential differences in the local orientation and distribution of the mineralisation. More sensitivities recommended. • Continuously monitor the spatial and statistical distribution of very-high grade samples. Investigate potential geological controls for extreme grades to ensure they are appropriately modelled and estimated. Independent check Haile open pit estimates via large panel recoverable estimation achieve very similar estimation outcomes. Model to mine to mill reconciliation is conducted on a monthly and annual basis and suggests that the estimates are acceptable.
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 Mineral Resource within stated confidence limits, or, if such an approach is*	Both the open pit and underground models have been classified to reflect appropriate confidence for open pit and underground estimates respectively. Both estimates are appropriate for medium and long-term planning. Additional grade control drilling is required to improve local estimates prior to mining. The resource model to mill-adjusted mine reconciliation data the 4-years to 2021 show variable performance from year to year. The long-term average performance for this period shows +12% for tonnes, -4% for grade and +8% for contained gold. The four-year grade reconciliation is however

Criteria	JORC Code Explanation	Commentary
	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 with production data, where available.*	negatively skewed by low mining selectivity during 2020 which resulted in excessive mining dilution during that year. More selective mining practices re-introduced during 2021 have resolved this. Whilst annual reconciliation fluctuations are expected to continue, the open pit resource estimates are believed to provide an acceptable basis for medium to long term mine planning purposes.

– **Table 0-1: Resource Model Reconciliation**

Year	HA1220OLM (MEAS&IND)			Mine (Mill-Reconciled)			Reconciliation Ratios		
	Tonnes	**Grade**	**Au Oz**	**Tonnes**	**Grade**	**Au Oz**	**Tonnes**	**Grade**	**Au Oz**
2021	3,162,000	1.98	201,695	3,273,607	2.17	228,179	1.04	1.09	1.13
2020	2,567,953	2.08	171,375	3,329,027	1.59	170,031	1.30	0.76	0.99
2019	2,867,894	1.96	180,599	3,179,597	1.78	182,394	1.11	0.91	1.01
2018	2,850,606	1.67	153,353	2,570,522	1.93	159,172	0.90	1.16	1.04
Total	**11,040,947**	**1.94**	**687,481**	**12,352,753**	**1.86**	**739,777**	**1.12**	**0.96**	**1.08**

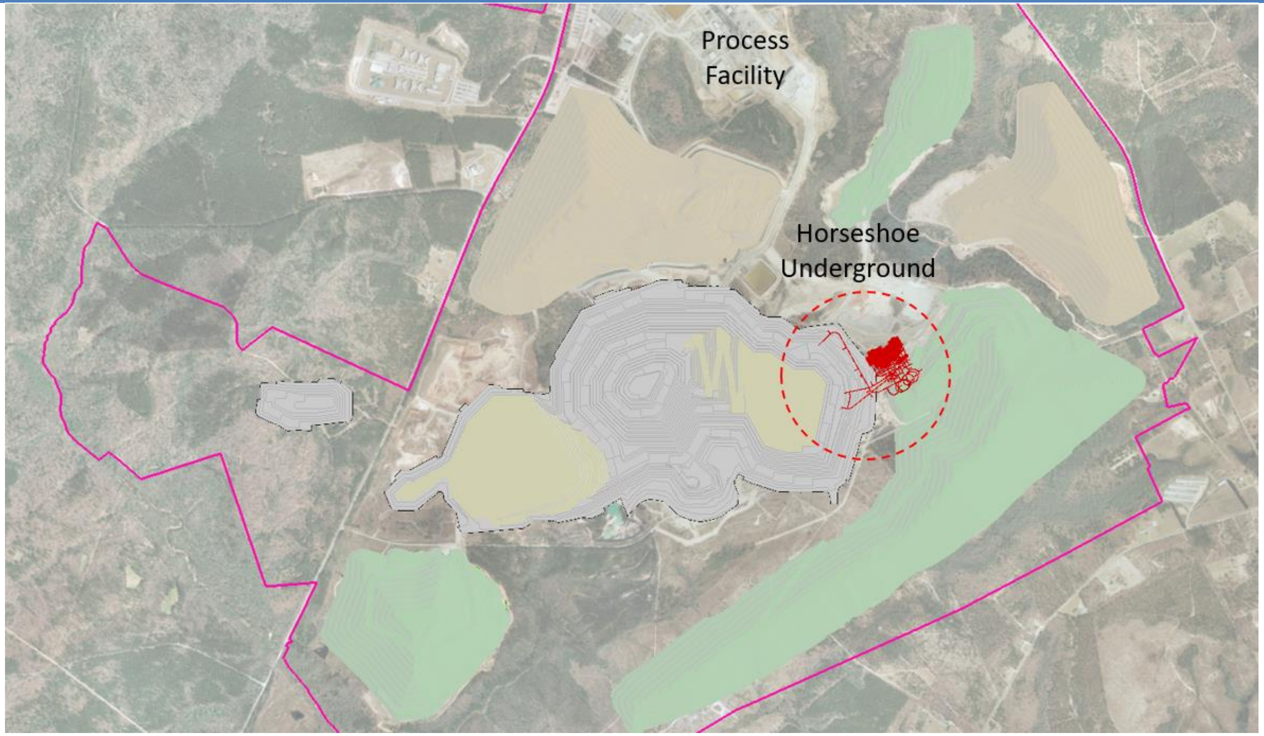
Source: OceanaGold, 2022

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 open pit Mineral Reserves at HGM are based on a block model and resource estimate discussed in section three. The underground Mineral Reserves at HGM are based on a block model and resource estimate discussed in section three. The Mineral Resources are reported inclusive of Mineral 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.*	Gregory Hollett, P.Eng, is the Competent Person for open-pit Ore Reserves. Mr Hollett is employed by OceanaGold Management Pty Ltd as Group Mining Engineer–Open Pits, based in Brisbane and most recently visited Haile in January 2022. Brianna Drury, MSME, is the Competent Person for underground Ore Reserves. Ms Drury is employed by Haile Gold Mine as Underground Project Manager, based at Haile Gold Mine
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 at Haile commenced in 2016, followed by commissioning and commercial operation of the processing plant in January 2017. Life of Mine planning studies have been undertaken to demonstrate the future economic viability of the mine. The Haile Mine Optimisation Study completed in 2017 included both open pit and underground Mineral Resources and Ore Reserves and was completed to a Feasibility Study level. An updated NI 43-101 report to Feasibility level, which underpins the Mineral Resources and Ore Reserves was completed in March 2022. Haile Gold Mine holds the necessary permits, consents, certificates, licences applicable to current open pit mining operations. Those required for future operations, including for Horseshoe Underground mining, are considered achievable and are being actively pursued in line with life of mine timing requirements.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	Ore Reserves are based on a gold price of US$ 1,500/oz. Metallurgical recoveries are based on three recovery curves: • For Au >= 1.7 g/t, recovery = (1-(0.2152*au grade^-0.3696)) + 0.025 • For Au < 1.7 g/t, recovery = (1-(0.2152*au grade^-0.3696)) • For oxide ore, recovery = 68%

Criteria	JORC Code Explanation	Commentary
		Open pit Ore Reserves are converted from Mineral Resources through the process of pit optimisation, pit design, production schedule and supported by a positive cash flow model. Open pit Ore Reserves are stated using a 0. 5g/t Au cut-off for primary material and 0.6 g/t for oxide material. Underground Ore Reserves are stated using a 1.53g/t cut-offwith adjacent lower grade stopes included in the design. Incremental material is included based on an incremental stope cut-off grade of 1.37g/t Au and an incremental development cut-off grade of 0.38g/t Au. Mining recovery ranges from 94-100% depending on activity type. Sill levels use a 75% recovery. Mining dilution is applied using zero grade. The dilution ranges from 2-10% depending on activity type.
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 (eg 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.*	<u>Open Pit</u> Mining dilution and ore recovery are applied using assumptions related to the type of excavator used for mining ore, and average 1.0% and 98.9% respectively over and above the dilution and ore recovery factors implicit in the resource model. The open-pit Ore Reserves are reported within a pit design based on open pit optimisation results. The optimisation included Measured, Indicated and Inferred Mineral Resource categories with a gold price of USD$1500/oz Au. Inferred material within the pit design was treated as waste and given a zero gold grade. The overall pit slopes used for the design are based on operational level geotechnical studies. The stage cutbacks are approximately 100 m to 300 m wide with a minimum mining width of 50 m. Bench sinking rates are approximated to a maximum of 10 m bench per month, mined as either a single-pass or three flitches of ~3.3 m per flitch. Mining is a conventional drill/blast/load/haul open pit operation using 10m benches in waste and generally 3.3 m benches in ore. Waste rock is categorised based on geochemical parameters and placed into the appropriate type of storage facility. The mining method is considered appropriate for the size and style of the deposit. <u>Underground</u> The Mineral Resource area evaluated for underground mining is referred to as “Horseshoe”. Horseshoe is located to the north east of the Snake Pit, as shown in the figure below. Note that the underground Ore Reserve does not consider the Palomino underground Mineral Resource at this time.

Criteria	JORC Code Explanation	Commentary
	• *The infrastructure requirements of the selected mining methods.*	 Measured and Indicated Mineral Resources were converted to Proven and Probable Ore Reserves by applying the appropriate modifying factors, as described herein, to potential mining block shapes created during the mine design process. Mine access will be via decline, with the main portal located off the Snake Pit haulage ramp. Sublevel open stoping (SLOS) will be employed, with grade control drilling carried out from underground prior to mining. Inferred material has been treated as waste with no grade. Based on the orientation, depth, and geotechnical characteristics of the mineralisation, a transverse SLOS orientation will be applied. The stopes will be 20m wide and stope length will vary based on mineralisation grade and geotechnical considerations. A spacing of 25 m between levels is used. Cemented rock fill (CRF) of sufficient strength will be used to backfill mined stopes to facilitate the extraction of adjacent stoping blocks. There will be an opportunity for some non-cemented waste rock to be used in select stopes based on the mining sequence.

Criteria	JORC Code Explanation	Commentary
		Stope sizing and ground support recommendations were determined from a geotechnical field investigation designed to examine rock mass fabric and structural features in and around the mineralised zone at different depths and orientations. An underground geochemical program was also completed to determine the metal leaching (ML) and ARD) potential of development rock that would be generated from the underground operations, including tailings and cemented rock fill (CRF) from test programs that were done to evaluate the geotechnical and geochemical properties of materials being evaluated for underground backfill. For mine design, a cut-off grade of 1.53g/t was used, with adjacent lower grade stopes included in the design. Incremental material is included based on an incremental stope cut-off grade of 1.37g/t Au and an incremental development cut-off grade of 0.38g/t Au. The ELOS and additional dilution factor for the sill stopes results in the dilution factors shown below. These factors were conservatively applied uniformly across each stope type. Mine Design Dilution Factors Stope Type Dilution Applied (at Zero Grade) Primary Stopes 2% Secondary Stopes 6% Sill Pillar Primary Stopes 6% Sill Pillar Secondary Stopes 10% For all horizontal development, dilution of 10% was applied at zero grade. A stope recovery value of 94% has been applied for Primary and Secondary Stopes and a 75% stope recovery applied to Sill Pillars. Productivities were developed from first principles. Input from mining contractors, blasting suppliers and equipment vendors was considered for key parameters such as drilling penetration rates, blast hole size and spacing, explosives loading time, bolt and mesh installation time, etc. The rates developed from first principles were adjusted based on benchmarking and the experience and judgment of OceanaGold. An annual production schedule was completed using Deswik scheduling software and is based on mining operations occurring 365 days/year, 7 days/week, with two 12 hr shifts each day. A production rate of approximately 2,000 t/d was targeted with ramp-up to full production as quickly as possible. Production levelling was used on a monthly basis for ore tonnage and lateral development. Infrastructure provisions have been made to support the open pit and underground mining methods as discussed below in the infrastructure section.

Criteria	JORC Code Explanation	Commentary
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?*	Recovery of gold at Haile is achieved through crushing, grinding, flotation, carbon-in-leach (CIL), elution, electro-winning and gold smelting. As at 30 June 2020, the Processing Plant has the capacity to treat 3.8 million tonnes per annum of ore with debottlenecking projects still underway to further improve throughput and plant utilisation. . Metallurgical test work to support throughput and recovery assumptions has included: - A series of metallurgical testing programs have been completed under HGM supervision by independent commercial metallurgical laboratories from different zones of mineralisation based on location, elevation, hardness, rock type, gold grade and sulphur content. Samples were composited to represent a range of plant feed grades. - Samples have been selected from the separate zones of mineralisation that make up the expected process plant feed. - There is minimal variation in metallurgical response apparent in the test work between samples from the various zones of mineralisation at HGM. Specific metallurgical domains have not been demarcated and a uniform recovery model has been applied. Plant operational data from 2020-21 has been used to validate the recovery models based on plant performance with the finalised flowsheet. Blend control to minimise the impacts of oxide material in the plant feed is now well understood and operating strategies established. No assumption or allowances have been made for the presence of deleterious elements. None are known to exist in Haile ore at a significant level. The CIL process is the customary choice for gold mine process plants of this scale, feed grade and metallurgical response. Fine grinding to less than 20µm is required to liberate gold from quartz and pyrite.

Criteria	JORC Code Explanation	Commentary
Environmental	- *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.*	Haile Gold Mine holds the necessary permits, consents, certificates, licences applicable to current open pit mining operations. Mine, processing and infrastructure plans have been approved by the relevant Federal and State regulatory agencies and are broadly supported by the communities adjacent to the Haile Gold Mine. Work associated with permitting for the expanded Haile open pit and underground operations as reflected in the reported Mineral Resource and Ore Reserves is in progress. This process considers environmental and social impacts including air quality, land disturbance, water and wastes management. No major impediments are anticipated. While delays in receiving the permits for the expanded operation will result in operational schedule changes, it is not expected to materially impact the Mineral Reserves. Waste material is classified and routed based on lithology, percent sulphur, and the calculated Net Neutralizing Potential (NNP) of the block. NNP is the ratio of acid neutralizing potential to acid generation potential. Based on the NNP, waste material is categorised into green (non-acid generating), and yellow and red waste (PAG – Potentially Acid Generating) types.. Red waste stored in dedicated, lined PAG storage facilities, while class-yellow material can be stored either in the PAG facilities or as backfill in mined-out pits, at least 5 m below final water table.
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 Haile Project is located in a populated area with good infrastructure including roads, power and water. The project is adjacent to a state highway and there is a large, skilled workforce in the region. All necessary infrastructure for the project either exists as part of the operation or has been accounted for and costed in the project evaluation. This includes the following elements: • Tailing Storage Facility (TSF) the existing facility will be expanded to accommodate the increased Ore Reserves. The method of construction and type of facility is unchanged from that which has been reported previously; • Overburden storage areas (OSA's). This includes material generated that will be classified as

Criteria	JORC Code Explanation	Commentary
		either potentially acid generating (PAG) or non-acid generating. Currently designed facilities will be either expanded, amalgamated (or both) to accommodate the material generated. Where applicable alterative storage areas will be prepared. • Site wide water management has been revised based on the change in mine design and the updating of the site wide water balance model. There is no change to the classification of contact or non-contact waters and these will be managed and utilised as previously reported; • Highway crossings and road realignment related to mining and tailings storage have been accounted for; • All ancillary facilities either exist as part of the existing project or are planned for completion as and when required throughout the mine life, this includes underground mine infrastructure; • Power Supply remains from Lynches River Electric Cooperative. The nearby power transmission infrastructure is well established and will be upgraded as required and this has been taken into consideration.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating 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.*	• Capital costs are estimated in US dollars. All cost estimates are based on North American supply. Where appropriate, capital cost estimates have been undertaken by suitably qualified and experienced consultants, and/or sourced from supplier quotations. Estimates have utilised where possible labour rates provided by the existing operations and current contractors. Capital costs include all infrastructure costs, owner's costs and contingency. • Capital costs include allowances for construction of TSF lifts and surface PAG waste storages to accommodate life of mine production, water management and site reclamation. • All major open pit mining equipment is supplied under operating lease arrangements. • Projected open pit mining operating costs have been developed based on mine production and equipment schedules over the life of the mine, with reference to current actual costs, adjustments for one-off, non-recurring costs and assumed productivity improvements from 2023. Productivity improvements have been assumed from 2023 that will result in further unit operating cost reductions. • Project operating costs for underground mining have been developed based on the life of mine production schedule. • Process operating costs have been developed based on the life of mine production schedule, actual cost performance and allowance for the realisation of improvement programs. • Operating costs include allowance for General and Administration and Indirect costs. • Life of mine capital expenditure is expected to be $904 million dollars including closure costs, split between non-sustaining capital of $155M and sustaining capital of $749M as at 31 December 2021. • No specific deleterious elements have been found with the Haile project. The management of acid rock drainage as discussed in the mine plan and geotechnical sections have been addressed in the project costs.

Criteria	JORC Code Explanation	Commentary
		- Exchange rates do not apply to this project because it was designed and is under construction in the United States, based on U.S. Dollars. - Gold pricing, refining, and transport costs are discussed in the Market Assessment section. - No allowance was made for royalties, government or private.
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.*	- Gold is readily traded and the cost structure is well known. The basis of the financial analysis within this study was $1500/oz, with sensitivity analysis completed at ±$250/oz. Transportation and refining cost have been included in the financial analysis based on current terms at precious metal refineries. Silver was included in the evaluations but has limited economic contribution relative to gold.
Market assessment	- *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and 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*	- The market for gold dore is well-established. Market predictions and discussions for gold are beyond the scope of this document. The impacts of gold price volatility on the mine plan and process operation are well understood. - The Competent Person is not aware of any forward sales or hedging contracts for Haile metal production. - A contract is in place with Metalor USA Refining Corporation, located in North Attleboro, Massachusetts for the refining of dore bullion. The contract has a two-year term starting with an Effective Date of January 31, 2020, with a current extension to 2023, subject to termination by either party. This contract also sets a range of prices and surcharges for refining the doré under terms and conditions which generally comply with industry norms. It is assumed that these contract terms will be renewed through the LoM operation without changes or will be negotiated with a new refiner, if necessary.

Criteria	JORC Code Explanation	Commentary
	contract.	
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.*	• The Haile Gold Project economics have been completed using a discounted cash flow model. The financial indicators examined for the project include Net Present Value (NPV) and All in Sustaining Cost (AISC). • Annual cash flow projections were estimated over the life of the mine based on capital expenditures, production costs, transportation and refining charges and sales revenue.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• Prior to commencement of operations, Haile actively participated in rigorous permitting reviews on the federal, state, and local levels. At each step of this process, the public was afforded the opportunity to engage in those technical reviews, afforded the right to ask questions, voice concerns, and consider alternatives. • The main permit to construct and operate was the Environmental Impact Statement (EIS) and Record of Decision (ROD). During this review and evaluation, cooperating agencies from the US Army Corp of Engineers, US Environmental Protection Agency (EPA), South Carolina Department of Health and Environmental Control (SC DHEC), US Fish and Wildlife, SC Department of Natural Resources, and the Catawba Indian Nation worked collectively to issue the respective permits. • All required permits have been obtained and the project is legally operating at this time. • Haile is in the process of completing a Supplemental Environmental Impact Statement (SEIS) with the same regulatory agencies for the project expansion – larger open pits, underground mining, and process plant modifications. Permits will be obtained, as required, in consultation with all key (government and non-government) stakeholders. There is reasonable expectation that these permits can be obtained based on positive supporting technical data, reclamation plan, and proposed mitigation plan.
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*	Several potential risks and opportunities were identified. • *Permitting* - While delays in receiving the permits for the expanded operation will result in operational schedule changes, it is not expected to materially impact the Mineral Reserves. • *Metal Prices* – The base case long-term gold price is $1500/ounce. • *Silver Grade* – Silver is a byproduct for this project and is modelled based on limited sample coverage. The overall economic contribution of silver to revenue is small, however the mill needs to understand the Ag/Au ratio of the mill feed in advance to efficiently run the elution circuit. • *Existing Mining Facilities and Underground Workings* – Due to the historic mining in the area, there is a chance that underground mining and other facilities will be found. This could potentially reduce mining efficiency. • *Reclamation/Closure* – Interim reclamation is a part of the overall mine. Opportunity(s) may present themselves to include additional/more expedient reclamation/closure activities as part of mining, thus reducing final closure obligations and financial assurance costs.

Criteria	JORC Code Explanation	Commentary
	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.	• *Fresh Water Makeup Risks and Opportunities* – The results of the site wide water balance indicate that sufficient water is expected to be available. Because the water balance is run on a monthly time step, instantaneous water demand shortages can be handled with the addition of water storage once Haile moves into operations. Water is available from the local municipal source if there is a shortage. • *Inferred Mineralisation* - There is known inferred mineralisation within the bounds of the reserve that is not included as reserves. If this mineralisation is converted to reserves the available ore tonnage may go up and the amount of waste (overburden) that will need to be handled will be reduced. • *Underground Project* – There is opportunity to optimize the underground mine plan through detailed short term planning on a stope by stope basis to reduce the planned dilution, currently included in the stope design, and therefore increase the grade of the underground mine plan.
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 not been included in the Ore Reserves. • It is the opinion of the Competent Persons 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 2018, OceanaGold conducted an internal technical review for the Haile 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 included:
		  ○ Geology
		  ○ Geotechnical
		  ○ Mine planning
		  ○ Mining operations
		  ○ Hydrology and hydrogeology
		  ○ Tailings Management Facility
		• The 2018 review did not indicate that there were any issues that would materially impact the Ore Reserve estimate.
		• In 2022, OceanaGold revised and released the NI43-101 document.

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*	• The accuracy and corresponding confidence in the mineralisation is addressed based on both qualitative and quantitative means. The classification of the Haile open pit and underground Ore Reserves is believed to appropriately reflect the accuracy of the estimates.

Criteria	JORC Code Explanation	Commentary
	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 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.*	• Gold deposits have higher levels of grade uncertainty than other metal deposits due to the high coefficients of variation. Manageable short-term variability will be an ongoing condition in the mine operation.

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 Haile Gold Mine].