Material Information Summary for the 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 Mineral Reserves as at 30 June 2020. 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.

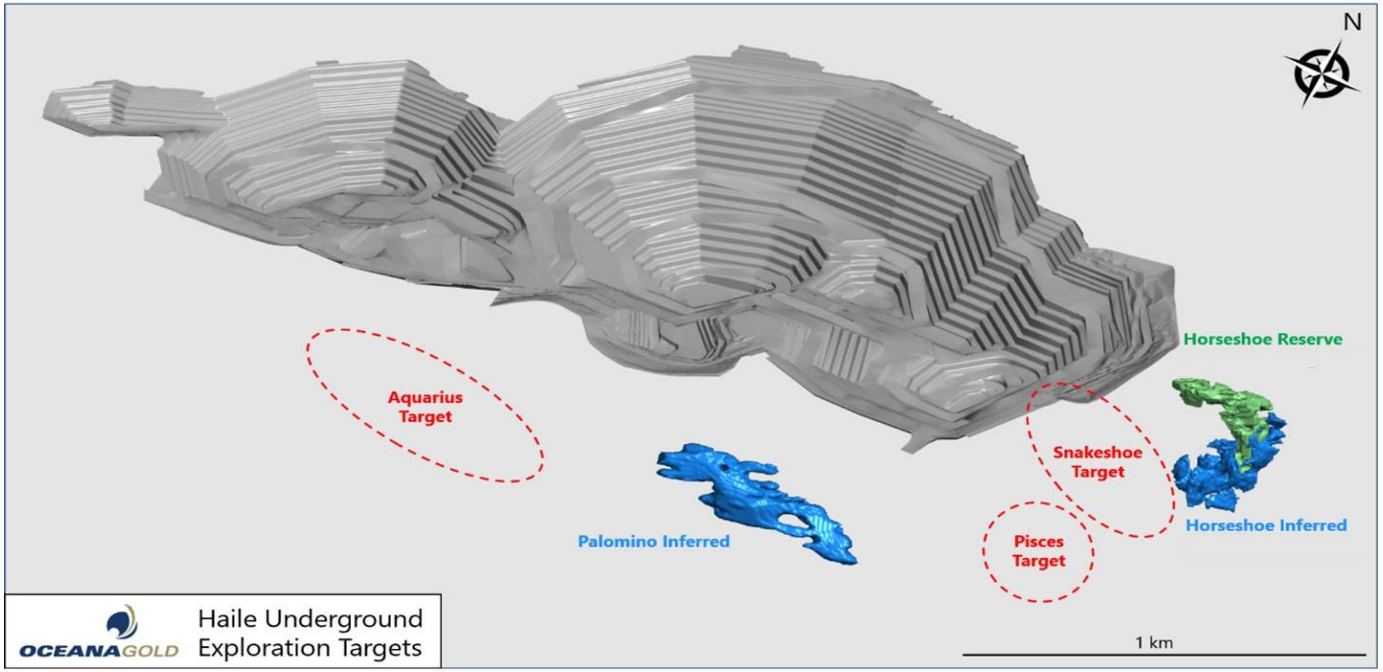
Haile is located 5 km northeast of Kershaw in southern Lancaster County, South Carolina. The Haile property site is 30 km southeast of Lancaster, South Carolina. The areas included in the Project comprise the following:

- Haile Open-pit Mine;
- Horseshoe Underground Mine (planned) and Palomino UG Resource;
- Processing plant; and
- Tailings Storage Facilities.

The Assessment and Reporting Criteria in accordance with JORC Code 2012 is presented in Appendix 1.

1.1 Geology and Geological Interpretation

Geologically, Haile is situated in the northeast-trending Carolina Terrane, otherwise known as the Carolina Slate Belt, which also hosts the past-producing Ridgeway, Brewer and Barite Hill gold mines in South Carolina. Haile is the largest gold deposit in the eastern USA and consists of nine en echelon gold deposits within a 3.5 km by 1 km area. Haile occurs within a variably deformed ENE-trending structural zone at or near the contact between metamorphosed Neoproterozoic volcanic and sedimentary rocks. Haile is hosted in laminated siltstones and 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. Gold mineralization dated at ~549 Ma (Mobley et al., 2014) slightly postdates peak volcanism and predates the most pervasive phase of deformation. Timing of gold mineralization coincides with a major tectonostratigraphic change from intermediate volcanism and tuffaceous sedimentation to basinal turbiditic sedimentation. Proximal quartz-sericite-pyrite alteration and distal carbonate-chlorite alteration are overprinted by regional greenschist facies metamorphism. The Figure below provides a view of the open pit design, underground resources and drill targets.



Oblique NNW view of Haile open pit design, underground resources and drill targets

1.2 Drilling, Sampling and Sub-Sampling

Reverse Circulation (RC) and Diamond Drilling (DDH) samples are used for the resource estimates at Haile. Since 2012, resource sampling has been exclusively by diamond core. Historical drilling prior to 2007 accounts for approximately 30% of the data. The sample procedures applied to the historical drilling (i.e. drilling prior to Romarco Minerals Inc.) at Haile were not well documented. Having said this, over three years of mining has tested the veracity of the resource estimates which are based on this data. Furthermore, database reviews have identified no material flaws.

Diamond drilling utilises wireline methods with HQ and NQ size core 63.5 mm and 48 mm core. Core recoveries are measured at the core shed by the geotechnicians. Core recoveries typically range from 97 to 100% except in the uppermost 5-15 m of each hole due to soft, crumbly saprolite. There is no observed relationship between core recovery and grade. Half core samples are cut by rotary diamond saw or if too soft, are cut by knife.

Sample preparation for both the diamond core and RC samples is considered appropriate. Sample lengths of 1 to 3 metre lengths produce bagged sample weights of 2-5 kg. These are considered adequate for the Haile deposits, which are primarily of the finely disseminated sediment-hosted style. Although coarse gold has been observed in drill core, it is rare and is not representative of the bulk mineralisation that will be mined.

- Diamond core drilling has been the sole drilling method for gold assays at Haile since 2012. Diamond drilling utilises wireline methods with HQ and NQ size core 63.5

mm and 48 mm core. Core is transferred from the core barrels to plastic core boxes at the drill rig by the driller. Core orientation is utilized for selected holes in about 50% of the holes. Core is broken as required to completely 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. Whole core is transported to the core shed for logging and cutting by OceanaGold Corporation (OGC) personnel.

1.4 Sample Analysis methods

Three laboratories have been used.

At AHK the samples were dried at 65º C, crushed to 80% passing 2mm. From this a 250gm sample was obtained using a riffle splitter and pulverised to 90% passing 150 mesh. The sample was split to 125gm with one sample sent to AHK Lab in Fairbanks Alaska for fire assay of a 30gm aliquot with Atomic Absorption finish. The second sample retained at lab. Coarse rejects were returned to Haile.

At KML the samples were dried at 93º C, crushed to 80% passing 2mm. From this a 450gm sample was obtained using a riffle splitter and pulverised to 85% passing 140 mesh. The sample was split to 225gm with one sample sent for fire assay of a 30gm aliquot with Atomic Absorption finish. Coarse rejects and pulps returned to Haile.

Blanks and standards were inserted at Haile, and check assays are submitted to a second lab on a regular basis.

The AHK laboratory is an independent laboratory. The KML laboratory is based at Haile and staffed by OceanaGold personnel.

Since July 2017 all Haile core has been prepared at the ALS lab in Tucson, Arizona, and analysed at the ALS lab in Reno, NV. Samples are pulverized from a 450 g sample to 85% passing 75 mesh. Approximately 225 g of pulp sample is used for fire assay.

1.5 Estimation Methodology

The Mineral Resources at Haile comprise both open pit and underground resources for which separate block models were generated.

For the open pit, gold estimation was constrained within implicitly modelled grade shells, approximating a 0.065 g/t gold indicator. Post-mineralisation dikes were assigned zero grade. Metasediment/metavolcanic contacts were not used to constrain gold estimation. Gold grades were estimated into 10mE x 10mN x 5mRl blocks using 2.5 m bench composites. Grade estimation was done in Vulcan software, using Multiple Indicator Kriging (MIK) to produce E-Type estimates for gold. MIK is well suited to estimating positively skewed grade distributions. Top caps of 50 g/t Au were used to temper mean grades for the top indicator classes.

Ordinary kriging was used for silver, sulphur and carbon estimates.

Densities based upon core analyses were assigned by rock type.

For the underground gold estimation was constrained within implicitly modelled grade shells, approximating a 1.0 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 with Vulcan™ modelling software. Ordinary kriging based on 3m composites was used to inform block grades. A top cap of 100 g/t Au was used for Horseshoe, whilst no top cap (maximum grade 31 g.t Au) was used for Palomino.

10mE x 10mN x 10mRl blocks (sub-blocked to 5mE x 5mN x 5mRl) and 5mE x 5mN x 5mRl block sizes for Horseshoe and Palomino respectively,

Densities based upon core analyses were assigned by rock type.

1.6 Resource Reporting

The Mineral Resources are classified as Indicated and Inferred Mineral Resources, based primarily on drill hole spacing.

Haile Combined Open Pit and Underground Resource Statement as of as of June 30, 2020

Type	Class	Tonnes (Mt)	Au Grade (g/t)	Contained Au (Moz)	Ag Grade (g/t)	Contained Ag (Moz)
Open Pit	Measured	3.2	1.35	0.14	2.61	0.27
	Indicated	52.3	1.53	2.57	2.40	4.04
	Measured & Indicated	**55.5**	**1.52**	**2.71**	**2.41**	**4.30**
	Inferred	7.6	1.0	0.2	1.32	0.32
Underground	Measured	-	-	-	-	-
	Indicated	3.3	4.95	0.53	-	-
	Measured & Indicated	**3.3**	**4.95**	**0.53**	-	-
	Inferred	9.0	3.1	0.9	-	-
Combined	**Measured**	**3.2**	**1.35**	**0.14**	**2.61**	**0.27**
	Indicated	**55.6**	**1.73**	**3.10**	**2.40**	**4.04**
	Measured & Indicated	**58.8**	**1.71**	**3.24**	**2.27**	**4.30**
	Inferred	**17**	**2.1**	**1.1**	**0.6**	**0.32**

Cut-off grades for the open pit, Horseshoe underground and Palomino underground are 0.45 g/t, 1.26 g/t and 1.37 g/t Au respectively, based on a gold price of US$1,700/oz.

- Open pit resource is reported within a US$1,700/oz optimized shell.
- Palomino underground is constrained within a conceptual stope design and Horseshoe underground is constrained by 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.
- The Mineral Resources were estimated under the supervision of Jonathan Moore, MAusIMM CP(Geo), a competent Person.

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

Inputs to the calculation of the reserve cut-off grades for the HGM open pit and underground mine include mining costs, metallurgical recoveries, treatment and refining costs, general and administration costs, royalties, and commodity prices. All these costs are reviewed annually as part of the LoM process. The resource and reserve gold price assumptions are also reviewed annually and if necessary, changed. Using the updated costs and gold prices the resource is re-optimised and forms the basis of the Resource and Reserve Statement.

As part of the pit design process the geotechnical stability of proposed open pit stages are reviewed by Call & Nicholas geotechnical consultants of Arizona and are used as inputs into optimisation runs and subsequent pit designs. NewFields consultants have designed the tailings and waste rock storage areas and also complete the hydrogeology and groundwater management on site.

The open-pit at HGM is mined using conventional hydraulic excavator and rigid dump truck methods. Bulk waste is mined on 10 m benches using Face Shovel configured excavators, while ore is selectively mined on 3.5 m to 5.0 m flitches to manage ore loss and dilution. Ore is usually mined with hydraulic excavators, while the majority of waste is mined with hydraulic shovels. Front-end loaders may be used in either application in back-up capacity. The haul truck fleet is a mix of 175 t, 140 t and 90 t payload units.

Underground mining at the future Horseshoe underground is planned to use longhole stoping methods with cemented rock backfill. The stopes will be 20 m wide and stope length will vary based on mineralization grade and geotechnical considerations. A spacing of 25 m between levels is used. The CRF will have sufficient strength to allow for mining adjacent to backfilled stopes. The deposit is divided into three production areas that will be mined bottom up.

HGM owns and operates the open pit mining fleets and mining costs and productivities are updated as part of the annual LoM process. The planned UG mine is at Feasibility Study level and is undergoing detailed engineering prior to commencement in 2021.

Recovery of gold at the HGM is by the installed processing plant which utilises a conventional flowsheet as developed in the feasibility study, comprising:

- Primary Jaw Crushing
- Conventional SABC grinding circuit incorporating flash flotation on the cyclone underflow
- Rougher flotation
- Two stage concentrate regrind with a tower mill followed by an Isamill
- 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 plant between 2018-2020 to achieve the expanded capacity of 4 mtpa.

The plant has an established skilled workforce and management team in place. As part of the annual LoM, process costs, throughput assumptions and processing recoveries are reviewed and used in the annual LoM optimisation runs and subsequent pit designs which are used to report the annual Ore Resource and Reserve statement.

1.8 Reserves

The Ore Reserve estimate for HGM as of 30 June 2020 is shown in the table below.

HGM Reserve Estimate

Type	Category	Tonnes (Mt)	Au Grade (g/t)	Au Grade (g/t)	Au Contained (Moz)	Ag Contained (Moz)
OP	Proven	3.00	1.37	2.54	0.13	0.25
	Probable*	46.4	1.58	2.35	2.36	3.50
	Proven + Probable	*49.4*	*1.57*	*2.36*	*2.49*	*3.75*
UG	Proven	-	-	-	-	-
	Probable	3.42	3.78	-	0.42	-
	Proven + Probable	*3.42*	*3.78*	-	*0.42*	-
OP + UG	**Proven**	**3.00**	**1.37**	**2.54**	**0.13**	**0.25**
	Probable	**49.8**	**1.73**	**2.19**	**2.77**	**3.50**
	Proven + Probable	**52.8**	**1.71**	**2.21**	**2.91**	**3.75**

*Includes 722kt of stockpile material grading 1.23g/t Au and 1.78g/t Ag

Notes to Accompany Mineral Reserve Table:

Source: SRK

1. Mineral Reserves are based on a gold price of US$ 1,500/oz. Metallurgical recoveries are based on a recovery curve (1-(0.2152*au grade^-0.3696)) + 0.025 that equates to an overall recovery of 82% for the open pit material and 88% for the underground material.
2. Open pit Mineral Reserves are stated using a 0.45 g/t Au cut-off and assume full mine recovery. 5% dilution at zero grade and 98% mining recovery was applied for 2020 and 2021 mine schedule. Remaining years open pit reserves are not diluted further to dilution inherent to the resource model and assume selective mining unit of 10 m x 10 m x 5 m.
3. 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.
4. Underground reserves are stated using a 1.44 g/t cut-off. The reserve estimate is based on a mine design using an elevated cut-off grade of 1.67g/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 1.29g/t Au and an incremental development cut-off grade of 0.38g/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.
5. 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.
6. Mineral Reserves have been stated on the basis of a mine design, mine plan, and cash-flow model.
7. The open pit Mineral Reserves were estimated by Fernando Rodrigues, BS Mining, MBA, MMSAQP #01405, MAusIMM #304726 of SRK, a Qualified Person. The underground Mineral Reserves were estimated by Joanna Poeck, BEng Mining, SME-RM, MMSAQP #01387QP, a Qualified Person.

Inputs to the calculation of the reserve cut-off grades for HGM open pits and underground mines include mining costs, metallurgical recoveries, treatment and refining costs, costs of storing waste rock and tailings, general and administration costs, royalties, and commodity prices.

1.9 Economic Analysis

Economic analysis is based upon mine schedules that include only Mineral Reserves,

The Project is expected to produce 2.47 million ounces of gold over a 14-year mine life at a rate of 183 koz Au per year with a RoM All-In Sustaining Cost (AISC) of US$799/oz which can be subdivided into three phases:

1. Starter OP AISC (July 2020-2022): US$897/oz Au;
2. UG+OP AISC (2023-2027): US$794/oz Au; and
3. Ending OP AISC (2028-2033 EOM): US$800/oz Au.

Competent Persons

The Mineral Resource estimates have been prepared under the supervision of J. Moore. Information regarding metallurgy or mineral processing has been prepared, verified and approved by D. Carr. The open pit Mineral Reserves have been prepared under the supervision of F. Rodrigues and the underground Mineral Reserves have been verified and approved by J. Poeck. The open pit and underground mining costs and economic evaluation have been prepared under the supervision of T. Cooney.

Each of D. Carr, T. Cooney, J. Moore, J. Poeck, and F. Rodrigues have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’ and consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

Messrs Carr, Cooney and Moore are full-time employees of the Company’s subsidiary, OceanaGold Management Pty Limited. Mr Carr is a member and Chartered Professional of the AusIMM. Mr. Moore is a member and Chartered Professional of the AusIMM (Geo), and Mr Cooney is a member and Chartered Professional of, the AusIMM (Min).

J. Poeck is a registered member of the SME and a QP member of the MMSA. F. Rodrigues is a member of AusIMM and a QP member of the MMSA. Both are full time employees of SRK.

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 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	Reverse Circulation (RC) and Diamond Drilling (DDH) samples are used for the resource estimates at Haile. Since OceanaGold's ownership, resource sampling has been exclusively by diamond core drilling. Historical drilling prior to 2007 accounts for approximately 30% of the data. The sample procedures applied to the historical drilling (i.e. drilling prior to Romarco Minerals Inc.) at Haile were not well documented. Having said this, over three years of mining has tested the veracity of the resource estimates which are based on this data. No material flaws have been identified. There were however six RC drill holes, located in the Snake open pit, that were found to be at odds with adjacent grade control sample grades as mining progressed. 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 all other RC drill holes meeting these criteria, were removed from the resource estimation database prior to EOY 2018 and remain excluded. Romarco has been drilling at the Haile project since 2007. The techniques described in this section reflect the procedures applied by Romarco and OceanaGold. Reverse Circulation Drilling The reverse circulation drilling at Haile typically uses 16 cm drill bits. Sample intervals were predominately 1.5m. The 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 to 19 ltr/min above the water table and decreases to 4 ltr/min when groundwater is encountered. Wet samples were bagged, drained and allowed to settle (aided by flocculent) before being transported to a storage facility for initial drying. Sample sizes were generally between 9 and 14 kg dry mass, representing a 11% to 17% split of the total sample mass. Lithological chip samples are retained in chip trays, labelled with the drill hole number and depth intervals in permanent marker. RC drilling has not been conducted at Haile since 2011. Diamond Drilling Diamond core drilling has been the sole drilling method for gold assays at Haile since 2012. Diamond drilling utilises wireline methods with HQ and NQ size core 63.5 mm and 48 mm core. Core is transferred from the core barrels to plastic core boxes at the drill rig by the driller. Core orientation is

Criteria	JORC Code Explanation	Commentary
		utilized for selected holes in about 50% of the holes. Core is broken as required to completely 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. Whole core is transported to the core shed for logging and cutting by OceanaGold Corporation (OGC) personnel. **Sample Preparation & Analysis** Core Samples The core is cleaned, measured, logged, photographed and cut at the on-site OGC core shed in Kershaw, South Carolina. All samples are handled and managed by OGC 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 geotech-hnical suite of data. 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 every 20th sample for QAQC. Core is sawed on-site with a rotary diamond saw. The saw is cleaned between each sample. The cooling water for the saw is not recycled. 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 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) Pulverize a 450 g sample (+/- 50 gm) to 85% passing 75 mesh 8) Clean the pulveriser between samples with sand and compressed air 9) Approximately 225 g of pulp sample is sent 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 1994 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 resource drilling since 2012 has been with core.
Drill sample recovery	- *Method of recording and assessing core and chip sample recoveries and results assessed.*	RC drilling was conducted prior to OceanaGold's ownership. No primary RC sample weights were recorded so RC recoveries cannot be directly calculated. However, 34,000 rotary split RC sub-

Criteria	JORC Code Explanation	Commentary
	• *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.*	samples were weighed by Romarco Minerals. Splitter ratio settings ranged from 8% to 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, 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 resource estimates to be low (a few per cent globally). Core drilling is by wireline methods and utilizes HQ and NQ size core 63.5 mm and 48 mm core. All drilling is conducted by OGC drillers using OGC-owned equipment. Core recoveries are measured at the core shed by the geotechnicians. Core recoveries typically range from 97 to 100%. There is no observed relationship between core recovery and grade. Core recoveries are typically less than 50% in the uppermost 5-15 m of each hole due to soft, crumbly saprolite in the surficial weathering zone.
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 OGC 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. All logging is recorded by geologists with tablets in standardised Excel files with a separate file for each drill hole. The data are stored on site and backed up daily. Excel files with geology logs are uploaded to the acQuire database. 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 18megapixel Canon 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.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	**On Site Sample Preparation** RC Samples RC sampling was carried prior to OceanaGold's ownership. OceanaGold does not use RC sampling for resource drilling at Haile. 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.

Criteria	JORC Code Explanation	Commentary
	- *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* - *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Samples followed one of two paths. Samples were weighed and poured through a Jones riffle splitter to reduce the size to roughly 2.7 kg 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, pyrite and deformation. Assay intervals for sampling are recorded in the Excel geology log after the hole has been logged. Interval lengths range from 1-3 m. Interval breaks 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 to 3 metre lengths produce bagged sample weights of 2-5 kg. These are considered adequate for the Haile deposits, which are primarily of the finely disseminated sediment-hosted style. Although coarse gold has been observed in drill core, it is rare and is not representative of the 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 operated by SGS. AHK Geochem (AHK) Once the samples arrive 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, Pulverize a 250 gm sample to 90% passing 150 mesh (0.106 mm), Ship about 125 gm of sample pulp for assay, Typically 30g aliquot for fire assay Kershaw Mineral Laboratory (KML) Once the samples arrived at KML, the following procedures are 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, Pulverize a 450 gm sample (+/- 50 gm) to 85% passing 140 mesh (0.106 mm), Approximately 225 gm of pulp sample

Criteria	JORC Code Explanation	Commentary
		is sent for fire assay, Coarse rejects and reserve pulps are returned to Haile for storage. Typically 30g aliquot for fire assay Coarse gold is present but rare at Haile. The sampling methodology is believed to be appropriate for the style of mineralisation.
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	All assay data are stored in a secure acQuire database. Data are stored as received with no adjustment made to the returned data. Geologists do not have the ability to adjust gold assays, which are managed by an off-site OceanaGold database manager. After crushing and pulverizing at the prep lab in Tucson, AZ, pulps are trucked to the ALS Reno, Nevada laboratory for gold analysis. Some holes are composited and analysed for carbon, sulfur and multi-elements using Leco and ICP methods respectively. ALS labs used for Haile OGC samples are ISO 17025 certified. Assays are based on a 30 g fire assay aliquot for gold with Atomic Absorption finish <3 g/t Au and gravity finish >3 g/t Au. Blanks and standards are inserted every 20th sample. All Exploration samples are assayed at ALS. Check assays are submitted to the SGS lab in Kershaw, SC, for 5% of the intervals each quarter. Assays are duplicated for >95% of the samples within 5% of their original assay.
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 - A large number of spot checks of paper records versus database entry in 2018 / 2019 A -5% adjustment has been made to all pre-Romarco RC drill hole sample grades as a precautionary measure. Due to their clustered distribution and that there are a significant proportion of Romarco RC drill hole samples and diamond core samples, this has had a very minor impact (approximately 2% globally). Over time, as mining progresses, this adjustment may be discontinued. As a precautionary measure, where RC recoveries are low (based upon back-calculated rotary splitter weights) and sampled at depth (>200m), factors 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 resource estimates to be low (approximately 2%). Quarterly analysis and reporting of QAQC drill hole data by OGC geologists has confirmed excellent precision and accuracy of results with no evidence of sample contamination. 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 RockLabs

Criteria	JORC Code Explanation	Commentary
		are inserted every 20th sample. All blanks and CRMs are handled by the Geotech Supervisor and are stored in the locked OGC office.
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 South Caroline State Plane Coordinates 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 40m x 40m drill hole spacing, this is not considered to be a material issue for the open pit resource estimates. The underground resources are based on diamond core drilling with good survey control. All holes drilled since 2008 are surveyed for deviation using OGC-owned tools manufactured by Reflex. Downhole survey tools are calibrated at the Reflex factory in Tucson, AZ annually. Holes are surveyed by drill supervisors and geotechnicians using a Reflex multi-shot camera every 5 m. Down hole survey data are reviewed and verified by an OGC geologist for deviation and magnetic intensity. All holes have been accepted for deviation and uploaded to the acQuire database. Topographic control has been established to a high level of precision. Resource estimation and mine planning relied on contour maps with 0.6m contour intervals. 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 resource estimates. Further refinements are unlikely to be material.
Data spacing and distribution	- *Data spacing for reporting of Exploration Results.* - *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* - *Whether sample compositing has been applied.*	The drill hole spacing for the Haile open, whilst approximating 40m x 40m, is variable due to the limited rig access that was available prior to the commencement of mining. The wetland environment necessitated collaring a number of variously angled holes off single pads resulting in a complex fanned drill hole distribution. The estimation approach adopted has mitigated the impacts of irregular drill hole spacing. Whilst the enveloping geometry of the mineralisation is not untowardly complex in relation to the drill hole spacing, high grade internal pods tend to exhibit considerable local variability on a 10m scale. This has resulted is some short-term reconciliation disparities (positive and negative), but the impact diminishes over longer periods. 3m downhole compositing is used.

Criteria	JORC Code Explanation	Commentary
		MIK is well suited to this style of mineralisation, and despite variable spacing, has provided acceptable estimates for periods of greater than 4 to 6 months. The resource classification fairly reflects the underlying drill hole spacing and mineralisation characteristics. For open pit resources: 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 resource classification. For Horseshoe underground: Indicated: 25m x 25m, Inferred: 35m x 35m For Palomino underground: Inferred: 40m x 70m
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 mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	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 to 60^{0} northwest. Drill holes are mostly angled at -40^{0} to -70^{0} southeast to intercept rocks roughly perpendicular to mineralised trends. Core intersection angles with foliation are mostly $50\text{-}80^{0}$. Drill holes deviate clockwise perpendicular to the northwest-dipping foliation at a rate of $1\text{-}3^{o}$ 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 OGC personnel. Access to the property is controlled by locked doors and cameras monitored by OGC 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.
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 checks in 2011 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

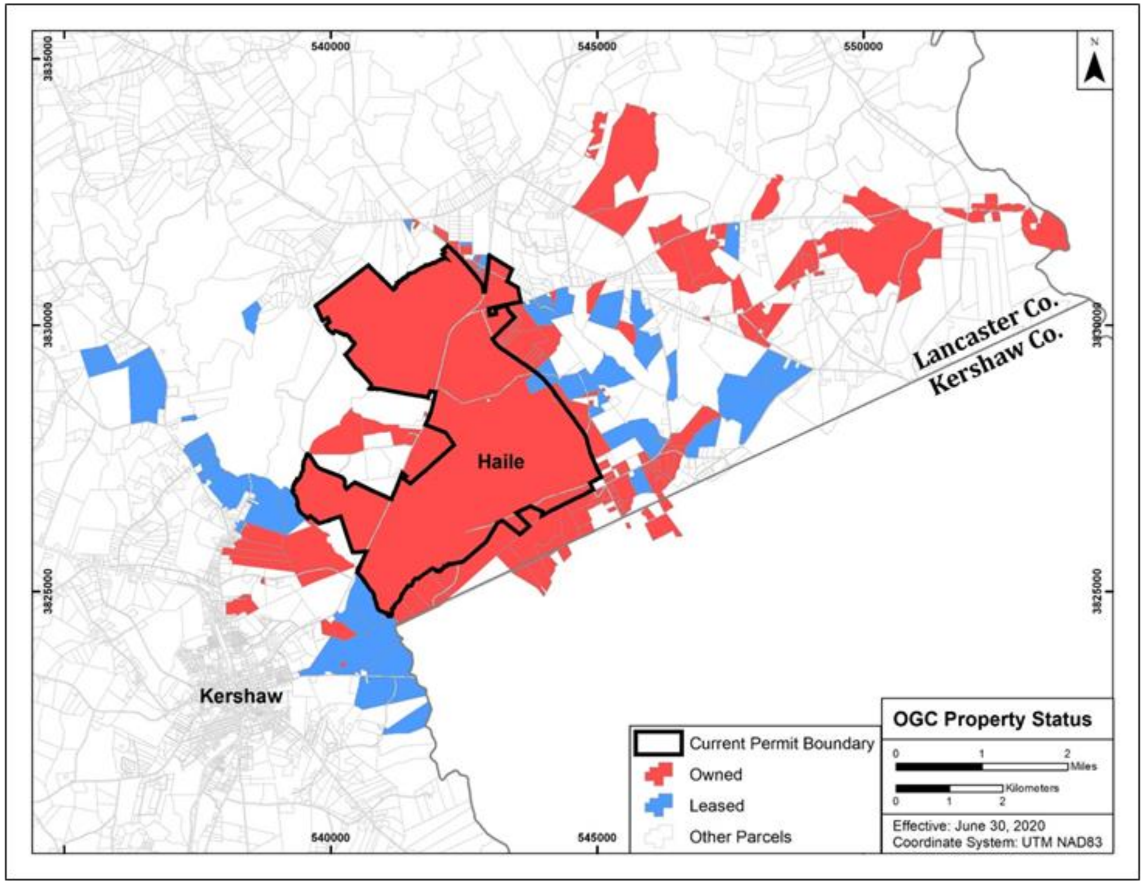
Criteria	JORC Code Explanation	Commentary
		Data, QAQC and methodology audits were performed by certified IMC consultants in 2011 and 2015. OGC internal data and model audits have been conducted by the OGC Chief Geologist and in November 2018 by an OGC and SRK audit committee. Collar coordinates, downhole surveys and assay certificates have been confirmed for drill hole data reported herein. Dr. Richard Tosdal, an independent geological consultant, verified geological and mineralization controls at Haile in September 2020.

Section 2 Reporting of Exploration Results

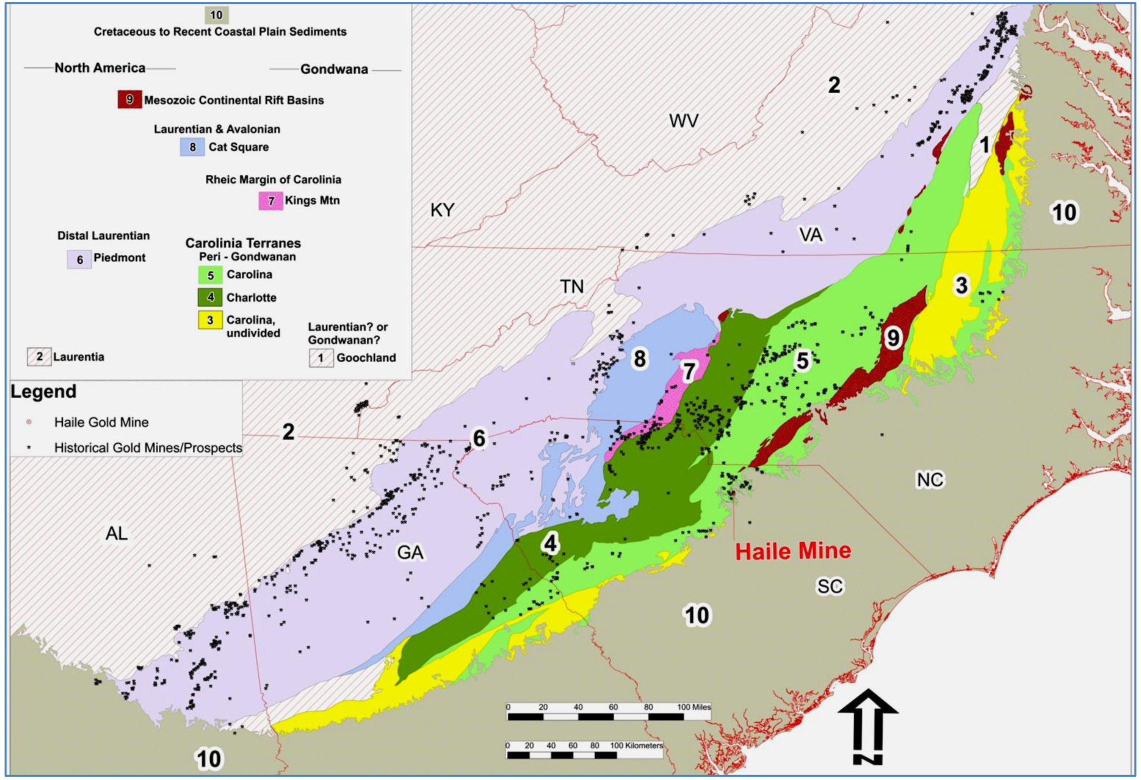
(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	The 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. Mineralized zones at Haile lie within an area extending from UTM NAD83 zone 17N coordinates 540000E to 544000E and 3825500N to 3827500N. The figure below shows a site map of the Haile Gold Mine.

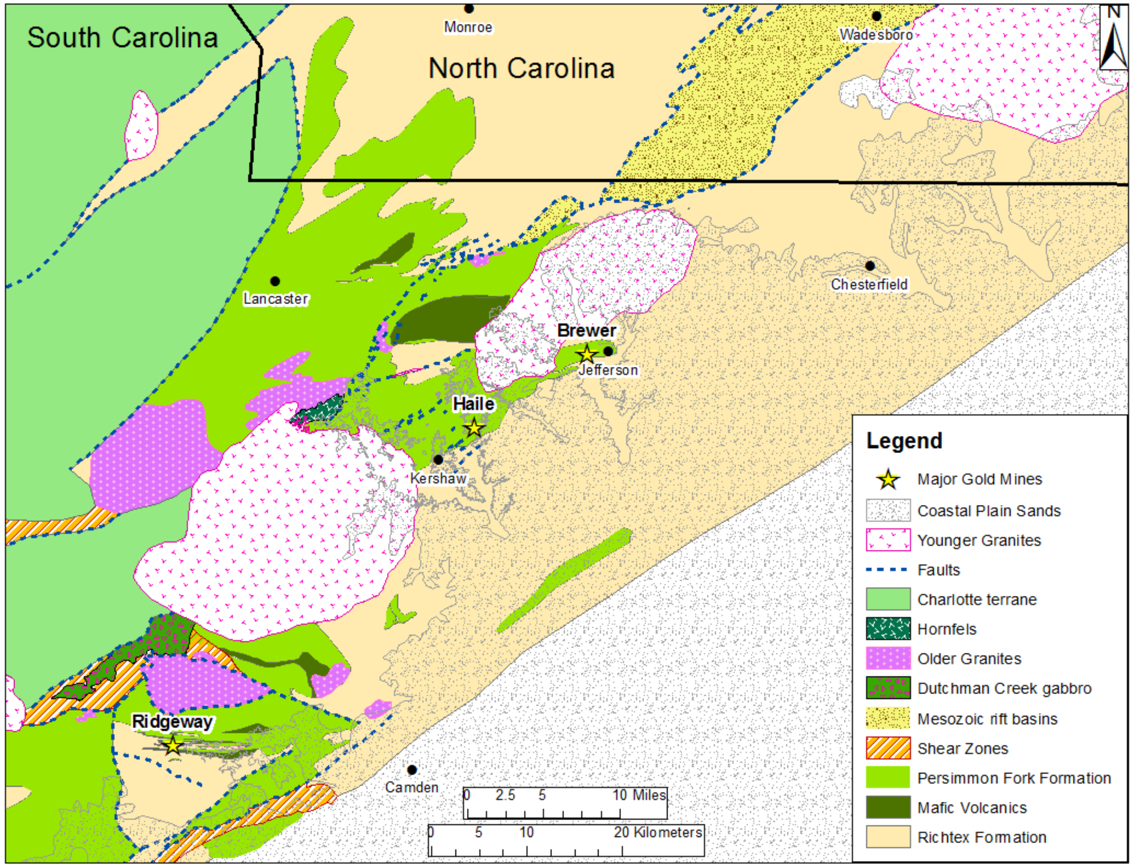
Criteria	JORC Code Explanation	Commentary
		 Source: OceanaGold **Site Map of the Haile Gold Mine. Background Imagery from Mar. 22, 2019**

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 June 30, 2020, HGM owns a total of 11,478 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 5,432 acres. SEIS approval is expected in Q4 2020. The figure below shows the Land Tenure map with Fee Simple (OGC owned) and leased properties, almost entirely in Lancaster County. . 

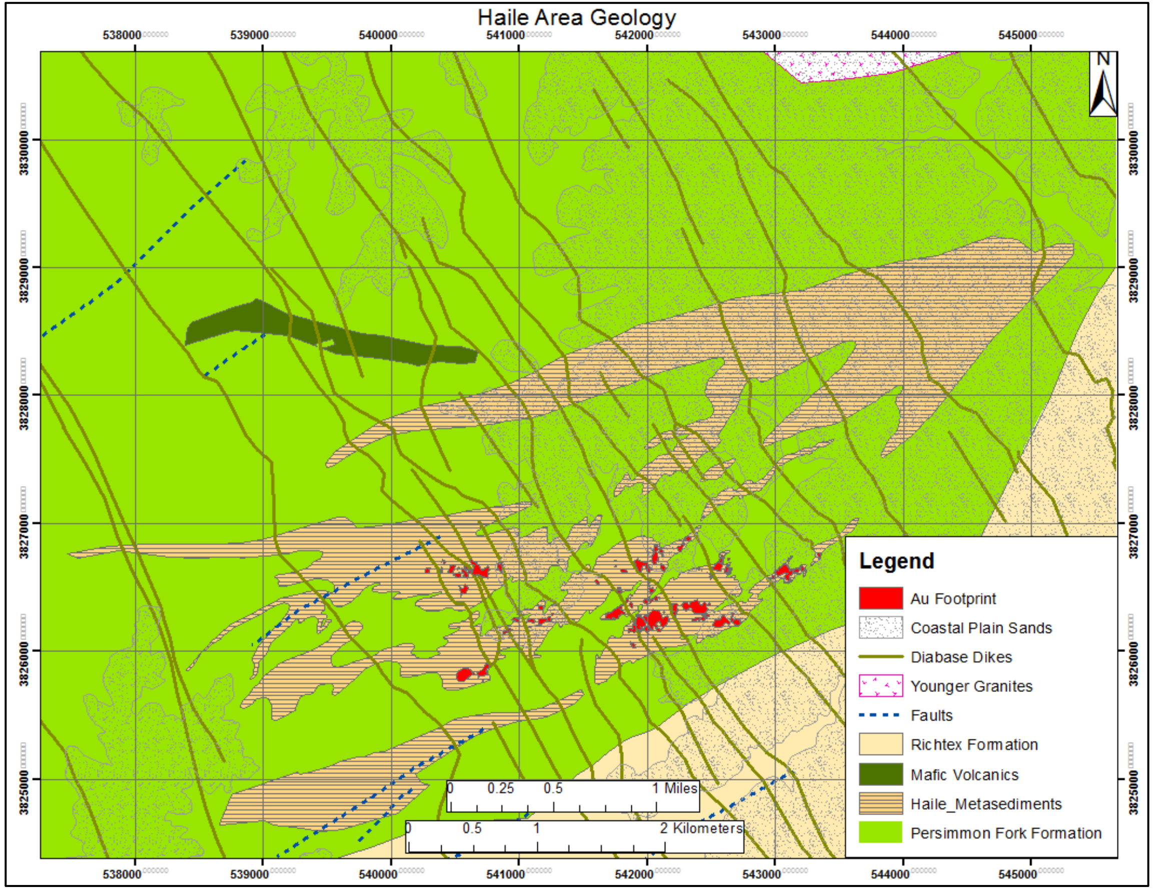
Criteria	JORC Code Explanation	Commentary
Exploration done by other parties	- *Acknowledgment and appraisal of exploration by other parties.*	Historic exploration was completed prior to acquisition of the Haile Gold Mine by Romarco, Cyprus Minerals, Amax, Piedmont, Westmont and others. Historical maps 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 northeast-trending Carolina Terrane, also known as the Carolina Slate Belt, which also hosts the past-producing Ridgeway, Brewer and Barite Hill gold mines in South Carolina. Haile is the largest gold deposit (4.2 Moz resource) in the eastern USA. The Haile district consists of nine en echelon gold deposits within a 3.5 km by 1 km area. Haile occurs within a variably deformed ENE-trending structural zone at or near the contact between metamorphosed Neoproterozoic volcanic and sedimentary rocks. Haile is hosted in laminated siltstones and 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. Gold mineralization dated at ~549 Ma (Mobley et al., 2014) slightly postdates peak volcanism and predates the most pervasive phase of deformation. Timing of gold mineralization coincides with a major tectonostratigraphic change from intermediate volcanism and tuffaceous sedimentation to basinal turbiditic sedimentation. Proximal quartz-sericite-pyrite alteration and distal carbonate-chlorite alteration are overprinted by regional greenschist facies metamorphism. Haile is classified as a low-sulfidation, sediment-hosted, disseminated, epithermal gold deposit. Haile is classified by OceanaGold geologists as a disseminated and structurally controlled, sediment-hosted, intrusion-related gold deposit with proximal quartz-sericite-pyrite-pyrrhotite (QSP) alteration and distal sericite-chlorite alteration. Haile is hosted by reduced, pyritic siliciclastic rocks with permeable volcanic caprocks. Haile is extensively folded and faulted with prominent ENE fabrics. The district is cut by younger granites and diabase dikes and is overprinted by regional greenschist facies metamorphism. The three figures below show location and regional and local geology plans for Haile.



Location Map of the Haile Gold Mine

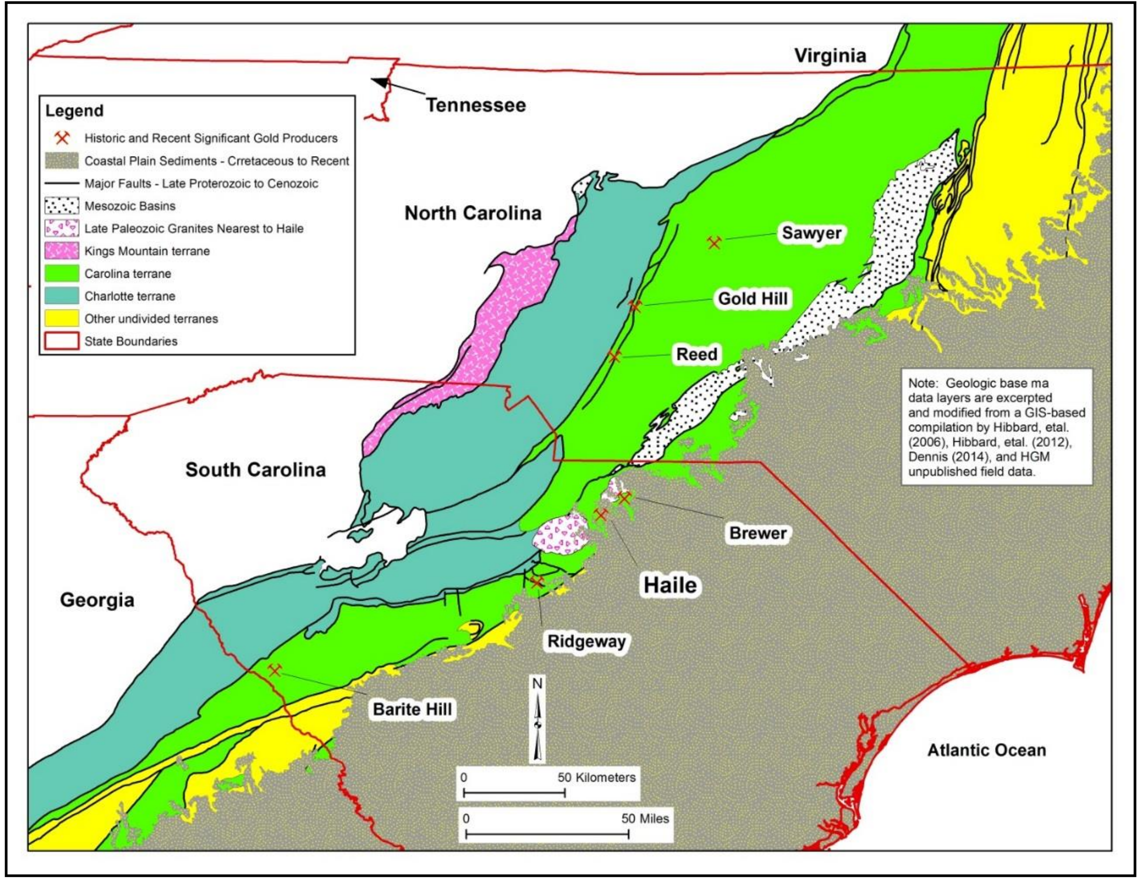


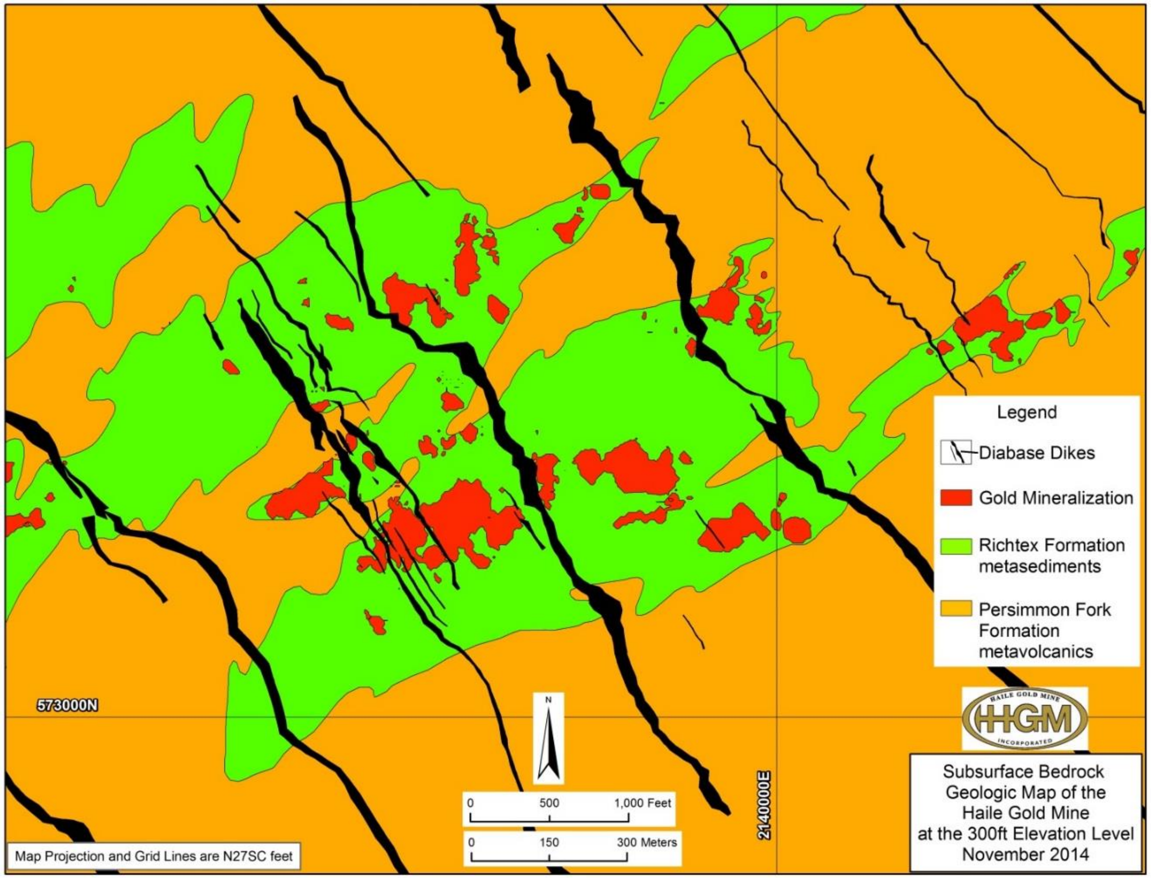
Simplified geology of north-central South Carolina

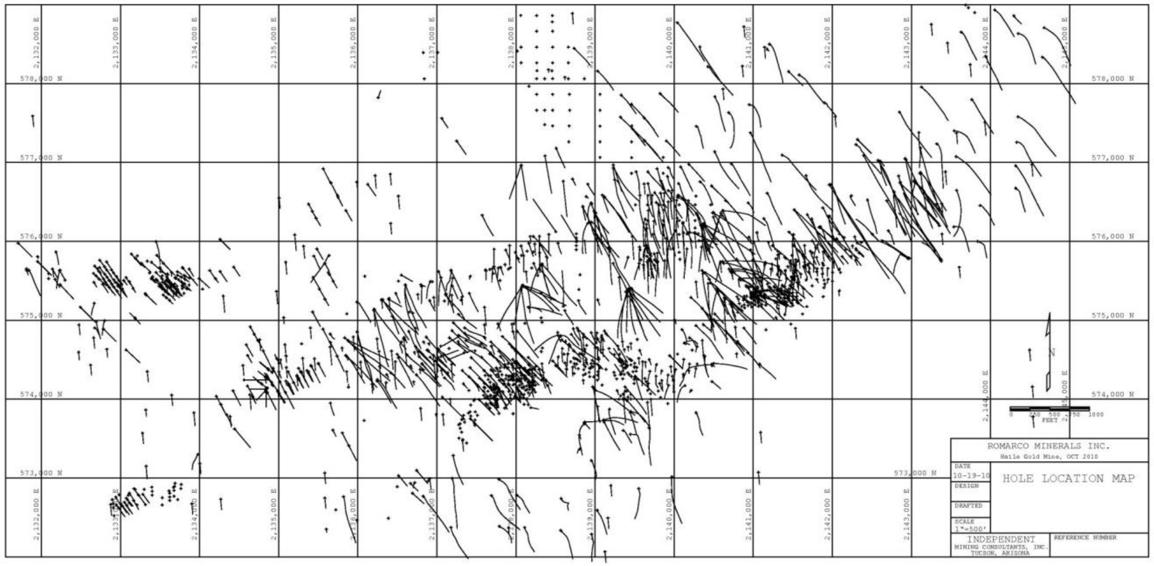
Criteria	JORC Code Explanation	Commentary
		 **Schematic Geologic Map of Haile Mine area**
		Key geologic events with ages in millions of years (Ma) include: • 580-550 Ma Carolina terrane volcanism & sedimentation, NE-trending • 550 Ma gold deposition & folding, dominantly ENE fold axes • 311 Ma Alleghanian orogeny – ENE-trending lamprophyre dikes, greenschist facies metamorphism, and ENE foliation • 300 Ma Alleghanian granite pluton emplacement & folding • 220 Ma Pangaea rifting – emplacement of NW-trending diabase dikes

Criteria	JORC Code Explanation	Commentary
		- 100 Ma – present Coastal Plain sands cover areas from Haile to the coast - Recent – weathering & saprolitization
Drill hole Information	- *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* - *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	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. 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 OGC Exploration office at Haile. Drill hole and core are boxed and stored on the OGC mine site.
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	- *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*	Drill intercepts are typically reported in down hole length from the drill collar. Most are 1.5m long assay intervals. 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.

Criteria	JORC Code Explanation	Commentary
intercept lengths	*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').*	

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 resource estimates completed.
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 (OGC) continues to drill in the district surround 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 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 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).*	OGC 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 resource estimates completed.

Criteria	JORC Code Explanation	Commentary
	- *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	

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 / early 2019. No material errors were identified.
Site visits	- *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* - *If no site visits have been undertaken indicate why this is the case.*	Jonathan Moore, MAusIMM (CP), is the Competent Person for open-pit resources. Mr Moore is employed by OceanaGold Ltd as Chief Geologist, based in Brisbane and has visited the Haile Gold Mine numerous times, most recently in January 2020.
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 hosted within the logged 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*	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-

<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr><td></td><td>*otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*</td><td>northeast (ENE). The corridor is approximately 1 km wide (NNW to SSE) and over 3.4 km 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.

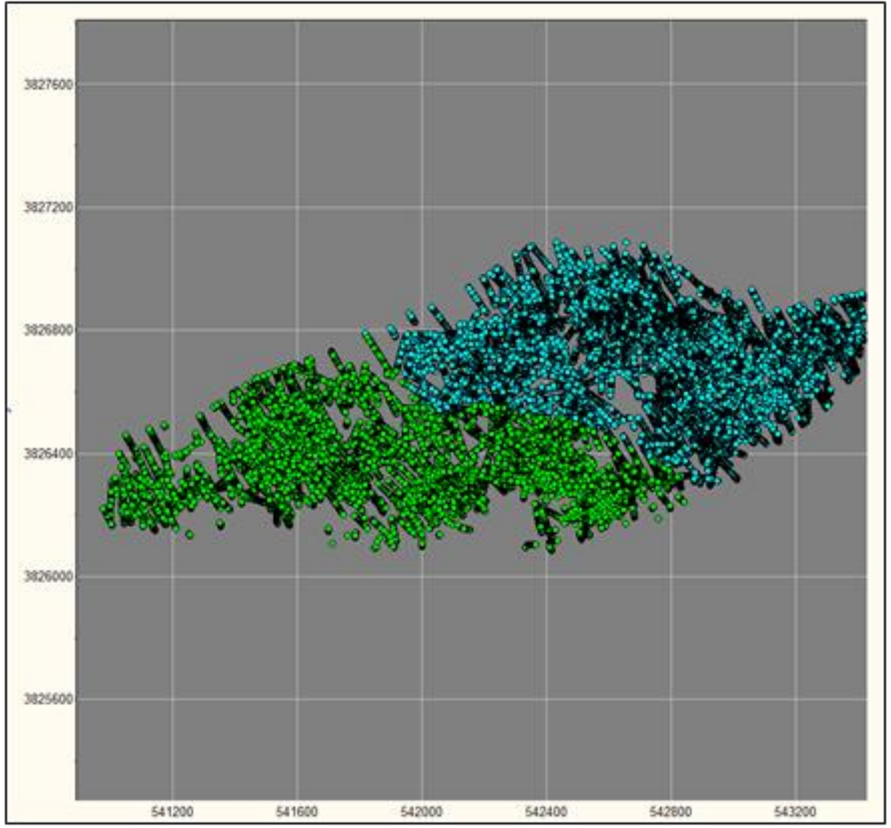
The mineralized zones at Haile are believed to be hosted along a gently northeast plunging antiform (trending approximately northeast to east-northeast). The interpreted dips of the ore zones range from 25° northeast at the western end of the property to steeply southeast at the eastern end of the known trend. In several areas, multiple mineralised zones exist.</td></tr>
<tr><td>**Estimation and modelling techniques**</td><td>• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*
• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*
• *The assumptions made regarding recovery of by-products.*
• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*
• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*
• *Any assumptions behind modelling of selective mining units.*
• *Any assumptions about correlation between variables.*
• *Description of how the geological interpretation was used to control the*</td><td>**Open Pit Estimate**
Drill hole data available in April 2020, up to and including DDH0996, were included in the HA0520OLM 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 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.

Sample Numbers for Gold, Sulphur and Carbon
<table>
<tr><th></th><th>Au</th><th>S</th><th>C</th><th>Ag</th></tr>
<tr><td>Count</td><td>376,522</td><td>63,238</td><td>31,400</td><td>14,418</td></tr>
</table>
Source: OceanaGold

Geologic Model Concepts
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 (Table 14-5). Faults have also been modelled. However, other than post-mineralisation dikes, and post-mineralisation erosion/deposition, there are few geological features that define mineralization boundaries at the economic cut-off grade.</td></tr>
</table>

Criteria	JORC Code Explanation	Commentary
	resource estimates. - *Discussion of basis for using or not using grade cutting or capping.* - *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	**Lithology** 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 building a resource model, these 150+ codes were reduced to a summary set of codes. The majority of mineralization is hosted within the metasediments and the lithological units are as follows: - S - sand - Sap - saprolite - MV - metavolcanics - DB - diabase dikes - Fill - back-fill from historical mining - Ml - laminated metasediments - Ms - silicified metasediments - Breccia - brecciated rocks **Silicification** 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 1.0 g/t and the very silicified (intensity 3) average grade increases to >2.0 g/t. The spatial gold to silicification relationship is strong, however, the silicified area is much larger than the gold. **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 mineralization. **Grade Domain Construction** Although both silicification and pyrite occurrence are qualitatively associated with gold mineralization, their relationships are not used for quantitative gold domain definition. Implicit modelling in Vulcan software was used to create a grade shell at a 0.065 g/t gold threshold. The grade threshold selection was optimized, 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 mineralized zones within domain 1 (blue in the figure below) have a dip direction of -40 toward 330, while in domain 2 (green) they dip -30 toward 335.

Criteria	JORC Code Explanation	Commentary
		 Source: OceanaGold **Estimation Domains** **Compositing** 2.5 m 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 6.1 m of drilling. **Assay Cap Values** 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. 2.5 m 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.

<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
Multiple Indicator Gold Class Thresholds and Means
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.
Indicator Gold Class Thresholds and Means
<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>98</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>
Source: OceanaGold
Variogram Analysis and Modeling
Variograms were estimated for gold for each indicator threshold. Variograms for carbon and Sulphur were estimated globally.
Block Model
The resource 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.
</td></tr>
</table>

Criteria	JORC Code Explanation	Commentary

Block Model Dimensions

Variable	East	North	RL
Minimum	539810	3825575	-800
Maximum	544510	3827725	200
Block Size (Parent)	10	10	5
No. of Blocks (Parent)	470	215	200

Source: OceanaGold

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 estimate silver.

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.

Criteria	JORC Code Explanation	Commentary

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

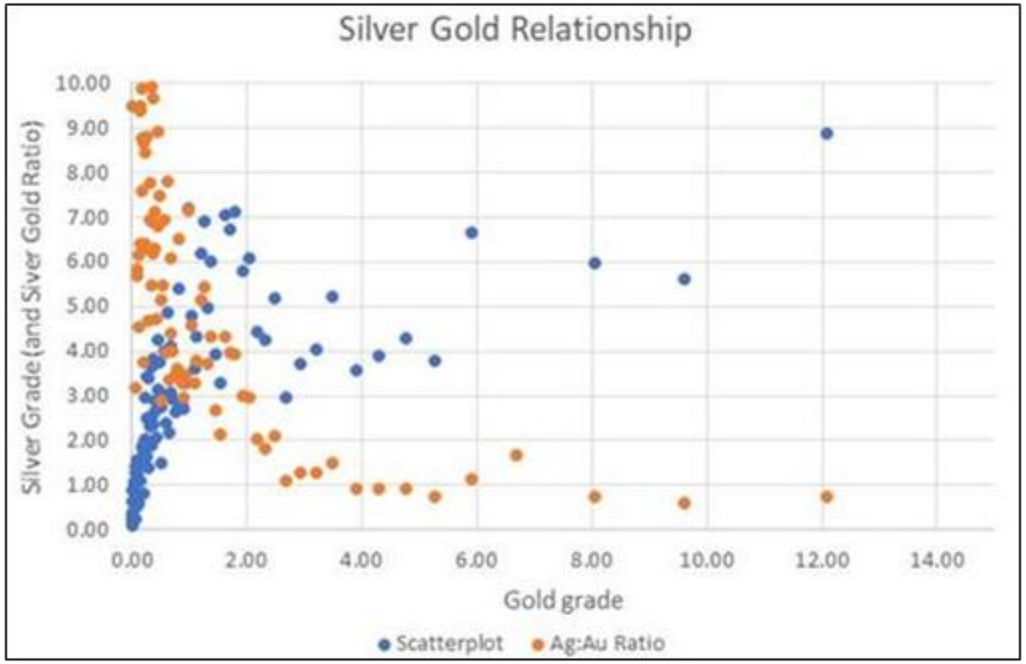
Source: OceanaGold

Estimation Methodology Silver

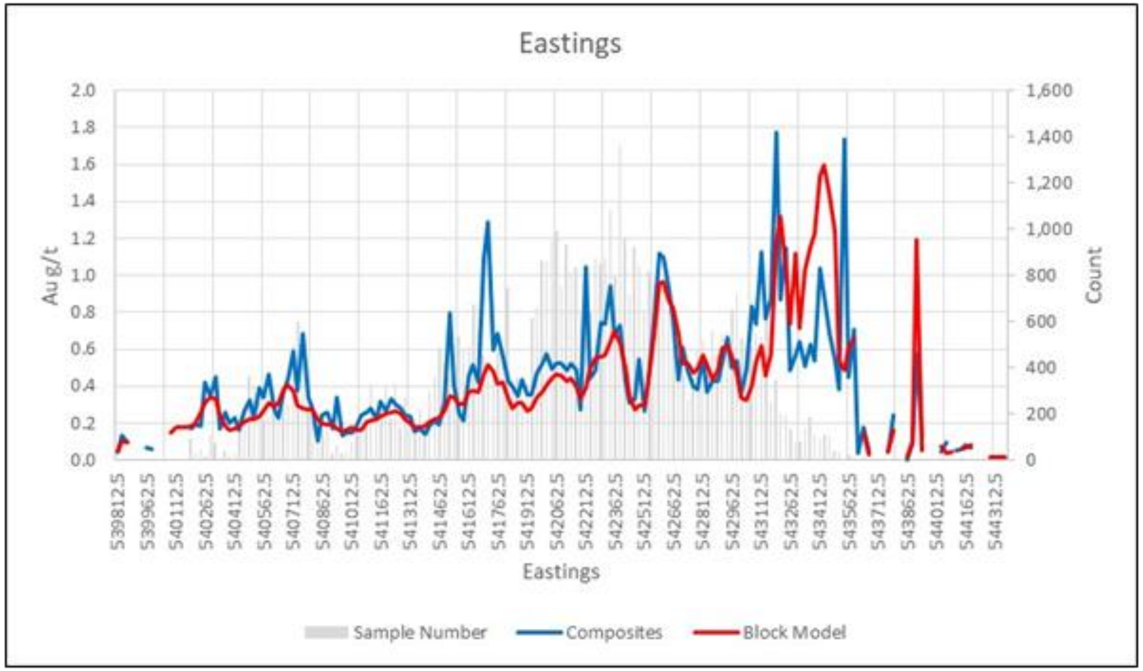
Silver estimates have been not been completed for the underground.

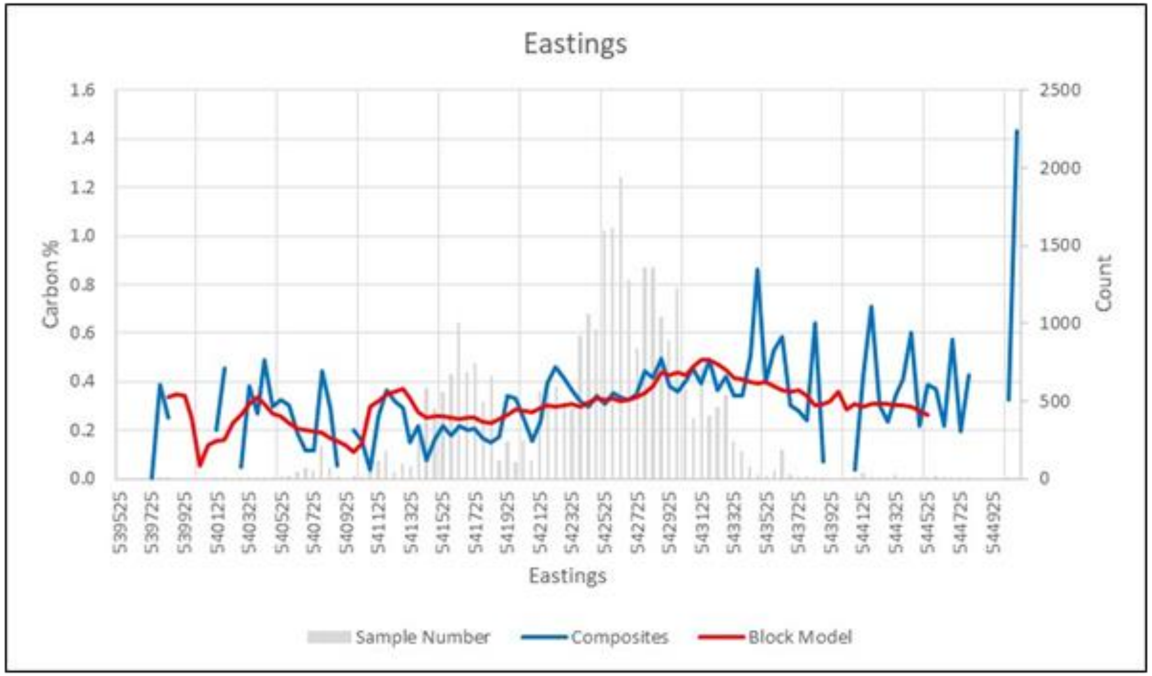
For the open pit, silver grade estimates are provided for metallurgical considerations (carbon stripping and electro-winning) as well as for revenue estimation, albeit silver contributes only about 1.5% of total revenue and so is not particularly material. Silver content is not used as a gold-equivalent 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 3 m composites for gold versus 5,551 x 3 m 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. Sample selection for silver assaying tended to favour more strongly gold-mineralised intervals, leaving less intensely mineralized intervals, on the flanks of the mineralization 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-

Criteria	JORC Code Explanation	Commentary
		ranked silver and gold grades, averaged for each percentile to highlight the underlying silver gold 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 2.36 g/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 1.84 g/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 9.9 g/t Ag was applied to both domains. The 95th percentile was selected to err on the side of conservatism.  Source: OceanaGold

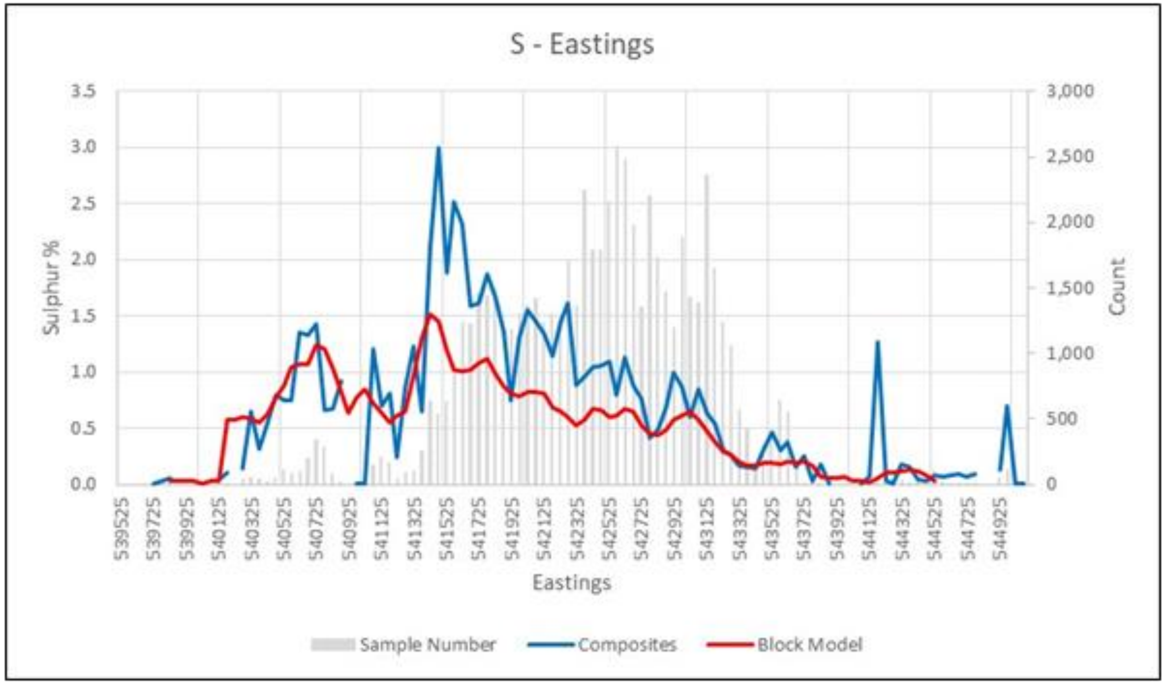
<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
<p>Silver Gold Relationship for Gold-Ranked Percentile-Averaged Grades
Silver domains and search orientations were the same as used for gold. Given the low number of original silver assays, ordinary kriging was used.</p>
<p>For mining to-date the resource-estimated silver to gold ratio is 1.15. Processing plant metallurgical accounting estimates a silver gold ratio of 1.04. The resources estimate is within acceptable limits (11%).</p>
<p>The silver estimation methodology described above is considered to be appropriate for the purposes of silver by-product estimation.</p>
<p>SG
In situ density determinations have been carried out by OGC personnel at regular intervals of 10 to 20 meters on drill core. The density database contains over 44,000 measurements. The immersion/displacement method involves weighing the sample both in air and in water. Scales are calibrated daily. Average measurements were used for each lithology. SG values were assigned to model blocks based on geological coding rather than estimated as a continuous variable. Density data have been evaluated and grouped based on rock type and oxidation, and are summarised in the table below.</p>
<p>SG Assignment</p>
<table>
<tr><td colspan="8" rowspan="3">SG 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">SG 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>Oxidized</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>Oxidized</td><td>Fresh</td><td>Oxidized</td><td>Fresh</td></tr>
<tr><td>2.57</td><td>2.78</td><td>2.49</td><td>2.76</td></tr>
</table>
<p>Source: OceanaGold</p>
<p>Resource Classification
Resource classification was assigned by Vulcan script according to the search criteria for each domain and estimation pass tabulated in Table 144. That is, search distance and minimum sample numbers (limited to maximum sample numbers per hole with pass 1 = Measured, pass 2 = Indicated, pass 3 = Inferred).</p>
</td></tr>
</table>

Criteria	JORC Code Explanation	Commentary
		Model Validation Numerous methods have been used to validate the HA0520OLM 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 The swath plots in the figures below compare 2.5 m bench composite grades to the estimated block grades for gold, carbon, Sulphur and silver respectively.  Source: OceanaGold

Criteria	JORC Code Explanation	Commentary
		Swath Plot with Mean Composite Gold Grade vs HA0520OLM Block Values Carbon and Sulphur were estimated from raw drill hole data because of the lack of data relative to the gold and silver data sets. Swath plots for carbon and Sulphur are shown in Figure 14-5 and Figure 146.  Source: OceanaGold

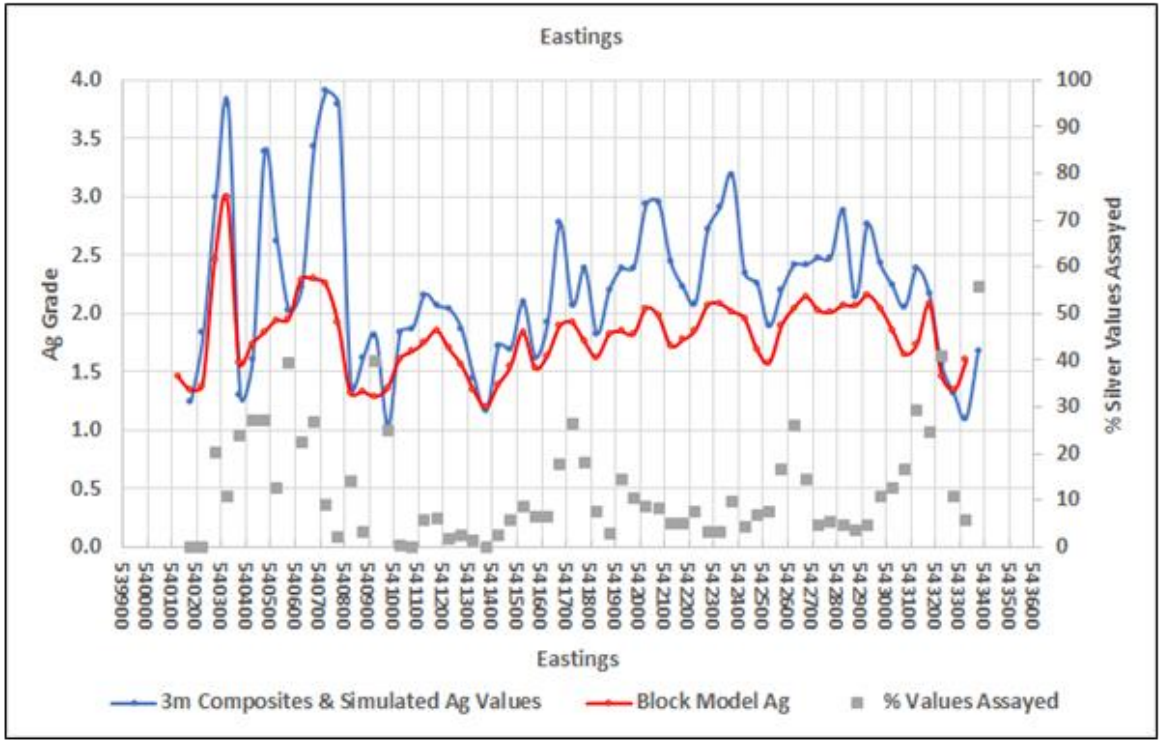
<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>

Swath Plot with Mean Composite Carbon Grade vs HA0520OLM Block Values



Source: OceanaGold

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

Criteria	JORC Code Explanation	Commentary
		Swath Plot with Mean Composite Sulphur Grade vs HA0520OLM Block Values  Source: OceanaGold **Swath Plot with Mean Composite Silver Grade vs Block Values** As a gold estimation methodology check, an independent large panel recoverable resource estimate using MIK was constructed and compared to HA0520OLM 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.

Criteria	JORC Code Explanation	Commentary
		Resource Model Reconciliation The table below summarizes the resource model reconciliations for 2018, 2019 and 2020 to-date (30 June). Based upon resource model to mine to mill reconciliation data for 2018, 2019 and 2020 to-date (30 June), the resource estimates performance varies from year to year but overall the estimates are within 2% for tonnage, grade and contained gold and reflect acceptable long-term model prediction. On this basis, the long-term predictions based upon the open pit resource estimates are acceptable for mine planning purposes.

Resource Model Reconciliation

Period	tonnes	grade	gold
2018	0.90	1.13	1.02
2019	0.96	0.99	0.96
H1 2020	1.22	0.92	1.13
Total	**0.99**	**1.02**	**1.01**

Source: OceanaGold

Mineral Resource Statement

The table below summarizes the resulting open pit resources. A US$1,700/oz shell was used with a cut-off of 0.45 g/t.

Open Pit Total Mineral Resources as of 30 June 2020

Class	Tonnes (Mt)	Au Grade (g/t)	Contained Au (Moz)	Ag Grade (g/t)	Contained Ag (Moz)
Measured	3.2	1.35	0.14	2.61	0.27
Indicated	52.3	1.53	2.57	2.40	4.04
Measured & Indicated	**56**	**1.52**	**2.71**	**2.41**	**4.30**
Inferred	7.6	1.0	0.2	1.32	0.32

Source: OceanaGold

- Cut-off grade 0.45 g/t Au based on a gold price of US$1,700/oz.
- Open pit resource is reported within a US$1,700/oz optimized 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.
- The open pit Mineral Resources were estimated under the supervision of Jonathan Moore, MAusIMM CP(Geo), a Qualified Person.

Criteria	JORC Code Explanation	Commentary
		The reader is cautioned that Inferred Mineral Resources are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is no certainty that the Inferred Mineral Resources will be realized or that they will convert to Mineral Reserves. **<u>Underground Mineral Resource Estimate</u>** **<u>Horseshoe</u>** The Horseshoe resource estimation is based on the current drill hole database, interpreted lithologies, geologic controls and current topographic data. The resource estimation is supported by drilling and sampling current to April 22, 2020. Gold estimation was constrained within implicitly modelled grade shells, approximating a 1 g/t gold indicator. The 1 g/t Au threshold was selected to be sufficiently below the reserve reporting cut-off grade of 1.44 g/t Au to minimize conditional bias. Model blocks with centroids outside the 1 g/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 10 m E x 10 m N x 10 m Rl blocks (sub-blocked to 5mE x 5mN x 5mRl) using Ordinary Kriging with 3 m composites. Densities based upon core analyses were assigned by rock type. **Horseshoe General Geology and Geologic Model** The Horseshoe deposit is the highest grade and easternmost known gold deposit in the Haile district. Mineralization extends over a vertical distance of 350 m, however, the deposit footprint is only about 200 m x 120 m. The top of the deposit is about 120 m below surface. The deposit is one of several siltstone-hosted deposits located near the steeply SE-dipping contact with metamorphosed volcanic rocks of the upper Persimmon Fork Formation. Horseshoe is a Neoproterozoic gold deposit characterized by strong silicification, 1-5% pyrite, and a halo of 0.5-1% 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 mineralization 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 mineralized. 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 Mineralization** Mineralization 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

Criteria	JORC Code Explanation	Commentary

siltstone-dacite contact, however, the upper zone dips about 40^0NW and the lower zone is near-vertical. The upper zone NW-dipping high-grade lenses of mineralization are focused along bedding-parallel foliation with intense silicification. The Horseshoe fault (NE strike, 40^0NW 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 mineralization in lower Horseshoe have not been fully delineated by drilling.

Horseshoe Density

Model densities are based on domain averages, as shown in the table below. The model densities were assigned through a combination of lithology, oxidation, and an ore/waste threshold. The SG was assigned for each lithology type. In-situ density determinations have been carried out at regular intervals on several drill core samples. The method involved weighing the sample both in air and in water. The measurements were then averaged for each lithology.

Densities Assigned in the Block Model

<table>
<tr><td colspan="8" rowspan="3">SG Assignment Criteria</td><td colspan="4">Criteria for Ore vs. Waste</td></tr>
<tr><td colspan="4">Ore = Inside Gold Shell</td></tr>
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<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>
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<tr><td>2.57</td><td>2.78</td><td>2.49</td><td>2.76</td></tr>
</table>

Source: OceanaGold

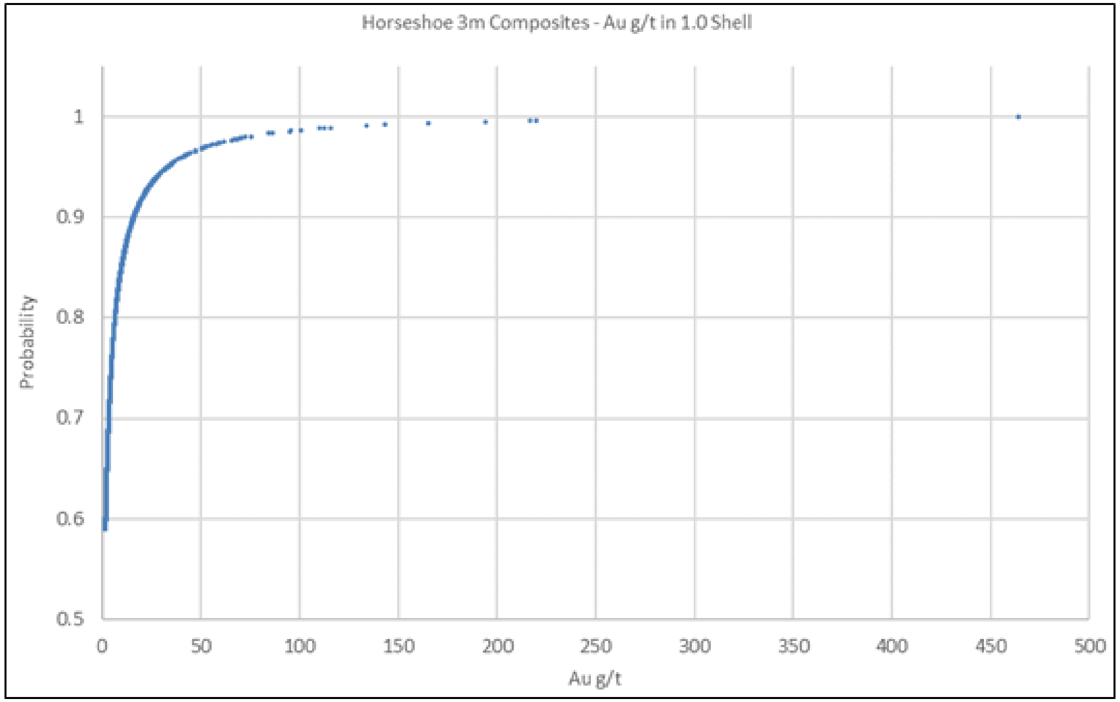
Horseshoe Sample Database

The April 22, 2020 database contains information from 3,285 diamond core and RC drill holes see the table below. Romarco discovered the Horseshoe deposit in 2011 and drill widely spaced holes at 30 to 60 meters 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 resource area. Of these, 74 drill holes intersected the 1 g/t grade shell and, the remainder were outside the shell.

Horseshoe Compositing and Top Capping

Compositing was completed in Vulcan software to 3-m downhole lengths with no breaks at lithologic contacts. The 3 m length was chosen to reflect the low degree of mining selectivity and the absence

<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
<p>of any visual features that coincide with the 1 g/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.</p>
<p>The table below summarizes the statistics of 3 m composites within the 1 g/t Au indicator shell. Sample localities without gold assays were assigned 0.0 grades unless belonging to drill holes with pending assays results.</p>
<p>Basic Statistics for 3 m Composites Within 1 g/t Au Indicator Shell</p>
<table>
<tr><th></th><th>Sample Stats</th></tr>
<tr><th></th><th>Au</th></tr>
<tr><td>Count</td><td>1,194</td></tr>
<tr><td>Min</td><td>0.005</td></tr>
<tr><td>Max</td><td>149</td></tr>
<tr><td>Mean</td><td>4.63</td></tr>
<tr><td>CV</td><td>2.13</td></tr>
</table>
<p>Source: OceanaGold</p>
<p>Statistical analysis of the original drill hole sample data has resulted in a capping value of 100 g/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 3-m downhole lengths with no breaks at lithologic contacts. The 3 m length was chosen to reflect the low degree of mining selectivity and the absence of any visual features that coincide with the 1 g/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.</p>
</td></tr>
</table>

Criteria	JORC Code Explanation	Commentary
		 Source: OceanaGold **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^{o} mineralization direction with the long axis. Details of the rotation, and block model limits of the OceanaGold resource 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 mineralization. The HUG local grid is based on a 30° clockwise rotation around 3,824,000 m N and 541,000 m E, with a 1,000 m adjustment to elevations as shown in the table below. Elevations were increased by 1000 meters relative to sea level to remove negative values.

Criteria	JORC Code Explanation	Commentary

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

Source: OceanaGold

The origin, limits and block sizes are listed in the table below.

Block Model Dimensions and Origin

Variable	X	Y	Z
Minimum	3,300	900	620
Maximum	3,920	1,600	1,200
Block Size (Parent)	10	10	10
Sub-block size	5	5	5
No. of Blocks (Parent)	62	70	58

Source: OceanaGold

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 1 g/t Au threshold guided by interpreted trend planes of mineralization. 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 mineralization utilized two trend planes which essentially represent the hanging wall and footwall of mineralization. The lower zone utilized two additional trend planes.

As described above, the gold mineralization 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 utilized in the ordinary kriging gold grade estimation.

Criteria	JORC Code Explanation	Commentary

The grade estimations utilize 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

Au Grade Estimation Search Distances

Estimation Domain	Estimation Pass	Search Range (m) (X, Y, Z)
Upper	1	60,20,10
	2	300,100,50
Lower	1	60,60,60
	2	210,210,210

Source: OceanaGold

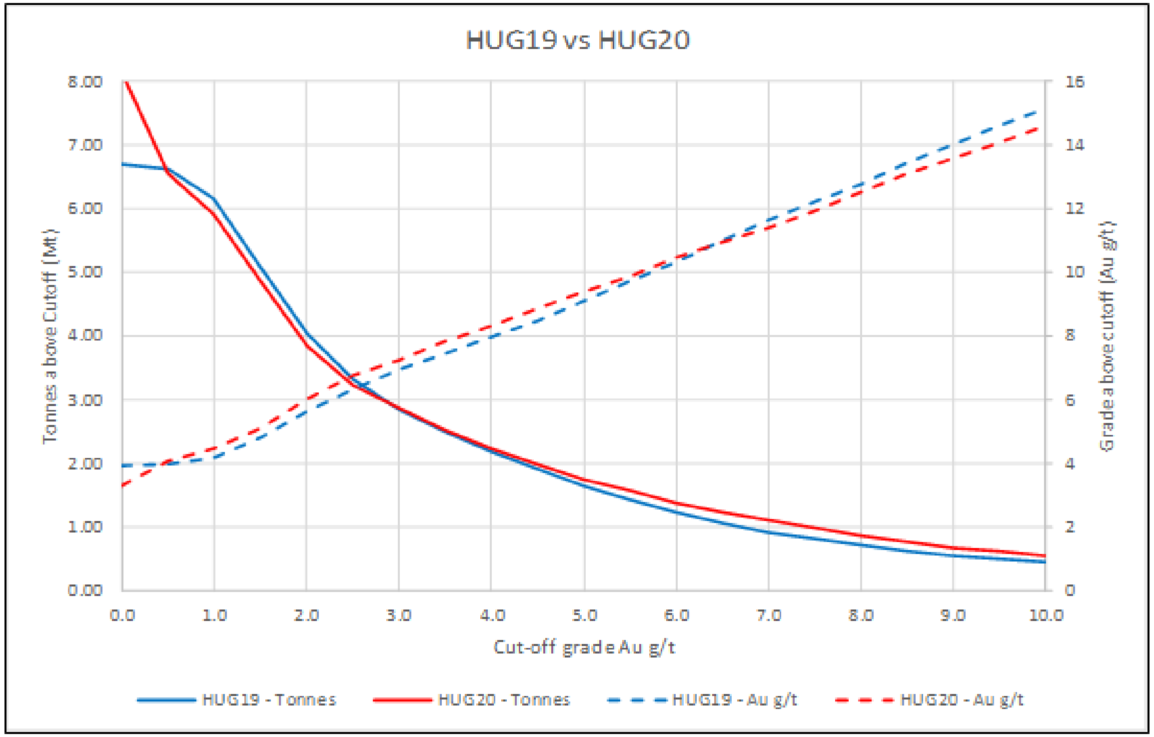
Ordinary Kriging Parameters

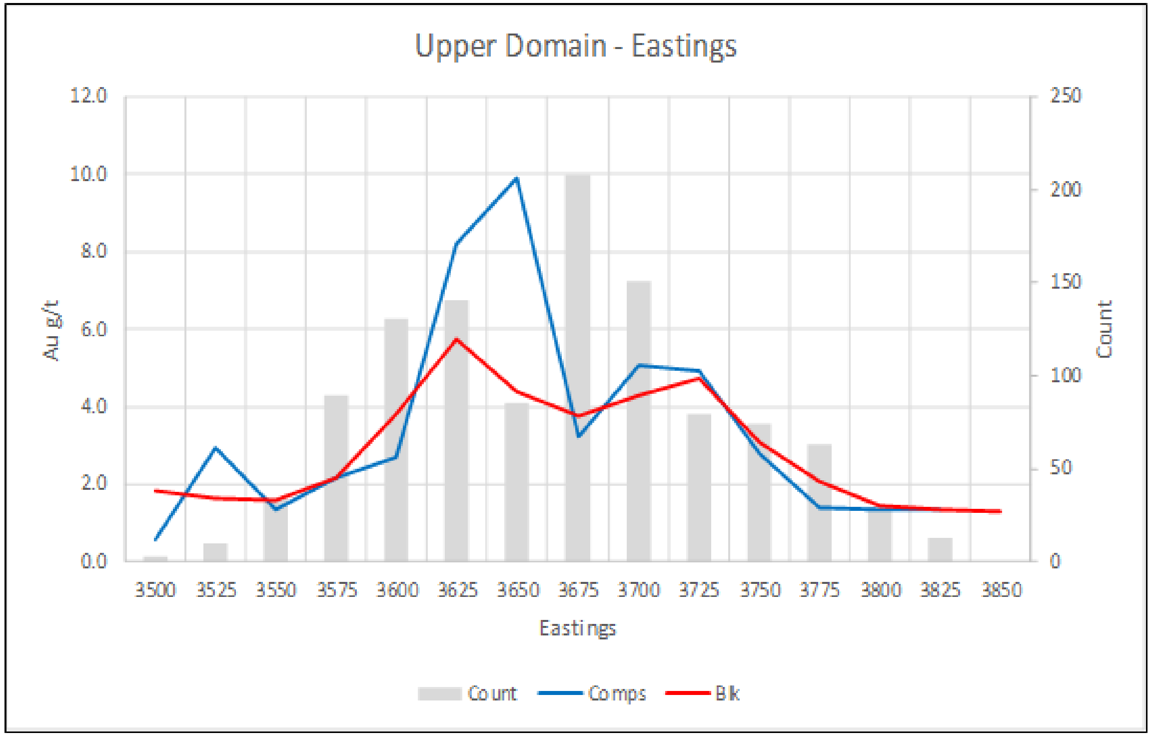
Estimation Domain	Variogram Structure	Nugget	Sill Differential	Rotations (Vulcan, X, Y, Z)	Ranges (m) (X, Y, Z)
Upper	1st Spherical 2nd Exponential	0.3	0.3 0.7	20°, 0°, 75° 20°, 0°, 75°	15,12,9 65,30,15
Lower	1st Spherical 2nd Exponential	0.3	0.42 0.32	Isotropic	12,12,12 105,105,105

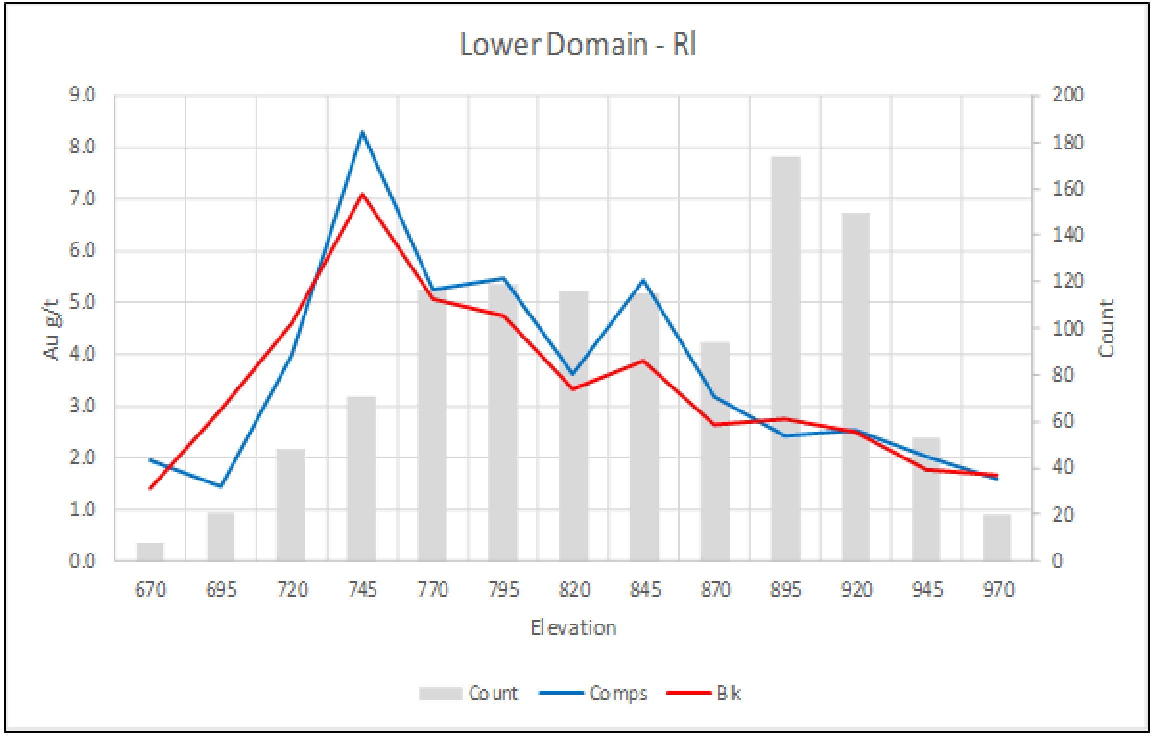
Source: OceanaGold

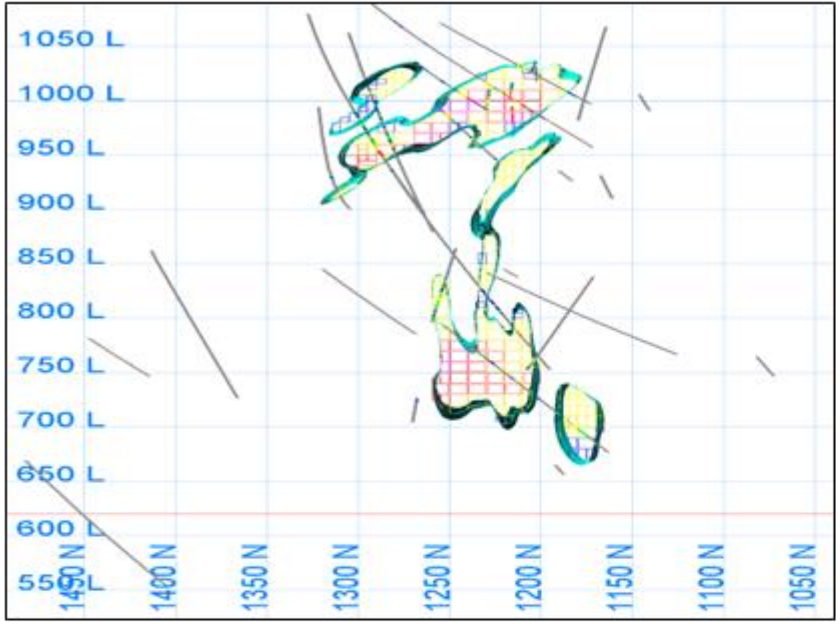
Horseshoe Model Validation

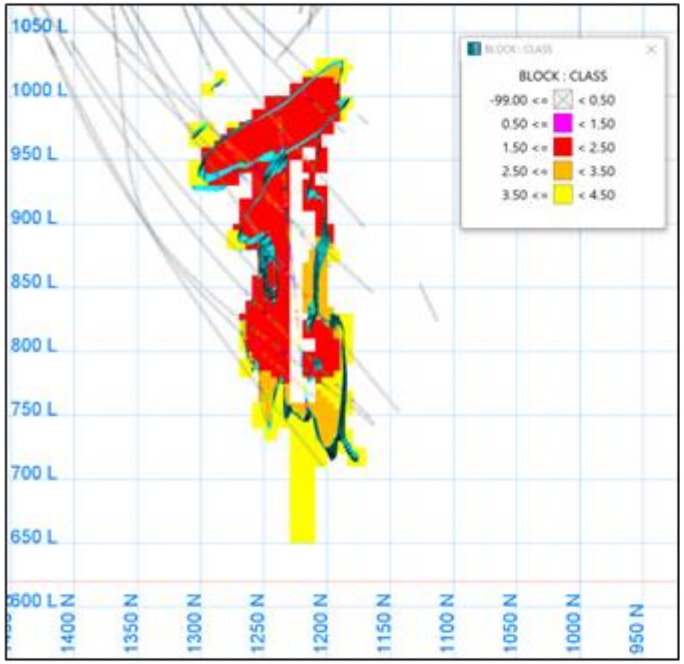
Several techniques were used to evaluate the validity of the block model. All new drilling and lithological mapping data were visually validated. QA/QC was performed on drilling data as per database procedures, and visual validation of lithological logging was performed on new drill holes. A visual review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

Criteria	JORC Code Explanation	Commentary
		was performed, to compare with previous versions and to drill hole lithological logging. The methodology used for the resource modelling was reviewed, to ensure industry 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 resource model (HUG19), in terms of grade, tonnages and contained metal. The figure below compares estimates and reveals very little change.  Source: OceanaGold

Criteria	JORC Code Explanation	Commentary
		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 3650 m E is related to the relatively low number of composites at that Easting.  Source: OceanaGold

Criteria	JORC Code Explanation	Commentary
		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.  Source: OceanaGold

Criteria	JORC Code Explanation	Commentary
		Lower Domain Rl Swath Plot The figure below shows a representative cross section of the gold estimation results.  Source: OceanaGold **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 resource reporting tables are based on this estimation. **Horseshoe Resource Classification** Mineral Resources are classified as Indicated and Inferred in accordance with CIM guidelines. There are no Measured Resources. Classification of the Mineral Resources reflects the relative confidence of the grade estimates and the continuity of the mineralization. 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

Criteria	JORC Code Explanation	Commentary
		Resources. The figure below shows a representative cross section of the resource classification, with indicated in red and inferred in orange. Yellow blocks are unclassified. Blue is the 1.0 g/t grade shell.  Source: OceanaGold **Representative Cross Section Showing Resource Classification (Viewing N90°E)** **Horseshoe Mineral Resource Statement** The Horseshoe Mineral Resource statement is based on the OK model as presented in the table below. A Cut-off grade of 1.26 g/t Au has been applied without constraint within any conceptual design. The Cut-off grade assumes underground mining methods and is based on a mining cost of US$45/t, milling cost of US$9.69/t, administration cost of US$3.2/t, a gold price of US$1,700/oz, and a gold recovery of 88%.

Criteria	JORC Code Explanation	Commentary
		(see below)

Horseshoe Underground Mineral Resource Statement as of June 30, 2020

Class	Tonnes (Mt)	Au Grade (g/t)	Contained Au (Moz)
Measured	0.0	0.00	0.00
Indicated	3.3	4.95	0.53
Measured & Indicated	**3.3**	**4.95**	**0.53**
Inferred	2.1	4.4	0.3

Source: OceanaGold

- Cut-off grade 1.26 g/t Au based on a gold price of US$1,700/oz.
- 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.
- The underground Mineral Resources were estimated under the supervision of Jonathan Moore, MAusIMM CP(Geo), a Qualified Person.

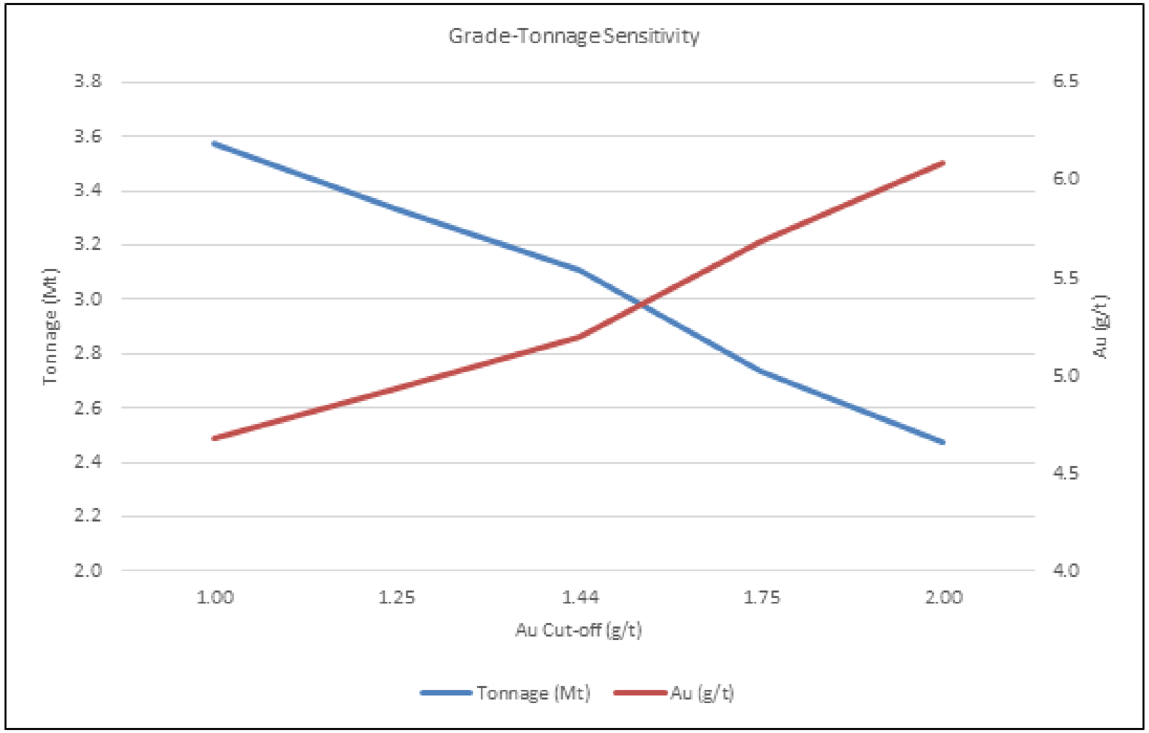
Horseshoe Mineral Resource Sensitivity

The Mineral Resources are presented at a range of Cut-off grades, subdivided by resource classification (see table below). Graphical representations of the grade and tonnage sensitivities of the Indicated resources are presented in the table below. Resources are not confined within any conceptual stope design.

Mineral Resource Sensitivity

Indicated			
Cut-off	Au (g/t)	Tonnes (Mt)	Au (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

Source: OceanaGold

Criteria	JORC Code Explanation	Commentary
		 Source: OceanaGold **Sensitivity of Indicated Resource Tonnes and Grade to Cut-off** **<u>Palomino Resource Estimate</u>** The Palomino deposit is located approximately 1 km southwest of the Horseshoe deposit. Palomino is a medium grade (2-6 g/t Au) underground gold deposit, located at 300 m to 500 m below surface. The deposit dimensions are approximately 300 m long by 50-100 m thick by 100-150 m wide. Lozenge-shaped mineralised zones strike ENE, dip northwest and plunge gently northeast. Diamond drill hole spacing ranges from 40 to 70 metres. The style of mineralisation is similar to the Horseshoe deposit. Fine-grained gold is hosted in pyritic and silicified siltstone and intrusives along a steeply SE-dipping, ENE-striking contact with barren dacite flows. Mineralization is truncated by several NNW-striking, sub-vertical, 1-25 meter thick diabase dikes.

Criteria	JORC Code Explanation	Commentary
		The Palomino resource estimation is based on the current drill hole database, interpreted lithologies, geologic controls and current topographic data. The resource estimation is supported by drilling and sampling current to November 11, 2019. Gold estimation was constrained within implicitly modelled grade shells using Leapfrog® software, approximating a 1.0 g/t gold indicator. A total of 28 drill holes provide 396 x 3m composites for estimation within the indicator shell. The maximum grade was 31 g/t Au and the coefficient of variation is 1.28. Top capping was not applied. Ordinary kriging was used with the following criteria: • The 1 g/t Au indicator shell was implemented as a hard boundary • Dynamic search orientation essentially parallel to the plane of gold continuity • Minimum of four 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 four drill hole • Composites from a minimum of two octants Gold grades were estimated into 5 m E x 5 m N x 5 m Rl with Vulcan™ modelling software using Ordinary Kriging on 3 m composites. Sub-blocking was not used. Post-mineralisation dikes were assigned zero grade. Metasediment / metavolcanic contacts were not used to constrain gold estimation. Densities based upon core analyses were assigned by rock type. Validation included visual cross-sectional and 3D checks of modelled vs sample grades, script reviews and global model vs sample grade comparison (3.24 g/t vs 3.31 g/t respectively). The results of the validations support a robust estimation. The Mineral Resources reported for the Palomino deposit are classified as Inferred Mineral Resources, based primarily on drill hole spacing and geological understanding. All blocks outside of the Inferred wireframes remain unclassified. The Palomino Mineral Resource statement is presented in the table below. The resource is constrained within a conceptual stope design that assumes underground mining methods and is based on a mining cost of US$45/t, milling cost of US$9.69/t, administration cost of US$3.2/t, based on a gold price of US$1,700/oz, a gold recovery of 85% and a gold price of US$1,700/oz, approximating a 1.37 g/t cut-off. All unclassified material within the conceptual design was assigned zero grade for the purposes of reporting.

Criteria	JORC Code Explanation	Commentary

Palomino Underground Mineral Resource Statement as of June 30, 2020

Class	Tonnes (Mt)	Au Grade (g/t)	Contained Au (Moz)
Measured	0.0	0.0	0.0
Indicated	0.0	0.0	0.0
Measured & Indicated	**0.0**	**0.0**	**0.0**
Inferred	6.9	2.7	0.6

Source: OceanaGold

- Cut-off grade 1.37 g/t Au based on a gold price of US$1,700/oz.
- 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.
- The underground Mineral Resources were estimated under the supervision of Jonathan Moore, MAusIMM CP(Geo), a Qualified Person.

Open Pit and Underground Combined Mineral Resource Statement

The table below presents the combined open pit and underground resource statement for Haile.

Haile Combined Open Pit and Underground Resource Statement June 30, 2020

Type	Class	Tonnes (Mt)	Au Grade (g/t)	Contained Au (Moz)	Ag Grade (g/t)	Contained Ag (Moz)
Open Pit	Measured	3.2	1.35	0.14	2.61	0.27
	Indicated	52.3	1.53	2.57	2.40	4.04
	Measured & Indicated	**55.5**	**1.52**	**2.71**	**2.41**	**4.30**
	Inferred	7.6	1.0	0.2	1.32	0.32
Underground	Measured	-	-	-	-	-
	Indicated	3.3	4.95	0.53	-	-
	Measured & Indicated	**3.3**	**4.95**	**0.53**	-	-
	Inferred	9.0	3.1	0.9	-	-
Combined	Measured	3.2	1.35	0.14	2.61	0.27
	Indicated	55.6	1.73	3.10	2.40	4.04
	Measured & Indicated	**58.8**	**1.71**	**3.24**	**2.27**	**4.30**
	Inferred	17	2.1	1.1	0.6	0.32

Criteria	JORC Code Explanation	Commentary
		Source: Oceana Gold - Cut-off grades for the open pit, Horseshoe underground and Palomino underground are 0.45 g/t, 1.26 g/t and 1.37 g/t Au respectively, based on a gold price of US$1,700/oz. - Open pit resource is reported within a US$1,700/oz optimized shell. Palomino underground is constrained within a conceptual stope design and Horseshoe underground is constrained by 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. - The underground Mineral Resources were estimated under the supervision of Jonathan Moore, MAusIMM CP(Geo), a Competent Person.
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 1.26 g/t Au and 1.37 g/t Au for Horseshoe and Palomino 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 Mineral Reserves are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Ore Reserves. There is no certainty that these Mineral Resources will be realized 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 resource estimate because the recoverable resource estimation process approximates mining selectivity. Mining modifying factors have been applied to the underground reserve model (see section 4). The underground resource estimate for Horseshoe however is reported undiluted. The Palomino underground Inferred 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 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 greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an*	Acid generating rock is stored on geomembrane-lined storage facilities and seepage from the facility is treated with lime before release to lined storage ponds and ultimately the tails storage facility. Potentially acid generating material with less than 1% sulfur is stored in the mined out pits below the water table and on the lined storage facilities. All waste rock with >1% sulfur is stored on lined facilities. Non-acid generating rock is stored adjacent to the pits at convenient haul distances in normal overburden stacks. Vegetation and soil are removed before dumping and soil is stockpiled for use in closure.

Criteria	JORC Code Explanation	Commentary
	explanation of the environmental assumptions made.	
Bulk density	- *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* - *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.* - *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	Density was assigned to each block in the model based on the rock type, redox and mineralization codes. Density information was based on the average results from analysis of core results. The following dry densities were assigned to each rock type in the block model. The dry density assignments are: Coastal Plain Soils = 1.90 Saprolite = 2.14 Clay Weathered = 2.46 Metasediment = 2.77 Metavolcanic = 2.60 Dike = 2.91
Classification	- *The basis for the classification of the Mineral Resources into varying confidence categories.* - *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* - *Whether the result appropriately reflects the Competent Person's view of the deposit.*	For the open pit, panels were coded as Measured, Indicated or Inferred based upon drill sample spacing. Measured: 27m x 27m x 10m with minimum of 16 samples and 4 octants. Indicated: 41m x 41m x 15m with minimum of 16 samples and 4 octants. Inferred: 41m x 41m x 15m with minimum of 8 samples and 2 octants. Furthermore, Measured or Indicated panels with probabilities less than 30% of exceeding the cut-off grade, are demoted one level of classification. Horseshoe 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 1.0 g/t Au grade shell. Inferred: 35m x 35m with a minimum of 6 samples within a 1.0 g/t Au grade shell. Palomino has been classified as Inferred as confidence in the geological interpretation of the mineralisation boundaries and orientation is not sufficient for a higher classification. The average drill density for Palomino is 40m x 70m with a minimum of 4 samples within a 1.0 g/t Au grade shell.
Audits or reviews	- *The results of any audits or reviews of Mineral Resource estimates.*	No external audits / reviews have been completed on the resource models. However, independent check estimates via E-Type (cf recoverable) estimations 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.

Criteria	JORC Code Explanation	Commentary
Discussion of relative accuracy/ confidence	- *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* - *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* - *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	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.

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 3. The underground Mineral Reserves at HGM are based on a block model and resource estimate discussed in section 3, completed in May 2019. 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*	Information regarding metallurgy or mineral processing has been prepared, verified and approved by D. Carr.

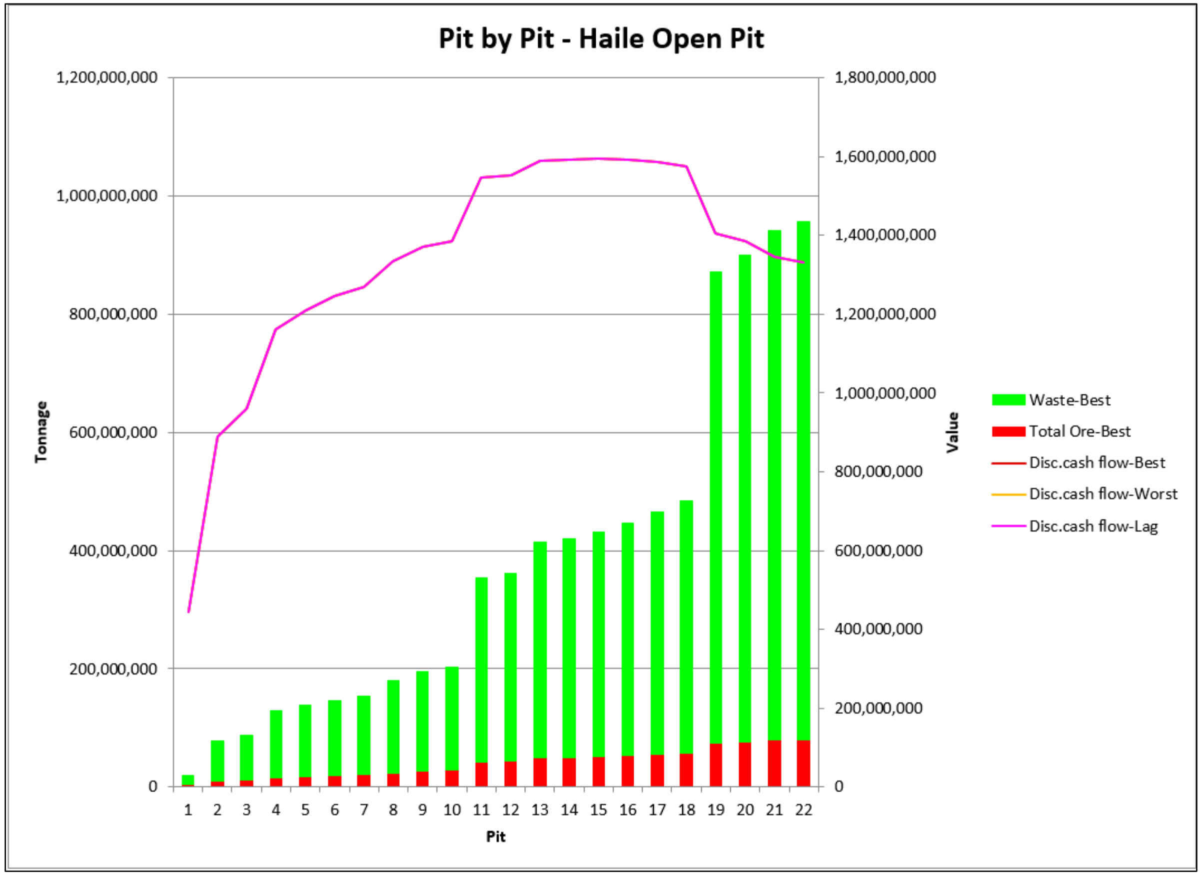
Criteria	JORC Code Explanation	Commentary
	indicate why this is the case.	Information regarding Mineral resources has been prepared, verified and approved by J. Moore. The open pit Mineral Reserves have been prepared under the supervision of F. Rodrigues and the underground Mineral Reserves have been verified and approved by J. Poeck. The open pit and underground mining costs and economic evaluation have been prepared under the supervision of T. Cooney. Each of D. Carr, T. Cooney, J. Moore, J. Poeck, and F. Rodrigues are Competent Persons under JORC 2012. Messrs Carr, Cooney and Moore are full-time employees of the Company’s subsidiary, OceanaGold Management Pty Limited. J. Poeck is a registered member of the SME and a QP member of the MMSA. F. Rodrigues is a member of AusIMM and a QP member of the MMSA. Both are full time employees of SRK Consulting (US) Inc. D. Carr last visited Haile site on between 9 March and 25 March 2020. T. Cooney last visited Haile site on between 28 November and 7 December 2018. J. Moore last visited Haile 13th to 28th January 2020. J. Poeck last visited Haile site on March 12-14, 2019. F. Rodrigues has not visited Haile site because of Covid travel restrictions.
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*	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 resources and reserves and was completed to a Feasibility Study level. An updated NI 43-101 report to Feasibility level, which underpins the resources and reserves was completed in September 2020. Haile Gold Mine holds the necessary permits, consents, certificates, licences applicable to current open pit

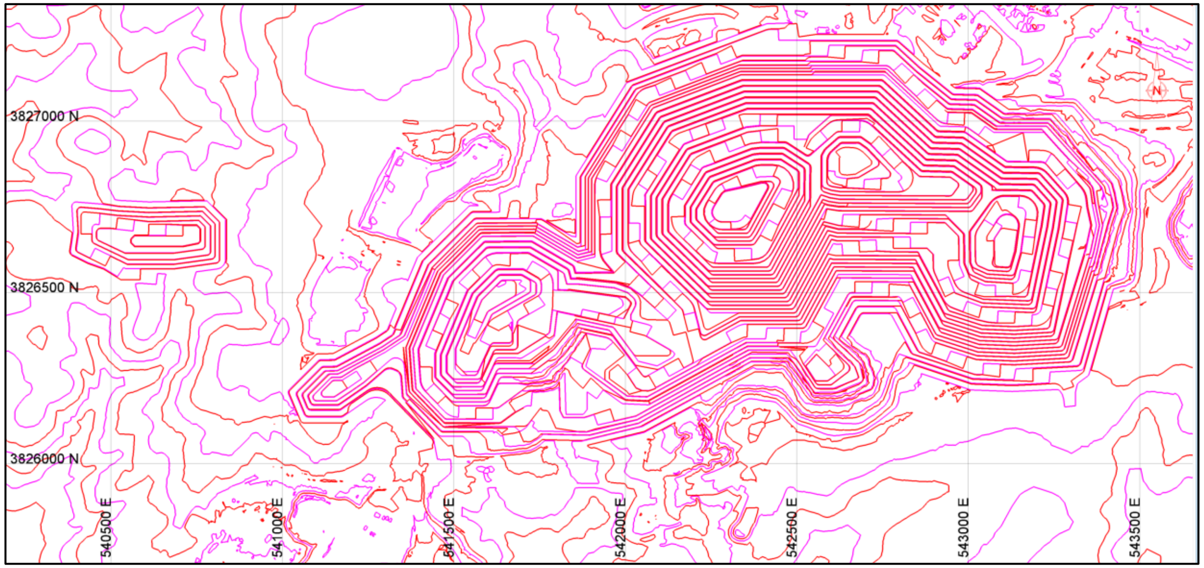
Criteria	JORC Code Explanation	Commentary
	economically viable, and that material Modifying Factors have been considered.	mining operations. Those required for future operations, including for Horseshoe Underground mining, are considered achievable and are being actively pursued in line with life of mine timing requirements.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	Mineral Reserves are based on a gold price of US$ 1,500/oz. Metallurgical recoveries are based on a recovery curve (1-(0.2152*au grade^-0.3696)) + 0.025 that equates to an overall recovery of 82% for the open pit material and 88% for the underground material. 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. Open pit Mineral Reserves are stated using a 0.45 g/t Au cut-off and assume full mine recovery. 5% dilution at zero grade and 98% mining recovery was applied for 2020 and 2021 mine schedule. Remaining years open pit reserves are not diluted further to dilution inherent to the resource model and assume selective mining unit of 10 m x 10 m x 5 m. Underground reserves are stated using a 1.44 g/t cut-off. The reserve estimate is based on a mine design using an elevated cut-off grade of 1.67g/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 1.29g/t Au and an incremental development cut-off grade of 0.38g/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.
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.*	**Open Pit** For the open pit, 5% dilution at zero grade and 98% mining recovery was applied for 2020 and 2021 mine schedule. Remaining years open pit reserves assuming a full mining recovery and reserves are not diluted further to dilution inherent to the resource model and assume selective mining unit of 10 m x 10 m x 5 m. The open pit Ore Reserves are reported within a pit design based on open pit optimization results. The optimization included Measured, Indicated and Inferred Mineral Resource categories with a gold price of US$1,500/oz Au. Subsequent to pit optimization, inferred material (approximately 10% by volume) within the reserve pit was treated as waste and given a zero-gold grade for the purposes of mine planning and economic analysis. Pit optimization parameters were derived by OceanaGold and are shown in the table below.

Criteria	JORC Code Explanation	Commentary
	• *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	**Pit Optimization Parameters**

Parameter	Unit	Value
Base Mining Cost	US$/t	1.41
Incremental Mining Cost	US$/t / 5 m bench	0.01
PAG Rehabilitation Cost	US$/t PAG waste	0.95
Processing Cost	US$/t ore	11.00
G&A Cost	US$/t ore	3.20
Ore Rehandle Cost	US$/t ore	0.70
TSF Expansion	US $/t ore	3.20
Gold Recovery	%	(1-(0.2152*au grade^-0.3696))+0.025
Mill Throughput	Mtpa	4.0
Gold Price	US$/oz	1,500
Gold Refining & Selling Cost	US$/oz	3.00
Calculated Au Cutoff Grade	US $/t	0.45
Royalties	%	0.0
Discount Rate	%	5.0

Source: OceanaGold

Criteria	JORC Code Explanation	Commentary
		The Table below shows the pit optimization results pit by pit graph.  Pit 15 represents a revenue factor of 1. Pit 13 was selected for pit design in accordance with industry best practice. The overall pit slopes (inter ramp angle slopes) used for the design are based on operational level geotechnical studies and range from 32° to 45°. This includes a 5° allowance for ramps and geotechnical catch benches. The stage cutbacks are approximately 150m-300m wide with a minimum mining width of 40m. Maximum bench sinking rates are generally one 10m bench per month, mined as either a single-pass or three flitches

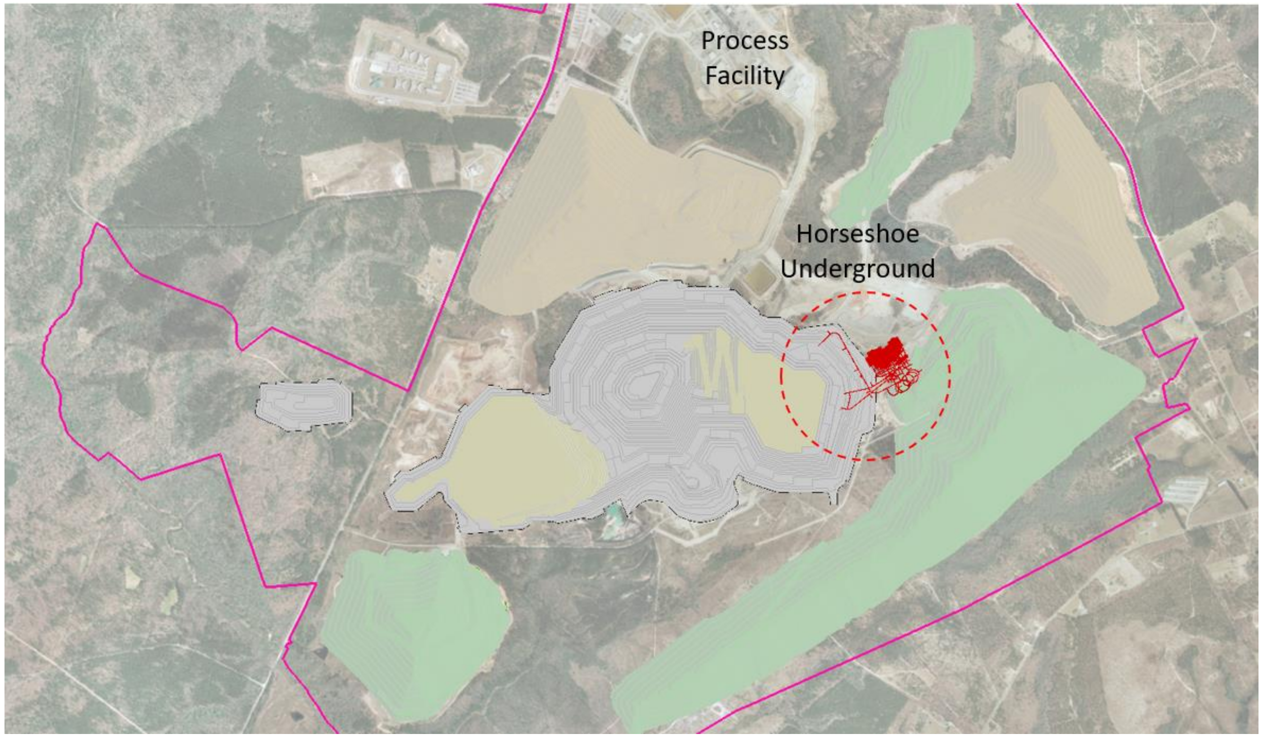
Criteria	JORC Code Explanation	Commentary
		of ~ 3.3m per flitch. Multiple pushbacks were designed based on the pit optimization (Lerch-Grossman algorithm) results. The figure below illustrates the final open pit design and associated ramp system. Ramp locations targeted saddle points between the various pit bottoms with ramps also acting as catch benches for geotechnical purposes. Each bench has at least one ramp for scheduling purposes.  The table below shows the material inventory for each designed pushback. Note that this does not include the 18months of material as that was taken from the short term mine plan.

<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><th></th><th colspan="3">Ore (Measured + Indicated)</th><th colspan="3">Waste Inferred (Inferred)</th><th colspan="2">Waste</th></tr>
<tr><th>Phases</th><th>Tonnes (kt)</th><th>Au g/t</th><th>Contained Au (koz)</th><th>Tonnes (kt)</th><th>Au g/t</th><th>Contained Au (koz)</th><th>Tonnes (kt)</th><th>SR</th></tr>
<tr><td>CP_01</td><td>1,258</td><td>0.81</td><td>33</td><td>125</td><td>0.70</td><td>3</td><td>4,353</td><td>3.6</td></tr>
<tr><td>HL_01</td><td>1,320</td><td>1.33</td><td>56</td><td>14</td><td>0.76</td><td>0</td><td>4,290</td><td>3.3</td></tr>
<tr><td>HL_02</td><td>4,121</td><td>1.03</td><td>137</td><td>534</td><td>0.75</td><td>13</td><td>16,084</td><td>4.0</td></tr>
<tr><td>IP_02</td><td>36</td><td>0.85</td><td>1</td><td>-</td><td>-</td><td>-</td><td>8,032</td><td>224.1</td></tr>
<tr><td>LB_01</td><td>431</td><td>2.91</td><td>40</td><td>1</td><td>2.08</td><td>0</td><td>937</td><td>2.2</td></tr>
<tr><td>LB_02A</td><td>2,799</td><td>2.48</td><td>224</td><td>141</td><td>2.34</td><td>11</td><td>31,659</td><td>11.4</td></tr>
<tr><td>LB_02B</td><td>2,797</td><td>2.27</td><td>204</td><td>381</td><td>1.49</td><td>18</td><td>57,103</td><td>20.6</td></tr>
<tr><td>LB_03</td><td>5,649</td><td>2.03</td><td>368</td><td>201</td><td>1.20</td><td>8</td><td>21,837</td><td>3.9</td></tr>
<tr><td>LB_04</td><td>15,941</td><td>1.24</td><td>634</td><td>2,564</td><td>0.74</td><td>61</td><td>138,523</td><td>8.9</td></tr>
<tr><td>LP_02</td><td>7</td><td>0.48</td><td>0</td><td>-</td><td>-</td><td>-</td><td>2,278</td><td>337.9</td></tr>
<tr><td>MZ_02</td><td>3,473</td><td>1.76</td><td>196</td><td>457</td><td>1.78</td><td>26</td><td>20,764</td><td>6.1</td></tr>
<tr><td>SP_03</td><td>4,618</td><td>1.39</td><td>207</td><td>299</td><td>0.81</td><td>8</td><td>41,344</td><td>9.0</td></tr>
<tr><td>Grand Total</td><td>42,449</td><td>1.54</td><td>2,100</td><td>4,717</td><td>0.97</td><td>148</td><td>347,205</td><td>8.3</td></tr>
</table>
<p>Mining is a conventional drill/blast/load/haul open pit operation using 10m benches in waste. Ore is mined on either 3.3 m or 5 m flitches. Waste rock is categorized based on geochemical parameters and placed into the appropriate type of storage facility. Dewatering and depressurization of highwalls is on-going. There are currently eleven dewatering wells in service at Haile.The mining method is considered appropriate for the size and style of the deposit. Necessary project infrastructure is in-place including TSF, waste rock storage facilities, necessary roads/bridges, power, water, etc.</p>
<p>A life of mine production schedule was generated where the first 18 months of material was taken from the short term site plan (monthly). An additional year was scheduled monthly and the remaining periods were scheduled quarterly.</p>
<p>Haulage cycle times were calculated for each period based on material destination and used for equipment calculations.</p>
</td></tr>
</table>

Criteria	JORC Code Explanation	Commentary
		The table below summarizes the open pit reserves checklist and data available.

Unit	Data Evaluated	Data Not Evaluated	Not Applicable	Notes
Mining				
Mining Width	X			Average 300 to 400 m
Open Pit and/or Underground	X			Open pit and underground
Density and Bulk handling	X			Density and swell considered
Dilution	X			SMU 10 m x 10 m x 5 m
Mine Recovery	X			Full mine recovery assumed
Waste Rock	X			NAG/PAD waste dumps
Grade Control	X			Operating mine – blast chips
Processing	X			
Representative Sample	X			Previous feasibility study and operating mine
Product Recoveries	X			Feasibility study - operating
Hardness (Grindability)	X			Feasibility study - operating
Bulk Density	X			Feasibility study - operating
Deleterious Elements	X			Feasibility study - operating
Process Selection	X			Feasibility study - operating
Geotechnical/Hydrological	X			
Slope Stability (Open Pit)	X			Majority FoS greater than 1.3. Small foliation/orientation risk in localized areas.
Water Balance	X			Full site water balance
Area Hydrology	X			Hydrology considered
Seismic Risk	X			Low
Environmental				
Baseline Studies	X			Operating Mine
Tailing Management	X			Operating Mine
Waste Rock Management	X			Operating Mine – NAG/PAG plan
ARD Issues	X			Lined waste facilities
Closure and Reclamation Plan		X		
Permitting Schedule	X			Ongoing – reasonable expectation of success
Location and Infrastructure				
Climate	X			High rainfall events
Supply Logistics	X			Operating Mine
Power Source(S)	X			Operating Mine
Existing Infrastructure	X			Operating Mine

<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Labor Supply and Skill Level</td><td>X</td><td></td><td></td><td>Operating Mine – Training ongoing</td></tr>
<tr><td>Marketing Elements or Factors</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Product Specification and Demand</td><td>X</td><td></td><td></td><td>Gold Market</td></tr>
<tr><td>Off-site Treatment Terms and Costs</td><td>X</td><td></td><td></td><td>Favorable refining conditions</td></tr>
<tr><td>Transportation Costs</td><td>X</td><td></td><td></td><td>Low</td></tr>
<tr><td>Legal Elements or Factors</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>Security of Tenure</td><td>X</td><td></td><td></td><td>Operating Mine</td></tr>
<tr><td>Ownership Rights and Interests</td><td>X</td><td></td><td></td><td>Operating Mine</td></tr>
<tr><td>Environmental Liability</td><td>X</td><td></td><td></td><td>ARD potential</td></tr>
<tr><td>Political Risk (e.g., land claims, sovereign risk)</td><td>X</td><td></td><td></td><td>Low political risk - USA</td></tr>
<tr><td>Negotiated Fiscal Regime</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td><i>General Costs and Revenue Elements or Factors</i></td><td></td><td></td><td></td><td></td></tr>
<tr><td>General and Administrative Costs</td><td>X</td><td></td><td></td><td>Operating Mine</td></tr>
<tr><td>Commodity Price Forecasts</td><td>X</td><td></td><td></td><td>US$1,500/oz Au</td></tr>
<tr><td>Foreign Exchange Forecasts</td><td></td><td></td><td>X</td><td></td></tr>
<tr><td>Inflation</td><td>X</td><td></td><td></td><td>Small</td></tr>
<tr><td>Royalty Commitments</td><td>X</td><td></td><td></td><td>No royalty</td></tr>
<tr><td>Taxes</td><td>X</td><td></td><td></td><td>Operating Mine</td></tr>
<tr><td>Corporative Investment Criteria</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td><i>Social Issues</i></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Sustainable Development Strategy</td><td>X</td><td></td><td></td><td>Environmental Impact Statement (EIS)</td></tr>
<tr><td>Impact Assessment and Mitigation</td><td>X</td><td></td><td></td><td>EIS</td></tr>
<tr><td>Negotiated Cost/Benefit Agreement</td><td>X</td><td></td><td></td><td>EIS</td></tr>
<tr><td>Cultural and Social Influences</td><td>X</td><td></td><td></td><td>EIS</td></tr>
</table>
</td></tr>
</table>

Criteria	JORC Code Explanation	Commentary
		Underground 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 reserve does not consider the Palomino underground resource at this time.  Source: OceanaGold **Figure: General Site Layout and Location of the UG Reserve Area** Measured and Indicated Mineral Resources were converted to Proven and Probable Mineral 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.

Criteria	JORC Code Explanation	Commentary
		Based on the orientation, depth, and geotechnical characteristics of the mineralization, a transverse SLOS orientation will be applied. The stopes will be 20 m wide and stope length will vary based on mineralization 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. 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 mineralized 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. Current estimated project costs and the calculated Au Cut-off grade are shown in the table below. For mine design, an elevated cut-off grade of 1.67 g/t was used, 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 1.29 g/t Au and an incremental development cut-off grade of 0.38 g/t Au.

Underground Cut-off Grade Calculation

Parameter	**Operating CoG**	**Incremental Stoping CoG**	**Marginal Development CoG**	**Unit**
Mining cost (1)	44.98	38.39	-	US$/t
Process cost	10.52	10.52	10.52	US$/t
Tailings	2.44	2.44	2.44	
G&A	2.75	3.20	3.20	US$/t
Total Cost	**$61.26**	**$54.66**	**$16.19**	**US$/t**
Gold price	1,500.00	1,500.00	1,500.00	US$/oz
Average Au mill Recovery (2)	88%	88%	88%	
Smelting & Refining	3.00	3.00	3.00	US$/oz
CoG	**1.44**	**1.29**	**0.38**	**g/t**

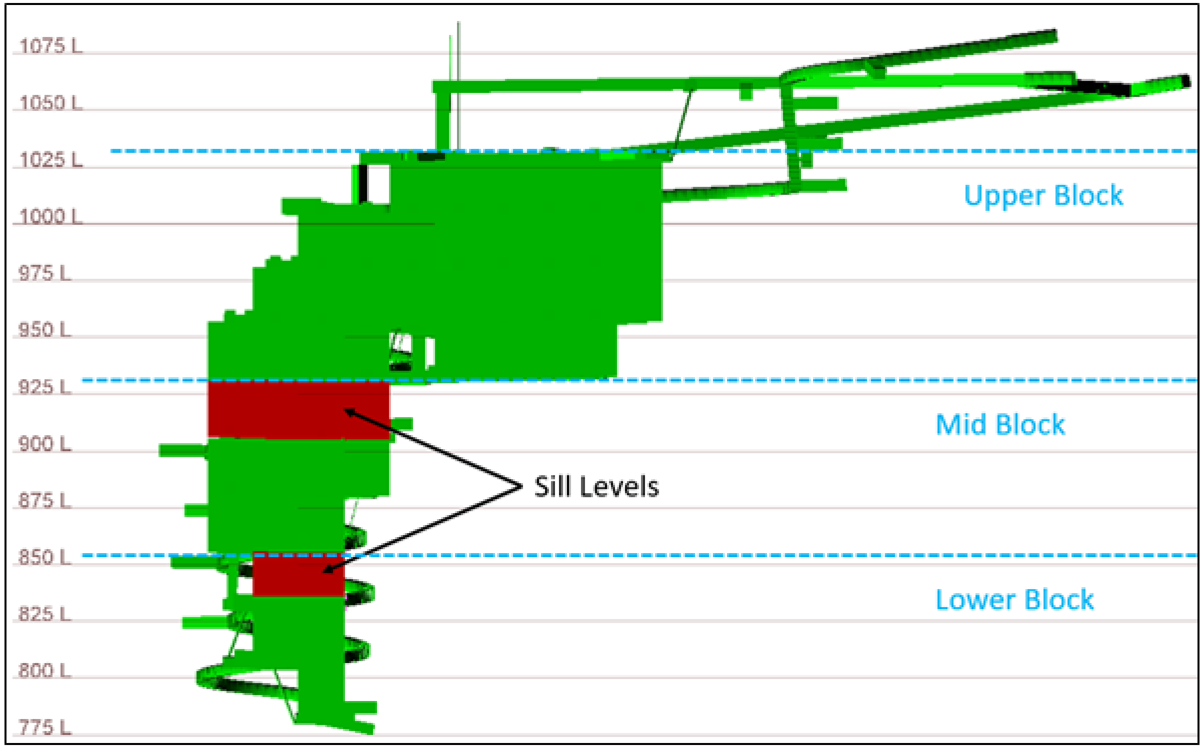
Source: SRK, OceanaGold

(1) Includes backfill

(2) Average stated. Variable recovery is expected based on head grade based on the following equation: (1-(0.2152*au grade^-0.3696)) + 0.025

Stope optimization was completed on prior versions of the model. Results from those prior runs were used for comparison during the mine design process. For the design, vertical slices were created through the orebody along 2 m strike length intervals. The model was then interrogated, filtered on cutoff, and then the slices were combined to create minable stopes.

The deposit has been divided into three production areas as shown in the figure below. Elevations have 1,000 meters added to actual elevations so that negative elevations are not used. Actual surface elevation is about 150m which equates to 1,150 in the adjusted system. Using the local grid, the uppermost block extends from approximately the 930 m elevation to 1,030 m elevation and includes four stoping levels that will be mined bottom up. The mid block extends from approximately the 850 m elevation to the 930 m elevation and includes three stoping levels that will be mined bottom up. The lowest block extends from approximately the 780 m elevation to the 930 m elevation. It includes three stoping levels that are also mined bottom up. Between each of the vertical stoping blocks, sill blocks have been designed, to facilitate the mining sequence to allow mining to progress simultaneously in multiple blocks.

Criteria	JORC Code Explanation	Commentary
		 Source: SRK **UG Design Sill Levels (local grid)** A detailed design was completed which includes all required mine infrastructure and ancillary development. All Mineral Reserve tonnages are expressed as "dry" tonnes (i.e., no moisture) and are based on the density values stored in the block model. Inferred Mineral Resources are not included in the mine plan. Mining dilution and recovery have been applied to the reserves using the methodologies described in the following sections. **Dilution** The mining dilution estimate is based on the equivalent linear overbreak/slough methodology (ELOS; Clark, 1997). ELOS is an empirical design method that is used to estimate the amount of overbreak/slough that will occur in an underground opening based on rock quality and the hydraulic radius of the opening.

Criteria	JORC Code Explanation	Commentary
		Dilution estimates were applied differently for primary and secondary stopes as follows: • For a typical primary stope, the sources of dilution are in the floor (CRF backfill) and in the front endwall of the stope (CRF backfill). Dilution from the sidewalls and the back endwall is not included, as this material is typically ore and is already accounted for within the volumes of adjacent secondary stopes. • For a typical secondary stope, the sources of dilution are in the floor (CRF backfill), in the front endwall of the stope (CRF backfill), and in the sidewalls of the stope (CRF backfill). • For the sill pillar primary and secondary stopes, an additional source of dilution is applied from the crown (CRF backfill). To account for more difficult expected mining conditions in the sill stopes, an additional dilution allowance has been included. ELOS assumptions are shown in the table below. **Dilution ELOS Assumptions**

Type	ELOS Value (m)
Sidewalls (backfill)	0.40
Endwall (backfill)	0.15
Floor (backfill)	0.10
Crown (backfill)	0.50

Source: OceanaGold

The rock sidewall/endwall dilution material will contain low-grade mineralization. However, a conservative approach was adopted by applying zero grade to all rock dilution. Zero grade was applied to CRF backfill dilution.

The ELOS and additional dilution factor for the sill stopes results in the dilution factors shown in the table below. These factors were conservatively applied uniformly across each stope type.

Criteria	JORC Code Explanation	Commentary

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%

Source: OceanaGold

For all horizontal development, dilution of 10% was applied at zero grade.

Recovery

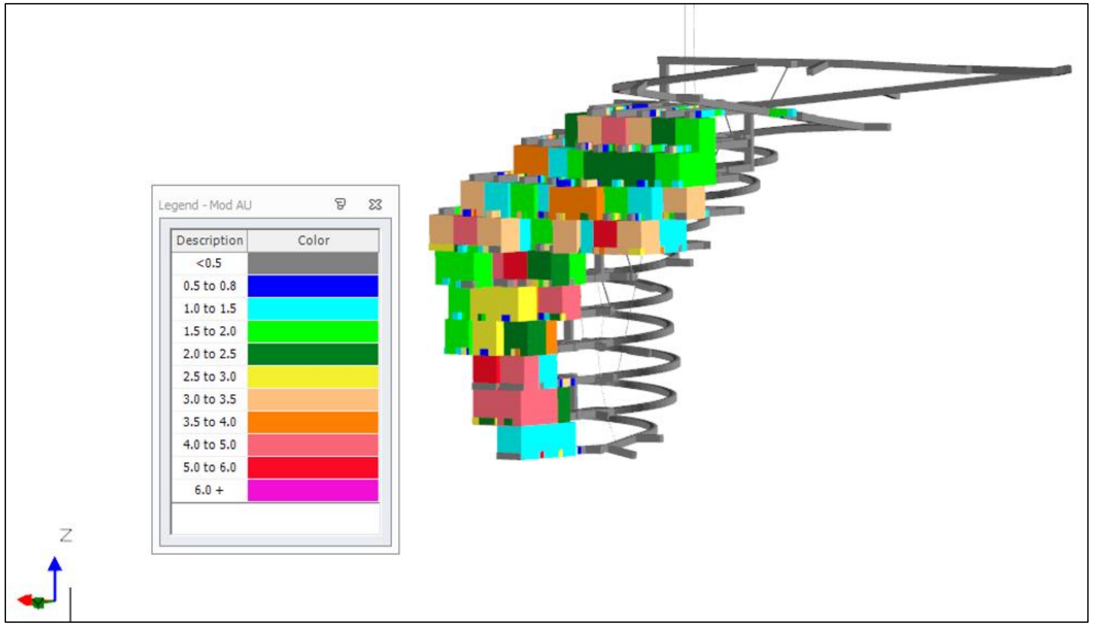
A stope recovery factor of 94% was used. The following items were used to calculate this factor:

- Material loss into backfill (floor) of 0.15 m
- Material loss to side and endwalls (under blast) of 0.15 m
- Material loss from leaving wing-shaped pillars in stope crowns (for stope stability and to enable tight-filling of stopes)
- Material loss to mucking along the sides and in blind corners of the stopes
- Additional loss factor due to rockfalls, misdirected loads, and other geotechnical reasons

A development recovery factor of 100% was used for all horizontal development.

Recoveries of the temporary sill levels have been reduced by 25%, to reflect room and pillar mining of the sill pillars.

The underground mine design process resulted in underground mining reserves of 3.4 Mt (diluted) with an average grade of 3.78 g/t Au. The figure below shows the completed underground mine design with stopes colored by Au grade.

Criteria	JORC Code Explanation	Commentary
		 Source: SRK Horseshoe Completed Mine Design, colored by activity type (looking South) 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. These rates were used in the production schedule and are shown in the table below.

Criteria	JORC Code Explanation	Commentary

Activity Type	Dimensions	Rate (1)
Level Access	5 m x 5.5 m	120 m/mo
Main Decline	5 m x 5.5 m	120 m/mo
Sumps, Remucks, Ventilation Drifts, Footwall and Stope Accesses	5 m x 5.5 m	120 m/mo
Escapeway Drifts	5 m x 5 m	120 m/mo
Stope Production Longhole Drilling		250 m/d
Stope Slot Raiseboring		4 m/d
Longhole Stoping		1,500 t/d
Ventilation Raises	6 mx4 m	100 m/mo
Escapeway Raises	1 m dia	90 m/mo
Backfilling (CRF)		1,000 m^3/d

Source: OceanaGold

(1) All rates are per face. Multiple areas/faces are mined together to generate the production schedule.

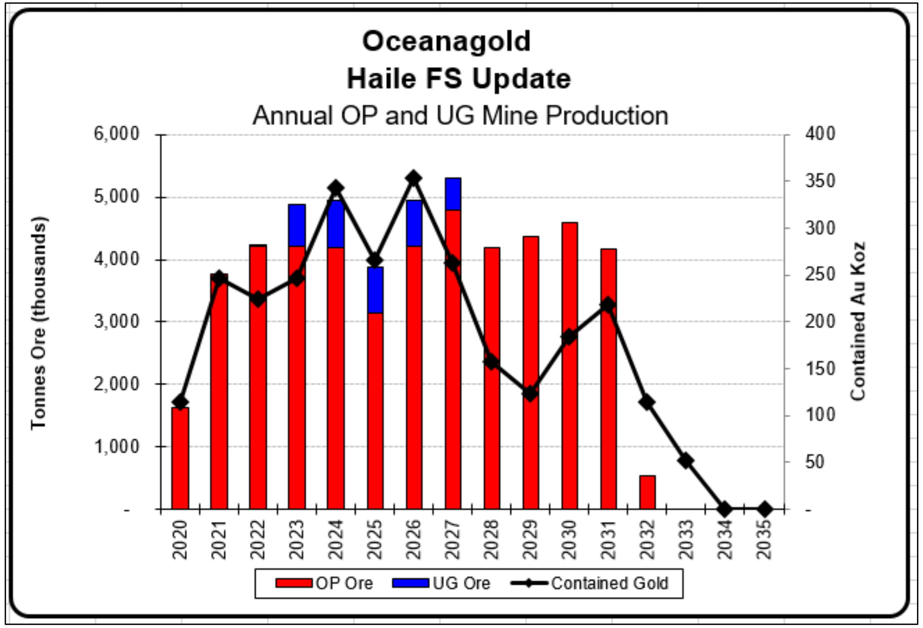
An annual production schedule was completed using Deswik scheduling software and is based on mining operations occurring 365 days/year, 7 days/week, with two 12 hr shifts each day. A production rate of approximately 2,000 t/d was targeted with ramp-up to full production as quickly as possible. Resource 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.

Combined OP + UG production schedule

The figure below presents the combined open pit and underground production schedule annually.

Criteria	JORC Code Explanation	Commentary



The table below shows the annual mining schedule for both open pit and underground. Note that this table does not include stockpile material. Year 2020 is a 6 month year as the reserve date is June 30, 2020.

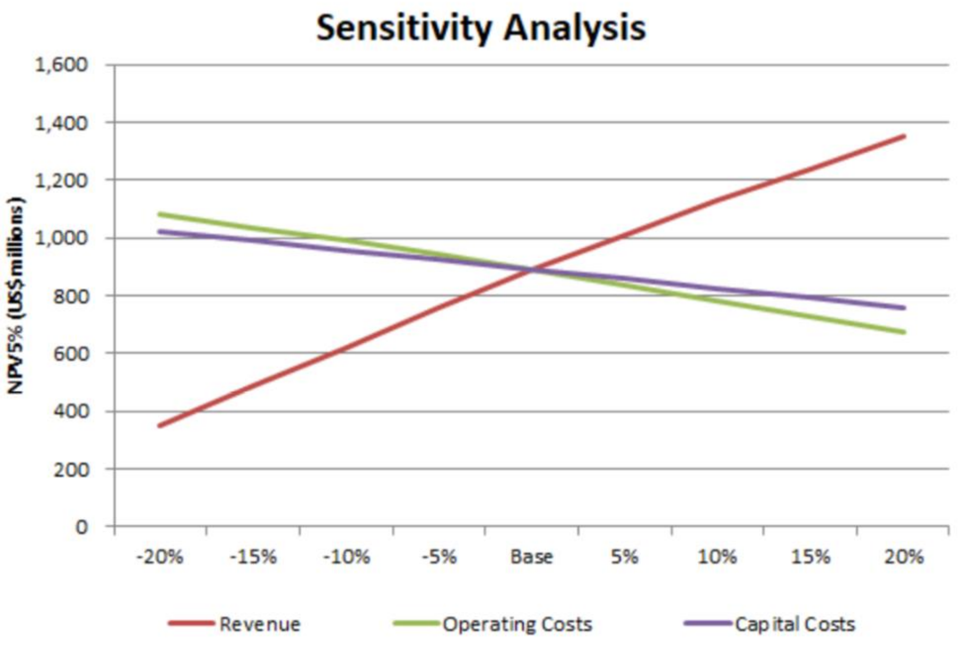
Year	Total Ore Tonnes	Au Grade	Ag Grade	Contained Au	Contained Ag	**Total Waste Tonnes**
	kt	g/t	g/t	koz	koz	tonnes
2020	1,638	2.15	2.04	113	107	19,282
2021	3,769	1.81	2.02	220	245	40,622
2022	4,222	1.66	2.27	225	308	40,592
2023	4,871	1.67	2.04	262	320	40,583
2024	4,951	2.27	2.19	361	348	40,427
2025	3,875	2.12	2.06	265	257	40,774
2026	4,941	2.44	2.13	387	338	40,485
2027	5,306	1.61	2.18	276	373	40,499
2028	4,200	1.14	2.11	154	285	40,284
2029	4,371	0.93	2.35	130	331	40,427

<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td><table>
<tr><td>2030</td><td>4,588</td><td>1.32</td><td>2.5</td><td>195</td><td>369</td><td>20,067</td></tr>
<tr><td>2031</td><td>4,176</td><td>1.65</td><td>2.62</td><td>222</td><td>351</td><td>3,658</td></tr>
<tr><td>2032</td><td>539</td><td>3</td><td>3.04</td><td>52</td><td>53</td><td>161</td></tr>
<tr><td>Total</td><td>51,447</td><td>1.73</td><td>2.23</td><td>2,861</td><td>3,685</td><td>407,861</td></tr>
</table></td></tr>
<tr><td>Metallurgical factors or assumptions</td><td>• <i>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</i>
• <i>Whether the metallurgical process is well-tested technology or novel in nature.</i>
• <i>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</i>
• <i>Any assumptions or allowances made for deleterious elements.</i>
• <i>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</i>
• <i>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</i></td><td>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 improve throughput and plant utilization to enable a throughput rate for 2021 and subsequent years of 4.0Mtpa.
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 sulfur 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.
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 20 microns is required to liberate gold from quartz and pyrite.</td></tr>
</table>

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, licenses 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 resource and 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. 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 categorized 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 very large, skilled workforce in the region. The project is adjacent to a state highway and there is a very 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 mine 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 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 utilized 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.

Criteria	JORC Code Explanation	Commentary
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 2022. Mining costs are forecast to reduce from $2.44 per tonne of total material in 2020 to $2.04 per tonne of total material in 2021. Productivity improvements have been assumed from 2022 that will result in further unit operating cost reductions, with the unit operating cost averaging $2.00 over the life of the mine. • Project operating costs for underground mining have been developed based on the life of mine production schedule. The average unit operating cost is $47.15 per tonne of ore. • 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, to average $9.98 over the life of the mine. • Operating costs include allowance for General and Administration and Indirect costs. • Life of mine capital expenditure is expected to be $788 million dollars including closure costs. • 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. • 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 $1,500/oz. Transportation and refining cost have been included in the financial analysis based on current commercial terms for refining of gold/silver dore. Silver was included in financial evaluations as a by-product credit.

Criteria	JORC Code Explanation	Commentary
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 contract.*	• The market for gold (including silver) 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. • There are no forward sales or hedging contracts that are directly applicable for Haile metal production. Haile Gold Mine's parent company, OceanaGold Corporation, has some group wide pre-sales agreements that are a relatively minor component of total gold production. OceanaGold has in total four mines across which these can be spread. • A contract is in place with Metalor USA Refining Corporation, located in North Attleboro, Massachusetts for the refining of dore bullion. The contract commenced in January 2020 and has an indefinite term, subject to termination by either party. This contract sets a range of prices and surcharges for refining the dore under terms and conditions which generally comply with industry norms.
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 and a constant dollars evaluation (i.e. inflation not included), and a 5% discount rate. Cash flows generated through the evaluation have been based on the life of mine production schedule development and relevant capital and operating costs and commercial assumptions. The gold price used to calculate cut-off grades for Reserves, USD1,500/oz, has formed the base case for evaluation. • Sensitivity analyses have been carried out on gold price, operating costs and capital costs. Results indicate that the project is robust, with a positive NPV at all sensitivities tested. • The life of the mine is 14 years as of 30 June 2020. • After tax NPV is $892 million dollars at a 5% discount rate. Sensitivity is shown in the Figure below.

Criteria	JORC Code Explanation	Commentary
		
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*	Several potential risks and opportunities were identified.

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	the following on the project and/or on the estimation and classification of the Ore Reserves: - *Any identified material naturally occurring risks.* - *The status of material legal agreements and marketing arrangements.* - *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	- *Metal Prices* – The base case long-term gold price is $1500/ounce. - *Silver Grade* – Silver is a by-product 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. - *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 Person for Ore Reserve estimation that the Mineral Resource classification adequately represents the degree of confidence in the orebody.
Audits or reviews	- *The results of any audits or reviews of Ore Reserve estimates.*	- In 2018, OGC 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: o Geology o Geotechnical o Mine planning

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		○ 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.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed 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 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. • 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.

Criteria	JORC Code Explanation	Commentary
	the estimate should be compared with production data, where available.	

Section 5 Estimation and Reporting of Diamonds and Other Gemstones

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

[Section 5 is not applicable to the Haile Gold Mine].