Technical Report

On The

Mineral Resource Estimate Update for the Hope Brook Gold Project, Newfoundland and Labrador, Canada

NAD83 UTM Zone 21 418785 m E; 5287790 m N
LATITUDE 47° 44.3' N, LONGITUDE 58° 05' W

Prepared for:

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Report Date: April 6, 2023
Effective Date: January 17, 2023

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SGS Project # P2022-24

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1 SUMMARY

SGS Geological Services Inc. ("SGS") was contracted by Big Ridge Gold Corp., ("Big Ridge" or the "Company") to complete a Mineral Resource Estimate ("MRE") update for the Hope Brook Gold Project ("HBGP" or "Property") including the Hope Brook deposit ("HB deposit"), and to prepare a National Instrument 43-101 ("NI 43-101") technical report written in support of the MRE. The Property is an advanced stage exploration project located on the southwest coast of the island of Newfoundland, in the Province of Newfoundland and Labrador, Canada.

On February 21, 2023, Big Ridge announced an updated MRE for the HB deposit. The updated MRE is reported to contain an in-pit and underground MRE of 1.21 Million Ounces grading 2.32 g/t Au in the Indicated category and 231,000 Ounces grading 3.24 g/t Au in the Inferred category. The in-pit resources are reported at a base case cut-off grade of 0.4 g/t Au and out-of-pit resources considered accessible by underground mining methods are reported at a base case cut-off grade of 2.0 g/t Au.

On April 6, 2021, Big Ridge entered into an earn-in agreement with First Mining Gold Corp. ("First Mining"), pursuant to which the Company may earn an interest of up to 80% in the HBGP, which includes the past producing HB deposit. This transaction closed on June 8, 2021. As of the effective date of this report, the Company has earned a 51% interest in the HBGP.

Big Ridge is focused on the acquisition, exploration and development of precious-metals properties located in Canada. The Company was incorporated under the provisions of the Business Corporations Act (British Columbia) on June 6, 1987. The Company is listed on the TSX Venture Exchange as a Tier 2 mining issuer under the trading symbol BRAU and is a reporting issuer in the provinces of British Columbia and Alberta. Big Ridge's head office is located at 18 King St. East, Suite 1400 Toronto, ON, Canada, M5C 1C4 and its registered and records office is located at Suite 1500, 1055 West Georgia Street, Vancouver, British Columbia V6E 4N7.

The current report is authored by Allan Armitage, Ph.D., P. Geo., ("Armitage") and Ben Eggers, MAIG, P.Geo. ("Eggers") of SGS (the "Authors"). The MRE presented in this report was estimated by Armitage. Armitage and Eggers are independent Qualified Persons as defined by NI 43-101 and are responsible for all sections of this report.

The current Technical Report will be used by Big Ridge in fulfillment of their continuing disclosure requirements under Canadian securities laws, including National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101").

1.1 Property Description and Location

The HBGP is located on the southwest coast of the island of Newfoundland, in the province of Newfoundland and Labrador, Canada and is centered at latitude 47° 44.3' N and longitude 58° 05' W (NAD83 UTM Zone 21 418785 m E; 5287790 m N).

The HBGP is located approximately 85 km by water east of the community of Port aux Basques. The Town of Deer Lake is located 167 km north of the Property and the city of St. John's, the capitol of Newfoundland and Labrador, is located 405 km to the east of the Property.

As of the effective date of this report, the Property comprised of 1,003 claims in 5 licences representing a contiguous package acquired through map staking. The Property covers 25,075 ha. All claims measure 500 m by 500 m in size, equivalent to 25 ha.

The Ironbound Hill Property is located in the Grandys River area, 25 km east-northeast of the HBGP and 8 km west of the Burgeo Highway and is not accessible by any form of highway transportation at this time. The property was acquired by map staking on November 19, 2013. The map staked licence, 021733M, comprises 63 claims for a total area of 1,575 hectares.

Licences for both properties are owned 49% by Coastal Gold Corp., ("Coastal Gold") a 100%-owned subsidiary of First Mining and 51% Big Ridge and are currently subject of an option agreement between the parties.

Subsequent to the Effective Date of this report Big Ridge has made changes to the HBGP Property licences. According to NL regulations, mineral licences that are to be renewed beyond twenty years must conform to a maximum size of 100 claim units. Prior to this date licences may be organized into groupings of up to 256 coterminous (one common side) claims. In 2022, three of Big Ridge's licences had up to the maximum of 256 allowed claim units (1*8, 1*227 and 3*256).

As of March 27, 2023, Big Ridge had completed re-organization of the five Hope Brook licences, totaling 1,003 claim units into 10 licences totaling 979 claim units. Big Ridge has also paid the renewal fees for these licenses. A total of 24 claim units were left out of the reconfiguration and will expire in March or April 2023, depending on their respective renewal dates. The abandoned units are located over water or in areas of unfavourable geology, distant from the known mineral potential of the property.

As of March 28th, the 10 new licenses less the 24 un-reconfigured claims (approximately 24,475 ha) have been registered with the Mines Department and their renewal fees paid. The licenses retain either a March 28th or April 10th anniversary depending on the composition of claim units assembled. They will remain in good standing for 1 year and are renewable yearly for the next five years upon filing the required assessment work reports and expenditures, and paying subsequent annual renewals.

1.1.1 Earn-In Agreement between Big Ridge and First Mining

On April 6, 2021, Big Ridge entered into an earn-in agreement with First Mining, pursuant to which the Company may earn an interest of up to 80% in the HBGP, a past producing mine located in Newfoundland and Labrador. This transaction closed on June 8, 2021.

On closing, Big Ridge paid First Mining $500,000 in cash and issued 11,500,000 common shares of Big Ridge, at which point Big Ridge became the operator of the project.

Throughout the year ended June 30, 2022, and the six months ended December 31, 2022, the earn-in was comprised of two stages, as described below:

Stage 1: In order to exercise its first earn-in right to acquire a 51% interest in the Hope Brook Gold Project, the Company was required to incur and fund expenditures on the HBGP of no less than $10 million by June 8, 2024 and to issue an additional 15 million common shares to First Mining. On September 13, 2022, the Company met the expenditure requirements necessary to satisfy the first earn-in threshold set out in the Hope Brook option agreement and issued a total of 15,000,000 common shares to First Mining with an aggregate fair value of $1,950,000, completing the first earn-in related to the Hope Brook project, gaining an initial 51% interest in the project, and becoming party to a joint venture agreement for the HBGP with First Mining (49% interest). Concurrently with the creation of the joint venture, the joint venture entity granted to First Mining a 1.5% net smelter returns royalty on the HBGP, subject to a right of the Company to buy back 0.5% for $2 million.

Stage 2: To earn an additional 29% interest in the HBGP, Big Ridge must incur an additional $10 million in expenditures on the project by June 8, 2026. Upon achieving this final expenditure threshold and issuing an additional 10,000,000 common shares ("Stage 2 Shares") to First Mining, subject to the approval of the TSX Venture Exchange, Big Ridge will become the holder of an 80% interest in the HBGP. Big Ridge will solely fund all expenditures on the project up to and including the date on which Big Ridge announces the results of a feasibility study on the project, at which time First Mining's free-carry period will terminate. If the issuance of the Stage 2 Shares would result in First Mining owning more that 19.9% of the total number of Big Ridge common shares issued and outstanding following such share issuance, the number of Stage 2 Shares shall be reduced such that First Mining will own no more than 19.9% of the total number of Big Ridge common shares issued and outstanding following the issuance of the Stage 2 Shares.

> The Company's expenditures from inception of the earn-in agreement with First Mining to December 31, 2022, represent progress of approximately 31.5% against the spending requirements related to the second stage earn-in.

In addition to the spending, share issuance and royalty requirements tied to the first and second earn-ins, upon the commencement of commercial production at the project, Big Ridge will pay $2 million to First Mining.

1.2 Accessibility, Local Resources and Infrastructure

The HBGP is not accessible by any form of highway transportation at this time. Port aux Basques is the year-round terminus for the Marine Atlantic ferry service connecting the island of Newfoundland with mainland Canada at North Sydney, Nova Scotia and was used as the marine service center for the former Hope Brook mine operations. The coastal community of Burgeo, located 50 km east of the mine site, has a population of 1,607 and has access to the Trans-Canada Highway system via the Burgeo Road (Highway 480) that extends north and northwest from the community for a distance of 140 km to its junction with Highway 105 near Stephenville Crossing. The coastal outport community of Grand Bruit is located approximately 12 km southwest of the mine site but at the report date was no longer classed as a permanent settlement. The closest permanently populated outport community is La Poile, which is located on La Poile Bay, approximately 20 km west of the Hope Brook mine site. This community receives year-round Marine Atlantic coastal boat service from Port aux Basques.

Direct site access to the HBGP can be gained by chartered boat from either the Burgeo or Port aux Basques areas and could also be gained through small boat charter from La Poile, after travel to that community on the coastal service vessel. The most efficient means of current access to the property is by charter fixed wing aircraft or helicopter from commercial bases in the Deer Lake-Pasadena area, approximately 120 km to the north. The 2021- 2022 project was supported by chartered boat and barge from Burgeo and by charter aircraft based in Stephenville.

Various site infrastructure features currently exist on the Property, primarily in the form of facilities originally established to support mining activities. The facilities were not removed during site reclamation programs carried out by the provincial government. Prominent among the site facilities are:

- access to the provincial electrical grid through the existing transmission line and transformer at site,
- access to the provincial telephone land line communications system through lines originally installed to service the mine plus the nearby communities of La Poile and Grand Bruit,
- access to the roll-on and roll–off docking facility at nearby Couteau Bay, which has greater than 5 m of water depth,
- access to the 4,000 ft (~1,220 m) gravel airstrip near Couteau Bay,
- intact site roads over much of the area of past mining, including areas of current exploration interest,
- intact tailings and polishing pond facilities with associated water control structures, and
- a potentially accessible decline/ramp system that accesses the Hope Brook gold deposit to the 4,800 m mine elevation level, approximately 350 m below surface.

1.3 History of Exploration

Exploration on the HBGP began with the discovery of copper and gold in the Chetwynd Prospect area along Cinq Cerf Brook in 1923. Subsequent exploration in this area was carried out by Burgeo Mines Ltd., Buchans Mining Co. Ltd., O'Brien Gold Mines Limited, Noranda Exploration Ltd., Rio Tinto Exploration Ltd. and Hudson Bay Oil and Gas Limited, with primary interest in assessment of base metal sulphide potential.

The HB deposit was discovered in 1983 by the Selco Division of BP. Programs of deposit definition drilling, resource estimation, metallurgical assessment and feasibility assessment were completed for the HB deposit between 1984 and 1986 and a production decision was announced in 1986 by BP. That company's subsidiary, Hope Brook Gold Inc., subsequently developed and mined the deposit during the period 1987 through 1991.

Initial open pit mining was followed by underground operations. The operation was subsequently sold to Royal Oak Mines Ltd. in 1991 as part of a broader corporate re-positioning initiative that saw BP exit the mining industry. BP produced 304,732 ounces of gold.

In 1991, Royal Oak Mines Ltd. purchased the Hope Brook operation plus associated exploration properties from BP and carried out underground mining at the site until mid-1997, when operations ceased. Provincial government records and Royal Oak annual reports document production of 447,431 ounces of gold by Royal Oak during the 1992-1997 period. In 1996, Royal Oak announced its intention to close mining operations in 1997 due to depletion of reserves, and much of the onsite milling and mining equipment was removed during the following year. In April 1999 the company declared bankruptcy and its mineral title assets were awarded to the government of Newfoundland and Labrador. Royal Oak did not carry out site reclamation work.

A total of 316 BP surface drill holes and 138 underground drill holes were completed between 1983 and 1986. Royal Oak completed 9 surface holes and 120 underground holes between 1992 and 1997. A total of 152 open pit (OP) series short drill holes completed from the open pit floor by Royal Oak, for local grade assessment, were also completed between 1992 and 1997. The OP grade control holes have not been used for the current or previous resource estimates.

During the period 2002 through 2007 the provincial government carried out environmental assessment and reclamation programs at the Hope Brook mine site. No mining activities have been carried out subsequent to those of Royal Oak.

In 2003 mine area exploration holdings were staked by related entities R. Quinlan and Quest Inc. and a subsequent agreement between these interests and Benton Resources Inc. (BRI) resulted in a large land position being assembled in 2008 by BRI. The company completed an airborne magnetometer and electromagnetic survey of the entire property, compiled past drilling results, carried out prospecting and completed an extensive bedrock sampling program. No substantial new discoveries resulted from any of this work.

In 2010, BRI terminated its option to acquire the HBGP and transferred all of its associated exploration licences to R. Quinlan. Coastal Gold entered into an option to purchase agreement with the Quinlan interests in 2010 and 2012 disclosed that it had exercised its option to purchase a 100% interest in the HBGP under terms of the Quinlan agreement. Between 2010 and 2013, Coastal Gold carried out programs of drill core physical properties investigation, ground geophysics, environmental screening, data compilation, data validation, 139 diamond drill holes and drill hole extensions, vibracore tailings drilling, bedrock and tailings mineral resource estimation, metallurgical assessment and general property evaluation.

In July of 2015, First Mining acquired a 100% interest in of Coastal Gold, which became a wholly owned subsidiary. Between 2015 and 2021 First Mining carried out internal mineral resource assessments of the HB deposit, evaluated aggregate potential of waste rock in the deposit area and initiated environmental, planning and permitting studies related to construction of a road linking the property with the provincial highway system.

In April of 2021, First Mining entered into an earn-in agreement with Big Ridge that allows that company to earn up to 80 percent interest in the HBGP.

1.4 Geology and Mineralization

The HBGP property occurs within a tectonically complex zone that has been interpreted by some to occur within the Avalon Zone of the Appalachian Orogen (or a related Avalon Composite Terrane), near its generally east-west trending tectonic contact with adjacent rocks of the Dunnage Zone. Sequences of Avalonian affinity occur throughout much of the Appalachian Orogen, and extend from the Avalon Peninsula and southwest coast areas of Newfoundland, through Nova Scotia, New Brunswick and northern New England. From that point southward, more discontinuously distributed outcropping segments occur as far as northern Georgia.

Late Proterozoic bedrock sequences predominate in the HBGP area. Sequences consist of deformed volcano-sedimentary rocks, amphibolite facies gneisses and variably foliated igneous intrusions.

Foliated, greenschist facies sedimentary and volcanic sequences of the Whittle Hill Sandstone and Third Pond Tuff units are the predominant stratified sequences within the HBGP. They trend east and northeast and represent the youngest Pre-Silurian basement sequence rocks defined to date in the area, they pre-date, along with quartzo-feldspathic gneisses of the Cinq Cerf Gneiss complex, emplacement of the Roti Intrusive Suite (578±10 Ma to 563±4 Ma (Dunning and O'Brien, 1989), which is the oldest dated intrusive complex in the immediate area. These sequences were also intruded by the Wild Cove Granite (499+3-2 Ma) and younger Ernie Pond Gabbro (495±2 Ma) prior to accumulation of Silurian La Poile Group rocks and emplacement of later Silurian and Devonian intrusions. The Devonian Chetwynd Granite intrudes the stratified sequences as well as some of the older intrusions. It locally intruded and thermally metamorphosed rocks of the northeast striking Cinq Cerf Fault as well as the alteration and mineralization zones that comprise the Hope Brook deposit.

The Hope Brook gold deposit is a large, disseminated gold-chalcopyrite-pyrite deposit hosted by highly altered sedimentary and volcano-sedimentary rocks of the late Proterozoic Whittle Hill Sandstone and Third Pond Tuff successions, and similarly altered felsic porphyry dikes and sills related to the Roti Intrusive Suite. Zones hosting gold mineralization of economic interest typically bear evidence of intense silicification and occur within a broad envelope of advanced argillic alteration (AAZ) that can be traced for up to 8 km southwest of the deposit. The Devonian Chetwynd Granite appears to truncate the alteration zone and associated gold-copper mineralization at its northeast limit. Intensity of the advanced argillic alteration and impact of superimposed Silurian ductile deformation along the Cinq Cerf Fault have obscured original rock fabrics in many areas of the deposit.

The main gold zone at Hope Brook is comprised of a group of tabular to lensoid silicified zones that show a continuously mineralized, northeast trending strike length of approximately 2 km. They define a mineralized corridor zone measuring about 100 m in width and have been defined by drilling and mine workings to have an aggregate dip extent that exceeds 400 m. The main gold zone is hosted by light grey, massively silicified rocks characterized by 1% to 5% vuggy porosity and <5% to 10% total sulphides occurring as either disseminated phases or as thin veinlets and aggregates that often parallel the dominant deformation fabric present in the rocks. Pyrite is the dominant sulphide present in the first 60 m to 80 m below surface in the main deposit area but below that level increasing amounts of chalcopyrite and bornite are present, often occurring as vug-filling phases. Quartz-chalcopyrite and quartz-pyrite veins and breccias locally cross-cut this silicification stage and in some instances carry strongly elevated gold values. Geochemically anomalous levels of silver, zinc, arsenic, antimony, mercury and tin characterize the subzone along with rutile and low levels of blue quartz eye fragments. Gold grades in this subzone typically exceed 1.5 g/t Au and highest grades tend to show spatial association above 2.5 g/t Au. Grade distribution tends to be spatially consistent and not subject to high spiking "nugget" effects that are commonly associated with other types of gold deposits.

Sericitic alteration zones in variably foliated to sheared rocks associated with the Bay d'Est Fault or with possible northeast trending secondary splays that cross La Poile Group or Bay du Nord Group rocks occur within the HBGP and locally host gold mineralization. The most prominent examples of such occur at the Old Man's Pond, Phillips Brook and Cross Gulch gold occurrences. Gold mineralization in these settings is typically low grade (< 2 g /t Au), associated with quartz vein arrays and/or zones of silicification and accompanied by pyritic sulphide mineralization and carbonate alteration. Infrequent high grade gold values in quartz vein samples have also been returned. Mineralized zones are associated with altered La Poile Group volcanics and porphyries or Bay du Nord Group schists and meta-sedimentary rocks that locally show well developed strike and dip continuity. This stage of gold mineralization post-dates development of the main HB deposit and appears to be related to regionally significant zones of post-Silurian shear deformation.

The HB deposit is considered to have developed as a late Proterozoic, high sulphidation mineralizing system characterized by disseminated gold that shows deep epithermal affinity, possible original structural focus and genetic association with the Roti Intrusive Suite. The younger style of gold mineralization present within the HBGP is associated with the Bay d'Est Fault (shear zone) system. This large shear zone and its various splays are interpreted to have controlled localization of the disseminated and vein hosted styles of gold mineralization identified to date, both of which are associated with generally well-developed carbonate alteration zones.

1.5 Diamond Drilling

A total of 316 BP surface drill holes and 138 underground drill holes were completed between 1983 and 1986. Royal Oak completed 9 surface holes and 120 underground holes between 1992 and 1997. A total of 152 open pit (OP) series short drill holes completed from the open pit floor by Royal Oak, for local grade assessment, were also completed between 1992 and 1997. The OP grade control holes have not been used for the current or previous resource estimates. Coastal Gold added a total of 139 surface diamond drill holes and drill hole extensions between 2010 and 2013 to the project database.

Since acquiring the property, Big Ridge has completed 61 surface drill holes for 19,090 m from October 2021 to August 2022. Drilling highlights are presented below.

2021 – 2022 Drilling Highlights:

- Drill hole HB-21-152 intersected 5.84 g/t Au over 14.8 m **including 19.9 g/t Au over 3.4 m**
- Drill hole HB-21-142 intersected 5.58 g/t Au over 6.1 m **including 25.2 g/t Au over 0.5 m**
- Drill hole HB-21-138 intersected 1.98 g/t Au over 23.1 m **including 5.30 g/t Au over 5.89 m.**
- Drill hole HB-21-148 intersected 1.09 g/t Au over 33.0 m **including 4.52 g/t Au over 4.1 m**
- Drill hole HB-22-158 intersected 1.64 g/t Au over 20.8 m **including 5.77 g/t Au over 4.7 m**
- Drill hole HB-22-159a intersected 1.41 g/t Au over 15.1 m **including 3.25 g/t Au over 4.2 m**.
- Drill hole HB-22-167 intersected 6.43 g/t Au over 3.2 m **including 12.9 g/t Au over 1.1 m**
- Drill hole HB-22-168 intersected **5.8 g/t Au over 1.7m**.
- Drill hole HB-22-178 intersected 0.95 g/t Au over 11.7 m **including 8.86 g/t Au over 1.0 m**
- Drill hole HB-22-179 intersected 0.95 g/t Au over 32.6 m **including 2.83 g/t Au over 8.7 m**
- Drill hole HB-22-182 intersected 0.86 g/t Au over 31.3 m including **5.38 g/t Au over 1.0 m and 1.28 g/t Au over 11.8 m**.
- Drill hole HB-22-185 intersected 0.64 g/t Au over 13.3 m **including 2.37 g/t Au over 1.6 m**
- Drill hole HB-22-192 intersected 0.93 g/t Au over 17.0 m **including 1.25 g/t Au over 9.0 m and 1.54 g/t Au over 1.0 m and 4.63 g/t Au over 1.0 m**
- **Drill hole HB-22-193 intersected 17.5 g/t Au over 1.0 m**
- Drill hole HB-22-198 intersected 0.47 g/t Au over 87.0 m **including 4.40 g/t Au over 2.0 m, 1.10 g/t Au over 2.0 m and 2.50 g/t Au over 7 m.**

1.6 Mineral Processing, Metallurgical Testing and Recovery Methods

Big Ridge has yet to complete mineral processing and metallurgical testing on samples from the HBGP. In 2012, Coastal Gold carried out a scoping level metallurgical program on samples from the Hope Brook Project. This was followed by additional testwork targeting specific areas of the flowsheet by Coastal Gold in 2013.

Scoping level metallurgical testwork on samples by Coastal Gold for the HBGP was carried out by G&T Metallurgical Services Ltd. in Kamloops, BC from May to August, 2012. The objectives of the program were to evaluate potential processing routes for maximizing gold recovery and to identify operating parameters for the preliminary circuit design.

Three composites were generated for metallurgical testwork from split core samples. These consisted of a High-Grade Composite and a Low-Grade Composite from the Main Zone, as well as an overall Master Composite consisting of a 3:1 ratio of the Low-Grade and High- Grade composites. In addition, a Tailings Composite was prepared from samples collected from the site tailings pond.

A single Bond Ball Work Index test was carried out on a -6 mesh sample of the Master Composite at a closing size of 100 mesh. The results indicated a moderate work index of 12.5 kWh/tonne. One Abrasion Index test was conducted on the Master Composite that resulted in an AI of 0.178. This value indicates that grinding media consumption would be low to moderate, as compared to other operations.

Whole ore cyanidation testwork was carried out on the composite samples under standard conditions of 48 hours leaching at 1 g/L sodium cyanide concentration. Results indicated gold extractions for the Master Composite averaging 81% gold extraction at a grind size P80 of 72 µm. Finer grinding of the master composite prior to cyanidation did not improve gold extraction. For example, at a P80 of 55 µ m the gold extraction was comparable to the coarser grind at approximately 82%.

Flotation testwork was successful at generating a concentrate grading 28% Cu from flotation of cyanidation residue from the High-Grade Composite, in a process similar to the historical flowsheet at Hope Brook.

Gravity concentration tests were carried out on the Master Composite which indicated that between 16 and 41% of the contained gold was recoverable to concentrate by this method. Combined gold recoveries of ~86% were achieved with both the High-Grade and Low-Grade composites using a flowsheet consisting of gravity concentration followed by cyanidation of the gravity tailings.

Direct cyanidation of the Tailings composite resulted in up to 49% extraction of gold. Bulk flotation of sulfides, followed by fine grinding of concentrate and cyanidation did not improve overall extraction.

Additional metallurgical testing was carried out in the fall of 2013 to further advance the understanding of the metallurgy of the HB deposit. This work included batch flotation testwork focused on the opportunity to recover a saleable grade copper concentrate after the grinding and gravity recovery step.

Batch rougher tests conducted at G&T in Kamloops on the Master Composite from the 2012 program revealed that good selectivity of chalcopyrite over pyrite could be achieved with short flotation times and low doses of collector 3418A. Up to 85% of the copper was recovered to a rougher concentrate grading 7.30% Cu and representing less than 1% of the mass.

Cleaner flotation testwork followed a conventional flowsheet of regrinding to a P80 of less than 25 microns and two stages of cleaning at a pH of 11.0 and 11.5, respectively. Consistent final concentrate grades were achieved reaching a maximum open circuit copper recovery of 78.4% at a concentrate grade of 27.7% Cu. Gold recovery to the final concentrate ranged from 23% to 48%, depending on whether a gravity step was included before flotation. Overall gold recovery was not improved by including the flotation step before the leach, but it is expected that this change will improve the water balance and reduce cyanide consumption.

Scoping level testwork was also carried out at Tomra Sorting Solutions in Surrey, BC to evaluate the potential of rejecting dilution material before the grinding area using sensor-based sorting. Core samples of mineralized rock, as well as mafic dyke, hanging wall, and footwall dilution, were submitted for qualitative evaluation using four industrially applied sensors: optical, x-ray, near infrared (NIR), and magnetic.

The results indicated that the mafic dyke dilution was readily distinguished from the mineralized rock using all four detectors, indicating that this material is highly amenable to rejection by sorting. The hanging wall and footwall samples, however, were found to be only distinguishable from mineralized rock by the NIR sensor.

Additional intersections from the 2013 vibracore sampling of the tailings ponds were also submitted for flotation and cyanidation testwork. A single flotation test using the optimized conditions from the Master Composite indicated a copper recovery of 61% to an open-circuit second cleaner concentrate grading 21.4% Cu. Gold recovery to the same concentrate was low, at 15%, probably due to the lack of recoverable fine free gold in the leached tailings.

Leaching tests on high-grade (1.2 g/t Au) and low-grade (0.8 g/t Au) tailings composites resulted in cyanide leach gold extractions of 63.6% and 45.6%, respectively. The results were found to be consistent with the leach tests conducted on the earlier sample and indicate a reasonably linear relationship between grade and leach extraction.

Based on the results of the summarized testwork, a preliminary process flowsheet has been developed that includes primary jaw crushing, waste rejection by pre-sorting, SAG milling, closed-circuit ball milling with gravity recovery on the cyclone underflow, froth flotation, CIP cyanidation of the flotation tailings, carbon stripping and electrowinning, and detoxification.

Recommendations for future testwork include optimization of the gravity recovery circuit and locked-cycle testing on the copper flotation circuit and additional testing of ore sorting enhancement of mill feed.

1.7 HB Deposit Mineral Resource Estimate

The MREs presented in this technical report generally respect industry standard practices as recently established by the CIM in the Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (November 29, 2019). The MREs are disclosed in compliance with all current disclosure requirements for mineral resources set out in the NI 43-101 Standards of Disclosure for Mineral Projects (2016) and Form 43-101F1. The classification of the current Mineral Resource Estimate into Indicated and Inferred is consistent with current 2014 CIM Definition Standards - For Mineral Resources and Mineral Reserves, including the critical requirement that all mineral resources "have reasonable prospects for eventual economic extraction". The current gold Mineral Resource for the HB deposit is sub-divided, in order of increasing geological confidence, into Indicated and Inferred categories; copper is reported into the Inferred category only.

The general requirement that all Mineral Resources have "reasonable prospects for economic extraction" implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade, taking into account extraction scenarios and processing recoveries. In order to meet this requirement, Armitage considers that the HB deposit mineralization is amenable for open pit and underground extraction.

In order to determine the quantities of material offering "reasonable prospects for economic extraction" by an open pit, Whittle™ pit optimization software 4.7.1 and reasonable mining assumptions to evaluate the proportions of the block model (Indicated and Inferred blocks) that could be "reasonably expected" to be mined from an open pit were used. The pit optimization was completed by SGS. The pit optimization parameters used are summarized in Table 1-1. A Whittle pit shell at a revenue factor of 1.0 was selected as the ultimate pit shell for the purposes of this MRE.

The reader is cautioned that the results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade. A selected base case cut-off grade of 0.40 g/t Au is used to determine the in-pit MRE for the HB deposit.

In order to determine the quantities of material offering "reasonable prospects for economic extraction" by underground mining methods, reasonable mining assumptions to evaluate the proportions of the block model (Indicated and Inferred blocks) that could be "reasonably expected" to be mined from underground are used. The underground parameters used, are summarized in Table 1-1. Based on these parameters, underground Mineral Resources are reported at a base case cut-off grade of 2.0 g/t Au. For the Main Zone, underground

Mineral Resources are estimated from the bottom of the pit. The underground Mineral Resource grade blocks for the Main Zone and 240 Zone are quantified above the base case cut-off grade of 2.0 g/t Au, below the constraining pit shell (Main Zone) and within the 3D constraining mineralized wireframes (the constraining volumes).

The current MRE for the HB deposit is presented in Table 1-2 and includes in-pit and underground (below-pit) Mineral Resources.

Table 1-1 Whittle™ Pit Optimization Parameters and Parameters used for In-pit and Underground Cut-off Grade Calculation

Parameter	Value	Unit
Gold Price	$1,750.00	US$ per pound
In-Pit Mining Cost	$2.65	US$ per tonne mined
Underground Mining Cost	$54.00	US$ per tonne mined
Processing Cost	$11.55	US$ per tonne milled
General and Administrative	$4.00	US$ tonne of feed
Pit Slope - Oxide	55	Degrees
Gold Recovery	86	Percent (%)
Mining loss / Dilution (open pit)	2/5	Percent (%) / Percent (%)
Mining loss/Dilution (underground)	10/10	Percent (%) / Percent (%)
In-pit cut-off grade	0.40	
Underground cut-off grade	2.00	

Table 1-2 HB Deposit In-Pit and Underground (below-pit) Mineral Resource Estimate, January 17, 2023

IN PIT				
Hope Brook	**Cut-off Grade (g/t Au)**	**Tonnes**	**Grade (Au g/t)**	**Contained Gold Ounces**
INDICATED				
Main Zone	0.4	14,584,000	2.14	1,002,000
UNDERGROUND				
Hope Brook	**Cut-off Grade (g/t Au)**	**Tonnes**	**Grade (Au g/t)**	**Contained Gold Ounces**
INDICATED				
240 Zone	2.0	544,000	4.31	75,000
Main Zone	2.0	1,062,000	3.78	129,000
INFERRED				
240 Zone	2.0	1,994,000	3.28	210,000
Main Zone	2.0	221,000	2.96	21,000
IN PIT AND UNDERGROUND				
Hope Brook	**Cut-off Grade (g/t Au)**	**Tonnes**	**Grade (Au g/t)**	**Contained Gold Ounces**
INDICATED				
240 Zone	2.0	544,000	4.31	75,000
Main Zone	0.4 and 2.0	15,646,000	2.25	1,131,000
INFERRED				
240 Zone	2.0	1,994,000	3.28	210,000
Main Zone	2.0	221,000	2.96	21,000

Notes

(1) *The classification of the current Mineral Resource Estimate into Indicated and Inferred is consistent with current 2014 CIM Definition Standards - For Mineral Resources and Mineral Reserves*

(2) *All figures are rounded to reflect the relative accuracy of the estimate.*

(3) *All Resources are presented undiluted and in situ, constrained by continuous 3D wireframe models, and are considered to have reasonable prospects for eventual economic extraction.*

(4) *The MRE is exclusive of historically mined material.*

(5) *Mineral resources which are not mineral reserves do not have demonstrated economic viability. An Inferred Mineral Resource has a lower level of confidence than that applying to a Measured and Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.*

(6) *The updated MRE is based on data for 763 surface and underground drill holes representing 164,865 m of drilling, including data for 61 surface drill holes for 19,090 m completed by Big Ridge in 2021 and 2022.*

(7) *The mineral resource estimate is based on 2 three-dimensional ("3D") resource models for the Main Zone and 240 Zones.*

(8) *Average rock density values were assigned per zone.*

(9) *It is envisioned that parts of the Main Zone may be mined using open pit mining methods. Open pit mineral resources are reported at a base case cut-off grade of 0.4 g/t Au within a conceptual pit shell.*

(10) *It is envisioned that parts of the Main Zone as well as the 240 Zone may be mined using underground mining methods. A selected base case cut-off grade of 2.0 g/t Au is used to determine the underground mineral resource for the Main Zone and 240 Zone. The underground Mineral Resource grade blocks were quantified above the base case cut-off grade, below the constraining pit shell and within the constraining mineralized wireframes.*

(11) *Base case cut-off grades consider a metal price of US$1750.00/oz Au and considers a metal recovery of 86 % for Au.*

(12) *The pit optimization and in-pit base case cut-off grade of 0.4 g/t Au considers a mining cost of US$2.65/t rock and processing, treatment and refining, transportation and G&A cost of US$15.55/t mineralized material, and an overall pit slope of 55°. The underground base case cut-off grade of 2.0 g/t Au considers a mining cost of US$54.00/t rock and processing, treatment and refining, transportation and G&A cost of US$15.55/t mineralized material. The cut-off grades should be re-evaluated in light of future prevailing market conditions (metal prices, exchange rates, mining costs, etc.).*

(13) *The results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade.*

(14) *The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. There is no certainty that all or any part of the Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. There is no other relevant data or information available that is necessary to make the technical report understandable and not misleading.*

(15) *The Author is not aware of any known mining, processing, metallurgical, environmental, infrastructure, economic, permitting, legal, title, taxation, socio-political, or marketing issues, or any other relevant factors not reported in this technical report, that could materially affect the updated MRE.*

1.8 Recommendations

The HBGP contains within-pit and underground Indicated and Inferred Mineral Resources that are associated with well-defined mineralized trends and models. The deposit is open along strike and at depth.

Given the prospective nature of the HBGP, it is the Author's opinion that the Project merits further exploration and that a proposed plan for further work by Big Ridge is justified. A proposed work program by Big Ridge will help advance the HBGP and will provide key inputs required to evaluate the economic viability of the HBGP.

The Author is recommending Big Ridge conduct further exploration, subject to funding and any other matters which may cause the proposed exploration program to be altered in the normal course of its business activities or alterations which may affect the program as a result of exploration activities themselves.

The total cost of the recommended work program by Big Ridge is estimated at C$8.1 million. The following projects are being considered by Big Ridge for 2023:

- Continued drill testing for expansion of the deposit in the 240 Zone area.
- Using materials from the company's library of 198 drill holes and sample reject material at site for Metallurgical testing with a view to advancing and improving gold and copper recoveries and to complete ore separation testing with the objective of removing unmineralized lithologies from key mineralized material.
- Field evaluation and detailed exploration of several priority targets including Old Man's Pond, Woodman's Droke, Phillips Brook and Cross Gulch, by surface mapping and sampling, induced polarization surveys and results-based follow-up drilling.
- Preliminary exploration of the lithium potential along 30 km of the Bay d'Est fault structure along the northern boundary of the Hope Brook Property.

2 INTRODUCTION

SGS Geological Services Inc. ("SGS") was contracted by Big Ridge Gold Corp., ("Big Ridge" or the "Company") to complete a Mineral Resource Estimate ("MRE") update for the Hope Brook Gold Project ("HBGP" or "Property") including the Hope Brook deposit ("HB deposit"), and to prepare a National Instrument 43-101 ("NI 43-101") technical report written in support of the MRE. The Property is an advanced stage exploration project located on the southwest coast of the island of Newfoundland, in the Province of Newfoundland and Labrador, Canada.

On February 21, 2023, Big Ridge announced an updated MRE for the HB deposit. The updated MRE is reported to contain an in-pit and underground MRE of 1.21 Million Ounces grading 2.32 g/t Au in the Indicated category and 231,000 Ounces grading 3.24 g/t Au in the Inferred category. The in-pit resources are reported at a base case cut-off grade of 0.4 g/t Au and out-of-pit resources considered accessible by underground mining methods are reported at a base case cut-off grade of 2.0 g/t Au.

On April 6, 2021, Big Ridge entered into an earn-in agreement with First Mining Gold Corp. ("First Mining"), pursuant to which the Company may earn an interest of up to 80% in the HBGP, which includes the past producing HB deposit. This transaction closed on June 8, 2021. As of the effective date of this report, the Company has earned a 51% interest in the HBGP.

Big Ridge is focused on the acquisition, exploration and development of precious-metals properties located in Canada. The Company was incorporated under the provisions of the Business Corporations Act (British Columbia) on June 6, 1987. The Company is listed on the TSX Venture Exchange as a Tier 2 mining issuer under the trading symbol BRAU and is a reporting issuer in the provinces of British Columbia and Alberta. Big Ridge's head office is located at 18 King St. East, Suite 1400 Toronto, ON, Canada, M5C 1C4 and its registered and records office is located at Suite 1500, 1055 West Georgia Street, Vancouver, British Columbia V6E 4N7.

The current report is authored by Allan Armitage, Ph.D., P. Geo., ("Armitage") and Ben Eggers, MAIG, P.Geo. ("Eggers") of SGS (the "Authors"). The MRE presented in this report was estimated by Armitage. Armitage and Eggers are independent Qualified Persons as defined by NI 43-101 and are responsible for all sections of this report.

The current Technical Report will be used by Big Ridge in fulfillment of their continuing disclosure requirements under Canadian securities laws, including National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101").

2.1 Sources of Information

In preparing the current Property MRE and the current technical report, Armitage has utilized a digital database, previous NI 43-101 technical reports and miscellaneous internal technical reports provided by Big Ridge. The current technical report also benefits from extensive discussions with Big Ridge personnel regarding the geology of the deposits and results of recent exploration programs completed by Big Ridge.

The Project was the subject of a recent NI 43-101 Technical Report for Big Ridge including:

- *Ni 43-101 Technical Report for the Hope Brook Gold Project Newfoundland and Labrador Canada; prepared for Big Ridge Mining Corp. dated May 6, 2021, and with an effective date of April 6, 2021 by Mercator Geological Services Limited.*

The Project was the subject of several previous NI 43-101 Technical Reports from 2010 to 2015, including MREs, most recently for Coastal Gold Corp. and First Mining Finance Corp.:

- *2015 Mineral Resource Estimate Technical Report for the Hope Brook Gold Project, Newfoundland and Labrador, Canada; NI43-101 Technical Report prepared for First Mining Finance Corp., dated February 24, 2015 and with an effective date of January 12, 2015, by Mercator Geological Services Limited.*

- *2013 Mineral Resource Estimate Technical Report, Hope Brook Gold Project, Newfoundland and Labrador, Canada; NI43-101 Technical Report prepared for Coastal Gold Corp., dated January 20,*
- *2014 and with an effective date of December 4, 2013, by AGP Mining Consultants Inc. and Mercator Geological Services Limited.*

Information regarding the property exploration history, previous mineral resource estimates, regional property geology, deposit type, recent exploration and drilling, metallurgical test work, and sample preparation, analyses, and security for previous drill programs (Sections 5-13) have been sourced from the recent technical reports and revised or updated as required. The Author believes the information used to prepare the current Technical Report is valid and appropriate considering the status of the Project and the purpose of the Technical Report.

2.2 Site Visit

Armitage completed a site visit to the Property from August 24 to 26, 2022, accompanied by Bill McGuinty P. Geo., Vice President Exploration and QP for the purposes of National Instrument 43-101 for Big Ridge. Access to the Property was by small fixed-wing aircraft from Deer Lake, Newfoundland to a well-established gravel airstrip located on the Property.

At the time of the site visit, the drill had just been shut down for the season. However, final completed holes were in the process of being logged, sampled and samples shipped.

During the site visit, the Author had the opportunity to examine a number of selected mineralized core intervals from historical and recent diamond drill holes (HB-22-182, -185, -196 and -198). The Author examined accompanying drill logs and assay certificates and assays were examined against the drill core mineralized zones. All core boxes were accessible, well labelled (metal tags) and properly stored outside either in core racks (recent holes) or in palletized cross stacked piles, by hole. Sample tags were still present in the boxes and it was possible to validate sample numbers and confirm the presence of mineralization in witness half-core samples from the mineralized zones.

The Author had the opportunity to inspect the offices, core logging and sampling facilities and core storage areas, and had discussions with the on-site geologists regarding the core sampling and QA/QC procedures, core shipping and security procedures, and analytical procedures.

The Author participated in a field tour of the Property to become familiar with current conditions on the Property, to observe and gain an understanding of the geology and various styles mineralization, and to verify the work done including surface drilling and past mining. Armitage visited a number outcrops to look at the mineralization in the field, as well as outcrops to become familiar with the geology in the hanging wall and footwall to the mineralization. Armitage inspected a number of historical and recent drill sites, the open pits, the tailings pond and tailing dams, the airstrip and docking facilities.

As a result of the site visit, the Author was able to become familiar with conditions on the Property, was able to observe and gain an understanding of the geology and various styles mineralization, was able to verify the work done and, on that basis, is able to review and recommend to Big Ridge an appropriate exploration program.

The Author considers the site visit current, per Section 6.2 of NI 43-101CP. To the Authors knowledge there is no new material scientific or technical information about the Property since that personal inspection. The technical report contains all material information about the Property.

2.3 Effective Date

The Effective Date of the current MRE is January 17, 2023.

2.4 Units and Abbreviations

Units used in the report are metric units unless otherwise noted. Monetary units are in United States dollars (US$) unless otherwise stated.

Table 2-1 List of Abbreviations

$	Dollar sign	m^3	Cubic meters
%	Percent sign	masl	Metres above sea level
°	Degree	mm	millimetre
°C	Degree Celsius	mm^2	square millimetre
°F	Degree Fahrenheit	mm^3	cubic millimetre
µm	micron	Moz	Million troy ounces
AA	Atomic absorption	MRE	Mineral Resource Estimate
Ag	Silver	Mt	Million tonnes
Au	Gold	NAD 83	North American Datum of 1983
Az	Azimuth	mTW	metres true width
CAD$	Canadian dollar	NI	National Instrument
CAF	Cut and fill mining	NN	Nearest Neighbor
cm	centimetre	NQ	Drill core size (4.8 cm in diameter)
cm^2	square centimetre	NSR	Net smelter return
cm^3	cubic centimetre	oz	Ounce
Cu	Copper	OK	Ordinary kriging
DDH	Diamond drill hole	Pb	Lead
ft	Feet	ppb	Parts per billion
ft^2	Square feet	ppm	Parts per million
ft^3	Cubic feet	QA	Quality Assurance
g	Grams	QC	Quality Control
GEMS	Geovia GEMS 6.8.3 Desktop	QP	Qualified Person
g/t or gpt	Grams per Tonne	RC	Reverse circulation drilling
GPS	Global Positioning System	RQD	Rock quality designation
Ha	Hectares	SD	Standard Deviation
HQ	Drill core size (6.3 cm in diameter)	SG	Specific Gravity
ICP	Induced coupled plasma	SLS	Sub-level stoping
ID^2	Inverse distance weighting to the power of two	t.oz	Troy ounce (31.1035 grams)
ID^3	Inverse distance weighting to the power of three	Ton	Short Ton
kg	Kilograms	Zn	Zinc
km	Kilometre	Tonnes or T	Metric tonnes
km^2	Square kilometre	TPM	Total Platinum Minerals
kt	Kilo tonnes	US$	US Dollar
m	Metre	µm	Micron
m^2	Square metre	UTM	Universal Transverse Mercator

3 RELIANCE ON OTHER EXPERTS

Verification of information concerning Property status and ownership, which are presented in Section 4 below, have been provided to the Author by Bill McGuinty P.Geo. FGC, Vice President Exploration for Big Ridge by way of an E-mail on March 13 and April 1, 2023. The Author only reviewed the land tenure in a preliminary fashion and has not independently verified the legal status or ownership of the Property or any underlying agreements or obligations attached to ownership of the Property. However, the Author has no reason to doubt that the title situation is other than what is presented in this technical report (Section 4). The Author is not qualified to express any legal opinion with respect to Property titles or current ownership.

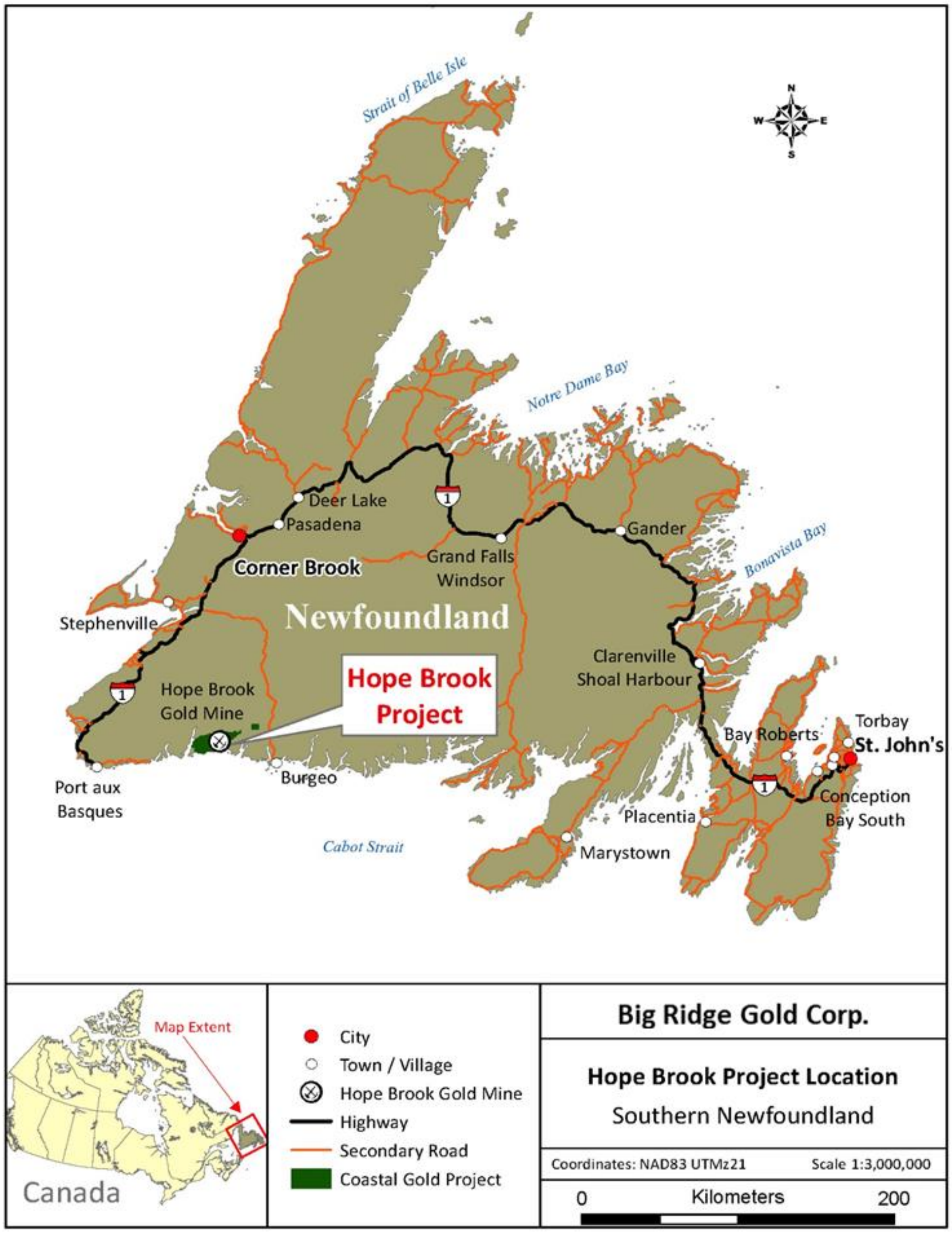
4 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

The HBGP is located on the southwest coast of the island of Newfoundland, in the province of Newfoundland and Labrador, Canada and is centered at latitude 47° 44.3' N and longitude 58° 05' W (NAD83 UTM Zone 21 418785 m E; 5287790 m N).

The HBGP is located approximately 85 km by water east of the community of Port aux Basques. The Town of Deer Lake is located 167 km north of the Property and the city of St. John's, the capitol of Newfoundland and Labrador, is located 405 km to the east of the Property (Figure 4-1).

Figure 4-1 Property Location Map



As of the effective date of this report, the Property comprised of 1,003 claims in 5 licences (Figure 4-2, Table 4-1) representing a contiguous package acquired through map staking. The Property covers 25,075 ha. All claims measure 500 m by 500 m in size, equivalent to 25 ha.

The Ironbound Hill Property is located in the Grandys River area, 25 km east-northeast of the HBGP and 8 km west of the Burgeo Highway (Figure 4-2) and is not accessible by any form of highway transportation at this time. The property was acquired by map staking on November 19, 2013. The map staked licence, 021733M, comprises 63 claims for a total area of 1,575 hectares (Table 4-1, Table 4-2).

Licences for both properties are fully owned by Coastal Gold Corp., ("Coastal Gold") a 100%-owned subsidiary of First Mining and are currently under option to Big Ridge.

Figure 4-2 HBGP – Mineral Licence Map

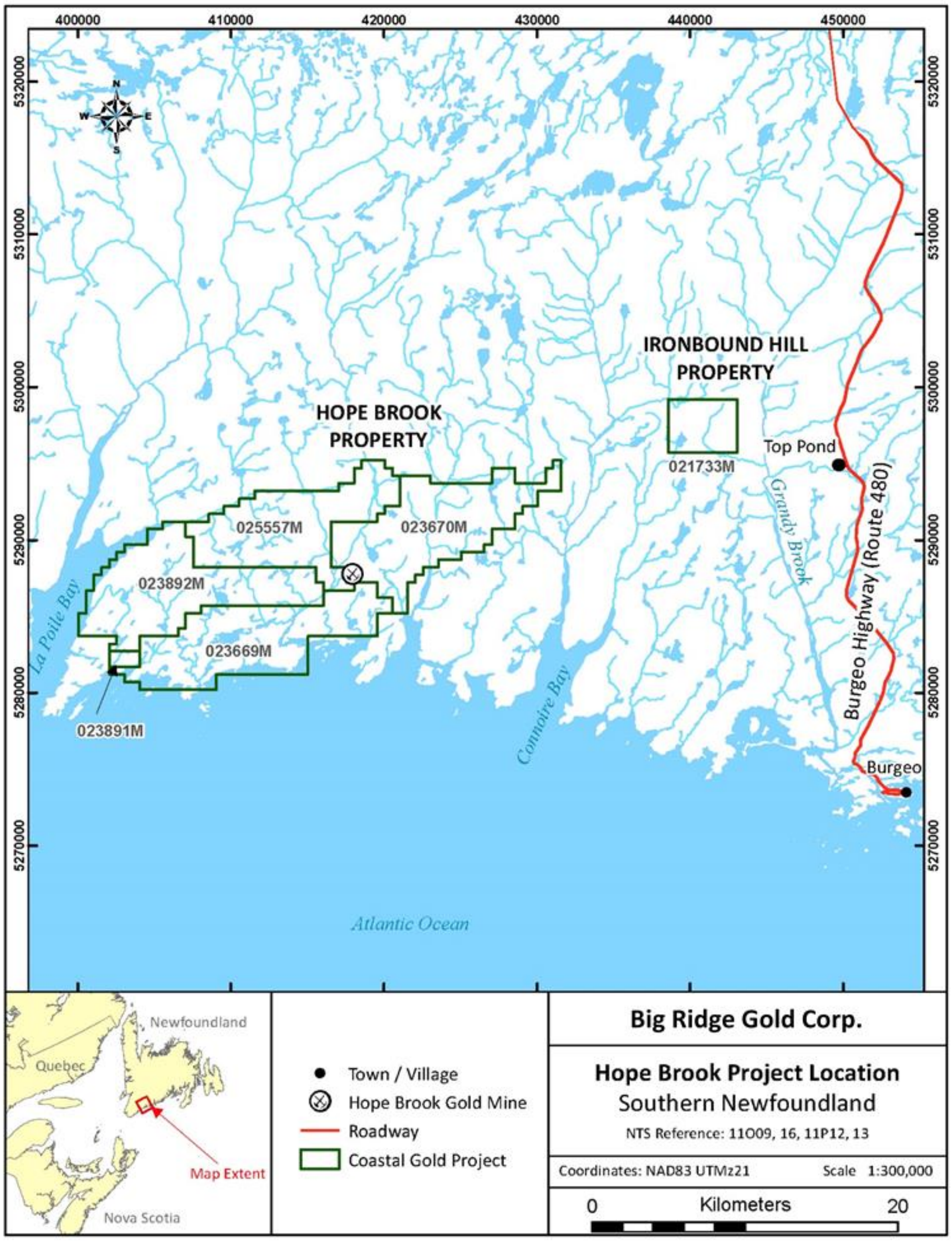


Table 4-1 Mineral Licences, HBGP

Licence Number	Property	No. of Claims	Recording Date	Anniversary Date	Area (Ha.)	Recorded Owner
021733M	Ironbound Hill	63	19-Dec-2013	19-Dec-2025	1,575	Coastal Gold Corp.
023669M	Hope Brook	256	10-Apr-2003	10-Apr-2024	6,400	Coastal Gold Corp.
023670M	Hope Brook	256	10-Apr-2003	10-Apr-2024	6,400	Coastal Gold Corp.
023891M	Hope Brook	8	10-Apr-2003	10-Apr-2024	200	Coastal Gold Corp.
023892M	Hope Brook	256	28-Mar-2003	28-Mar-2024	6,400	Coastal Gold Corp.
025557M	Hope Brook	227	28-Mar-2003	28-Mar-2024	5,675	Coastal Gold Corp.

4.1.1 Hope Brook Licence Conversion

Subsequent to the Effective Date of this report Big Ridge has made changes to the HBGP Property licences. According to NL regulations, mineral licences that are to be renewed beyond twenty years must conform to a maximum size of 100 claim units. Prior to this date licences may be organized into groupings of up to 256 coterminous (one common side) claims. In 2022, three of Big Ridge's licences had up to the maximum of 256 allowed claim units (1*8, 1*227 and 3*256).

On or before the 20th anniversary, with payment of annual renewal fees of $200 per claim unit, larger licences must be broken down to match the 100-unit requirement. This can be done while retaining all claims and regrouping them into new licences. There are no restrictions on the shape of mineral licenses except the coterminous condition.

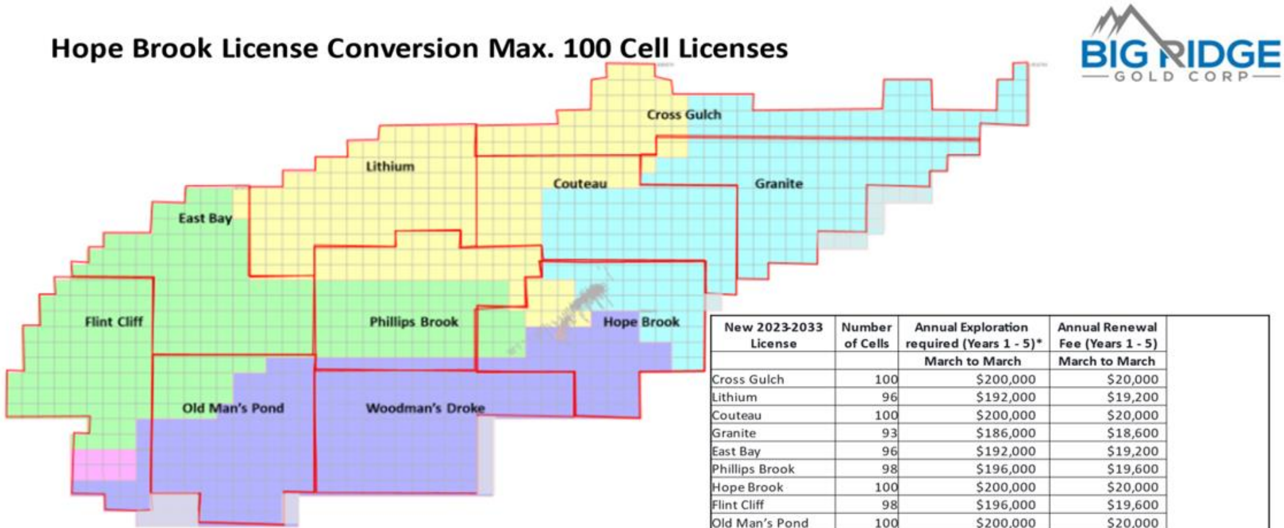
It should be noted that merging cells from licenses with the two expiry dates of 28-Mar-23 and 10-Apr-23 will cause all the newly generated licence(s) to have the earlier anniversary date.

Also, upon entering the 21st year, all banked exploration credits are voided, thereby requiring an exploration expenditure on each new license, equivalent to $2,000 per constituent claim unit, in year 21 to meet renewal requirements. Big Ridge has selected new licence polygons to address efficiency of assessment work application and protection of the HBGP core assets, namely the HB deposit and infrastructure as well as other known targets.

As of March 27, 2023, Big Ridge had completed re-organization of the five Hope Brook licences, totaling 1,003 claim units into 10 licences totaling 979 claim units (Figure 4-3). Big Ridge has also paid the renewal fees for these licenses. A total of 24 claim units were left out of the reconfiguration and will expire in March or April 2023, depending on their respective renewal dates. The abandoned units (light gray areas in Figure 4-3) are located over water or in areas of unfavourable geology, distant from the known mineral potential of the property.

As of March 28th, the 10 new licenses less the 24 un-reconfigured claims (approximately 24,475 ha) have been registered with the Mines Department and their renewal fees paid. The licenses retain either a March 28th or April 10th anniversary depending on the composition of claim units assembled. They will remain in good standing for 1 year and are renewable yearly for the next five years upon filing the required assessment work reports and expenditures, and paying subsequent annual renewals.

Figure 4-3 Hope Brook License Conversion (as of March 28th 2023)



New 2023-2033 License	Number of Cells	Annual Exploration required (Years 1 - 5)*	Annual Renewal Fee (Years 1 - 5)	
		March to March	March to March	
Cross Gulch	100	$200,000	$20,000	
Lithium	96	$192,000	$19,200	
Couteau	100	$200,000	$20,000	
Granite	93	$186,000	$18,600	
East Bay	96	$192,000	$19,200	
Phillips Brook	98	$196,000	$19,600	
Hope Brook	100	$200,000	$20,000	
Flint Cliff	98	$196,000	$19,600	
Old Man's Pond	100	$200,000	$20,000	
Woodman's Droke	98	$196,000	$19,600	
Dropped with New License Creation	24	$0	$0	**Total Property Annual**
for Years 1 - 5 $2,000 / cell		$1,958,000	$195,800	$2,153,800
* for Years 6 - 10 $2500 / cell		$489,500		
		$2,447,500	$195,800	$2,643,300

4.2 Earn-In Agreement between Big Ridge and First Mining

On April 6, 2021, Big Ridge entered into an earn-in agreement with First Mining, pursuant to which the Company may earn an interest of up to 80% in the HBGP, a past producing mine located in Newfoundland and Labrador. This transaction closed on June 8, 2021.

On closing, Big Ridge paid First Mining $500,000 in cash and issued 11,500,000 common shares of Big Ridge, at which point Big Ridge became the operator of the project.

Throughout the year ended June 30, 2022, and the six months ended December 31, 2022, the earn-in was comprised of two stages, as described below:

Stage 1: In order to exercise its first earn-in right to acquire a 51% interest in the Hope Brook Gold Project, the Company was required to incur and fund expenditures on the HBGP of no less than $10 million by June 8, 2024 and to issue an additional 15 million common shares to First Mining. On September 13, 2022, the Company met the expenditure requirements necessary to satisfy the first earn-in threshold set out in the Hope Brook option agreement and issued a total of 15,000,000 common shares to First Mining with an aggregate fair value of $1,950,000, completing the first earn-in related to the Hope Brook project, gaining an initial 51% interest in the project, and becoming party to a joint venture agreement for the HBGP with First Mining (49% interest). Concurrently with the creation of the joint venture, the joint venture entity granted to First Mining a 1.5% net smelter returns royalty on the HBGP, subject to a right of the Company to buy back 0.5% for $2 million.

Stage 2: To earn an additional 29% interest in the HBGP, Big Ridge must incur an additional $10 million in expenditures on the project by June 8, 2026. Upon achieving this final expenditure threshold and issuing an additional 10,000,000 common shares ("Stage 2 Shares") to First Mining, subject to the approval of the TSX Venture Exchange, Big Ridge will become the holder of an 80% interest in the HBGP. Big Ridge will solely fund all expenditures on the project up to and including the date on which Big Ridge announces the results of a feasibility study on the project, at which time First Mining's free-carry period will terminate. If the issuance of the Stage 2 Shares would result in First Mining owning more that 19.9% of the total number of Big Ridge common shares issued and outstanding following such share issuance, the number of Stage 2 Shares shall be reduced such that First Mining will own no more than 19.9% of the total number of Big Ridge common shares issued and outstanding following the issuance of the Stage 2 Shares.

The Company's expenditures from inception of the earn-in agreement with First Mining to December 31, 2022, represent progress of approximately 31.5% against the spending requirements related to the second stage earn-in.

In addition to the spending, share issuance and royalty requirements tied to the first and second earn-ins, upon the commencement of commercial production at the project, Big Ridge will pay $2 million to First Mining.

4.3 Royalty Agreement

Coastal Gold acquired an option to purchase a 100% interest in the original 993 constituent claims of the HBGP over a four-year period under terms of an agreement between Castillian Resources Corp. ("Castillian") - a previous name of Coastal Gold) with Roland Quinlan, Mervin Quinlan and Eddie Quinlan dated January 22, 2010. Coastal Gold disclosed by press release on November 1st, 2012 that it had exercised its option to purchase a 100% interest in the 993 claims that were subject to the option to purchase agreement. In 2012, Dr. William Pearson, then President and CEO of Coastal Gold, confirmed that the option to purchase the original 993 claims was exercised on October 27th, 2012 and that all cash payments and issuances of stock to the vendors required by the effective date of this report had been made.

After purchase of the 100% interest by Coastal Gold, a 2% net smelter return royalty payable to the vendors applies under terms of a royalty pre-payment schedule of $20,000 per year that initiates after year four of the agreement.

All HBGP mineral exploration titles excepting 21733M (Ironbound Hill) are subject to the royalty terms provided for in the Letter Option Agreement dated January 22, 2010 between Castillian and Roland Quinlan, Mervin Quinlan and Eddie Quinlan, which is subject to an Amending Agreement ("Amended Letter Agreement") dated February 17, 2012 made between Roland Quinlan, Mervin Quinlan and Eddie Quinlan and Castillian. The Amended Letter Agreement provides for a 2% net smelter return royalty in favour of Roland Quinlan, Mervin Quinlan and Eddie Quinlan (the "Quinlan NSR") plus an annual advance royalty payment of CDN $20,000.00 to Roland Quinlan, Mervin Quinlan and Eddie Quinlan payable in each year subsequent to the fourth year anniversary of the Amended Letter Agreement (the "Advance Royalty"), which Advance Royalty is to be deducted from any and all royalty payments due following commencement of production. The Amended Letter Agreement further provides that Castillian shall have the option to purchase 50% of the Quinlan NSR for CDN $1,000,000.00 at any time during the term of the Amended Letter Agreement.

4.4 Mineral Tenure System in Newfoundland and Labrador

Mineral exploration claims in Newfoundland and Labrador are issued under the province's Mineral Act (the Act) as Amended in 1991 c36 s74; 1992 cF-7.1 s20; 1992 c41; 1994 c14; 1995 c11; 1995 c12; 1997 c13 s44; 1998 c14; 1999 cM-15.1 s25; 2000 c10; 2002 cW-4.01 s101; 2004 c17; 2004 cL-3.1 s48. Any individual 19 years of age or more and registered with the provincial mineral claims on-line staking system, or a comparably registered corporation, can acquire mineral exploration claims in the province. Exploration licenses are issued for a period of five years and can be renewed through application, payment of prescribed renewal fees and demonstration that required yearly assessment work has been performed.

Claim staking at this time is through the province's Mineral Rights Administration - MIRIAD - System, which is an on-line pass-worded system for registered users. Map staking covers all areas deemed open for staking at the time of title application. Restrictions exist in some areas where leases, grants or other legally binding instruments vest mineral rights with non-Crown entities. Such areas generally reflect land grants, concessions or other historical facilities and since July 12, 1977, many of these have been subject to legislation that limits their future continuance.

The current basic unit of exploration title accessible through the on-line system is the “claim” which measures 500 m by 500 m in size (25 ha) and represents one quarter of a one km square Universal Transverse Mercator grid block, based on 1:50,000 scale reference maps using North American Datum 27 (NAD 27). Submission of a staking fee consisting of $60 per claim is required at the time of license application and this fee reflects a $10 charge for staking combined with a $50 security deposit. Annual work requirements for each claim are set out under the Act and these are presented in Table 4-2. Upon acceptance of submitted work reports at the end of the first year of issue, the $50 security deposit is refunded to the licensee. Various detailed provisions covering termination, renewal, and other issues surrounding exploration title are covered by the Act and associated Regulations, copies of which are available on-line and through provincial government offices.

Mining claims may be grouped into ‘licenses’ comprised of a maximum of 256 coterminous (common side) claims at any time during the first 20 years subject to the renewal date of the oldest claim to be grouped. Upon the 20th anniversary of the license regulation requires that the size of all licenses be no more than 100 claim units. License holders may reorganize their holdings to this requirement by reallocating claims to smaller licenses with no loss of mineral land. Big Ridge will undertake this process at the HBGP in 2023.

Written notice of initiation of exploration programs on licenses must be submitted to the provincial government prior to commencement of the exploration work. Development work leading to mine production can only proceed under the terms of a Mining Lease issued by the provincial government under terms of the Act. Legal surveying is required for any lands held under a Mining Lease and the Act specifies Royalties on mine production that are payable to the provincial government.

Table 4-2 Claim Renewal Fees and Work Requirements

Year of Issue	*Required Work Value	Renewal Fee Required
1	$200 per claim	$25 per claim for Year 5
2	$250 per claim	$50 per claim for year 10
3	$300 per claim	$100 per year for year 15
4	$350 per claim	$200 per claim for years 20 and 25
5	$400 per claim	
6 through 10	$600 per claim	
11 through 15	$900 per claim	
16 through 20	$1,200 per claim	
Reallocation of Licenses to maximum of 100 claim units required		
21 through 25	$2,000 per claim	
26 through 30	$2500 per claim	

*CDN$

4.5 Permits Required for Recommended Future Exploration

To carry out surface exploration programs recommended in this report Big Ridge requires permits to access Crown lands for intrusive mineral exploration activities such as core drilling and trenching and also for access to surface sites at which camp facilities are present. Additional permitting is required in instances where proposed intrusive work such as drilling, trenching or road making is planned to occur within 200 m of a recognized salmon stream or for such work as tailings deposit sampling programs.

As of the effective date of the current report, Big Ridge has yet to apply for exploration permits for the proposed 2023 field program. However, with respect to the License to Occupy that applies to the Hope Brook exploration camp, it is understood to currently be in good standing.

4.6 Environmental Liabilities

The Hope Brook mine production period spanned the 1987-1997 period and was preceded by exploration and development programs carried out between 1983 and 1987. During the course of these activities substantial modifications to natural landscapes were made to accommodate site infrastructure required to support mining and milling activities. Included in such modifications were construction of open pit and underground mining facilities, milling facilities, heap leach pads, a site road system, a docking facility at Couteau Bay, an airstrip, and establishment of tailings pond, solid waste management and site drainage control facilities. All of this was carried out under the terms of required environmental and other approvals of the day. Public records show that during the course of mining and milling activities BP encountered difficulty at times in maintaining acceptable metal and cyanide levels in site discharges which periodically impacted local receiving watersheds. Royal Oak subsequently modified processing methods and facilities to negate this problem and continued operation until closure in 1997.

Due to financial difficulties that led to bankruptcy of Royal Oak in April of 1999, environmental reclamation of the Hope Brook site was not completed by that company. After being awarded ownership of the site and remaining infrastructure, the Newfoundland government initiated a major reclamation effort with work programs spanning the period 2001 to 2004. Site programs included environmental assessment and monitoring, removal of remaining site infrastructure, upgrading of tailings dams and other water control structures, placement of acid generating waste rock and remaining heap leach pad materials in the water-filled open pit, clean up and capping of landfill sites, de-commissioning the mine power network and communication services, installation of fencing around the open pit, and establishment of on-going water quality and tailings dam structural monitoring programs.

Big Ridge confirmed that the Newfoundland and Labrador government had previously provided assurance that Coastal Gold's site liability during exploration programs carried out in this area will be limited to impacts of those exploration activities and that these will be appropriately addressed under terms of permits normally required for completion of exploration activities. Big Ridge also confirmed that this assurance remains in effect at the present time. Any future proposed programs by Big Ridge will be designed to minimize site impacts.

As part of the 2011 work program, Fracflow Consultants Inc. (FracFlow) of St. John's NL was retained to carry out a screening level assessment of baseline environmental conditions at the Hope Brook site. Results of this study showed that a number of chemical impacts that are residual to the former mining operation are present locally. These include elevated metal levels in soil, sediment and water as well as elevated petroleum hydrocarbon levels in soil. The most significant liabilities were deemed to be associated with subsurface conditions where impairment to both soil and groundwater had occurred around existing landfill sites, the heap leach pad, and within the underground mine workings.

All of these conditions pre-date Big Ridge, First Mining and Coastal Gold site activities and the companies are excluded from associated liability. However, if a new mining venture is established at this site it will be necessary to fully quantify the potential impacts of such conditions on site development, mining and site decommissioning and reclamation plans for any new operation. All such issues would be dealt with under the mine permitting and associated environmental approval processes.

In addition to programs described above, FracFlow carried out a baseline surface water monitoring program for the two tailings pond systems and also completed systematic water sampling during the 2013 vibracore drilling program conducted to assess economic potential of gold and copper occurring in the tailings deposits.

4.7 Other Relevant Factors

The Authors are unaware of any other significant factors and risks that may affect access, title, or the right, or ability to perform exploration work recommended for the Property.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

5.1 Accessibility, Local Resources and Infrastructure

The HBGP is located approximately 85 km by water east of the community of Port aux Basques (4,170 population - 2011 census) and is not accessible by any form of highway transportation at this time (Cullen et al., 2021). Port aux Basques is the year-round terminus for the Marine Atlantic ferry service connecting the island of Newfoundland with mainland Canada at North Sydney, Nova Scotia and was used as the marine service center for Hope Brook mine operations (Figure 4-1). The coastal community of Burgeo, located 50 km east of the mine site, has a population of 1,607 (2006 Census) and has access to the Trans-Canada Highway system via the Burgeo Road (Highway 480) that extends north and northwest from the community for a distance of 140 km to its junction with Highway 105 near Stephenville Crossing. The coastal outport community of Grand Bruit is located approximately 12 km southwest of the mine site but at the report date was no longer classed as a permanent settlement. The closest permanently populated outport community is La Poile (103 population - 2011 census), which is located on La Poile Bay, approximately 20 km west of the Hope Brook mine site. This community receives year-round Marine Atlantic coastal boat service from Port aux Basques.

Direct site access to the HBGP can be gained by chartered boat from either the Burgeo or Port aux Basques areas and could also be gained through small boat charter from La Poile, after travel to that community on the coastal service vessel. The most efficient means of current access to the property is by charter fixed wing aircraft or helicopter from commercial bases in the Deer Lake-Pasadena area, approximately 120 km to the north. The 2021- 2022 project was supported by chartered boat and barge from Burgeo and by charter aircraft based in Stephenville.

Various site infrastructure features currently exist on the Property, primarily in the form of facilities originally established to support mining activities. The facilities were not removed during site reclamation programs carried out by the provincial government. Prominent among the site facilities are:

- access to the provincial electrical grid through the existing transmission line and transformer at site,
- access to the provincial telephone land line communications system through lines originally installed to service the mine plus the nearby communities of La Poile and Grand Bruit,
- access to the roll-on and roll–off docking facility at nearby Couteau Bay, which has greater than 5 m of water depth,
- access to the 4,000 ft (~1,220 m) gravel airstrip near Couteau Bay,
- intact site roads over much of the area of past mining, including areas of current exploration interest,
- intact tailings and polishing pond facilities with associated water control structures, and
- a potentially accessible decline/ramp system that accesses the Hope Brook gold deposit to the 4,800 m mine elevation level, approximately 350 m below surface.

5.2 Climate

The climate of southwestern coastal Newfoundland is strongly affected by proximity of the Atlantic Ocean, which exerts a moderating effect with respect to temperature extremes. However, dramatic seasonal variations occur, with winter conditions of freezing temperatures and moderate to heavy snowfall expected from late December through late March. Spring and fall seasons are cool, with frequent periods of rain and frequent heavy fog. Summer conditions typically prevail from July through early September and provide good working conditions for field parties. Environment Canada records for the 1971 to 2000 period for Burgeo, located on the coast approximately 50 km east of the Hope Brook mine site, show daily mean temperatures in August of 14.7 degrees C and an average maximum August daily temperature of 18.1 degrees C. Average daily winter maximum temperature in February is -2.6 degrees C and the corresponding average minimum is -10.4 degrees C. The extreme winter minimum is -25.9 degrees C. Average yearly precipitation totals 1,708.6 mm which includes 276.7 cm of snowfall. Weather and site conditions during the spring breakup period can prevent some exploration activities from being carried out due to high water levels and remnant snow cover. Scheduling of field activities to avoid this period is advisable. Winter programs can be carried out with adequate consideration given to noted snowfall and cold temperature conditions as well as potentially high wind conditions that generally accompany storm events.

5.3 Physiography

Topography of the HBGP defines two distinct physiographic elevation domains that correspond to differing underlying bedrock types. The first is characterised by a gently rolling land surface having predominantly tundra attributes that rises from sea level to an elevation of approximately 150 m above sea level. This area is generally underlain by rocks of the late Proterozoic stratified volcano-sedimentary sequences of the Whittle Hill Sandstone – Third Pond Tuff succession plus Lower Paleozoic and younger igneous intrusions. The second topographic domain rises abruptly from the first and broadly corresponds with transition to areas underlain by Silurian rocks of the La Poile Group. This abrupt physiographic transition is well-illustrated in the Cinq Cerf River area, where Silurian rocks of the La Poile Group forming Dinnerbox Hill, west of the Hope Brook mine site, rise abruptly above older sequences that outcrop extensively in the river valley bottom (Figure 5-1 and Figure 5-2). Topographic relief across the property ranges from sea level to a maximum of approximately 400 m with a gradual increase in elevation occurring from south to north across the property.

Areas underlain by the large Silurian and Devonian intrusive complexes, such as those located north of the Hope Brook mine site, form rounded topographic highs with morphology reflecting well developed orthogonal jointing patterns. The Hope Brook mine area and the associated AAZ alteration zone adjoin the Cinq Cerf valley to the east and show elongate, well defined northeast trending ridges of 5 m to 15 m height that correspond with resistant bedrock lithologies such as silicified Whittle Hill Sandstone, porphyry dikes and other lithologies. Intervening topographic lows often mark zones of less resistant altered bedrock.

Barren land or tundra conditions characterize much of the HBGP, with irregularly developed coniferous forest cover consisting primarily of black spruce and fir being discontinuously present in river valley bottom areas and along protected side valleys or slopes (Figure 5-7). Substantial areas of boggy ground with associated peat development are also present, as are areas of stunted low growth tuckamore. Barren land expanses are characterised by lichen and moss cover interspersed with grasses and low bushes of various types. Outcropping bedrock is extensively developed in many areas, particularly at higher elevations and in barren land settings, and this facilitates prospecting and geological mapping activities. Well-developed soil profiles are present along valleys and where glacial overburden is comprised of thicker till sections, but limited development of only organic layers is also common.

The entire HBGP area has been glaciated and most low relief areas are now mantled with a thin to moderately thick layer of till and/or glacial fluvial deposits. In contrast, upland areas are characterized by abundance of angular bedrock outcroppings, including steep cliff and slope exposures that locally account for more than 80 percent of surface area. Relatively youthful drainage systems characterize the region, with first order north-south river valleys showing high gradient transitions to surrounding uplands through short second and third order stream systems. Low relief areas in both upland and lowland settings are generally characterised by abundance of small lakes and ponds with poorly developed, if any, interconnecting drainage systems. Glacial modification of bedrock ridges and outcroppings is commonly evident through ridge morphology, rounding, polishing and presence of well-developed striation sets.

5.4 Availability of Surface Rights, Power, Water and Personnel

All areas covered by the MRE presented in this report occur on lands owned by the province of Newfoundland and Labrador and access to lands sufficient to support past mining operations was established under terms of agreement with the provincial government. Development of any future mining operation at this site would be expected to follow the same course, subject to possible local restrictions established on the basis of environmental permitting factors relevant to watershed issues, wildlife, historic contamination or other issues related to the 1987-1997 operating period. The deposit area is non-populated at present and is surrounded by an abundance of cleared and levelled site components that would favorably contribute to future development.

In addition, and as outlined previously, access to the provincial electrical grid is available at the Hope Brook site and could greatly benefit any future mining project. The current exploration camp is connected to the electrical grid. Similarly, the abundance of surface water resources at the site is a positive factor for future development, as is the presence of a tidewater wharf facility, site road infrastructure, an operational airstrip, accessible mine workings and established tailings pond facilities with remaining capacity and water control structures.

Work forces in western Newfoundland have historical association with the natural resources sector through long-term presence of pulp and paper making, lumbering, fishing and mining and oil and gas industries. Much of the workforce employed during mining operations at the Hope Brook site was sourced in this area and it is reasonable to assume that a future new development at the Hope Brook site could benefit from the regional workforce.

Figure 5-1 Proterozoic age rock underlying tundra south of Cinq Cerf River

Figure 5-2 Silurian promontories north of Cinq Cerf River

6 HISTORY

A summary of the exploration history on the Hope Brook and Ironbound Hill properties is provided in Tables 2 and 3. More detailed descriptions of the exploration history of the properties can be found in Cullen et al., (2021) as well as Cullen (2015a and 2015b), Cullen (2010) and Desautels et al. (2012a, 2012b and 2014).

6.1 Hope Brook Property

Table 6-1 Hope Brook Property Exploration History

1902 - 1905	Initial discovery of the Cinq Cerf Brook area (later known as Chetwynd Prospect). Limited exploratory underground workings were completed (including two vertical shafts plus minor drifting and cross cutting at the Chetwynd Main Shafts area and one vertical shaft in the Chetwynd Cu Shaft area). Several tons of bulk sample material were collected (found to be of an unspecified but "uneconomic" grade).
1930 - 1937	A. L. Reading Interests trenched the main mineralized zone east of the Main Shafts area and in 1933 formed Burgeo Mines Limited, which pumped out and assessed the Main Shaft workings and trenched nearby outcrops.
1939	Geophysical Exploration Company Limited completed a self-potential (SP) ground geophysical survey over the Chetwynd Prospect area.
1957	The Buchan's Mining Company completed further SP surveying in the prospect area as well as a water geochemistry survey, bedrock chip sampling and 1:2,400 scale detailed mapping programs. This work was primarily focused on evaluation of the area's base metal potential and returned largely negative results.
1967 - 1968	O'Brien Au Mines Ltd. carried out a combined airborne magnetometer and electromagnetic survey of the Cinq Cerf district, followed by ground surveys of selected airborne anomalies.
1971 - 1972	Noranda Mines Ltd. acquired a large exploration concession in the district that included the Cinq Cerf area and carried out regional geological mapping, prospecting and geochemical surveys. Exploration focus was toward volcanogenic or sediment-hosted base metal sulphide potential, reflecting the presence of the Strickland Zn-Pb-Ag prospect located on the east coast of La Poile Bay.
1979 - 1982	Hudson Bay Oil and Gas Limited (HBOG) acquired several large land positions that included part of the Cinq Cerf area, with a focus on base metal potential. An airborne magnetometer and electromagnetic survey was completed over the Cinq Cerf trend that identified two conductors within the AAZ between the Chetwynd prospect area and the HB deposit (McWilliams, 1983). Airborne surveying, mapping, prospecting, ground geophysical surveys and diamond drilling was reported for the Couteau Lake -Top Pond area northeast of Hope Brook but with no significant discoveries of bedrock base metal or Au mineralization.
1982	The original Chetwynd Fee Simple Grant covering the Chetwynd Prospect was staked by the Selco Division of BP, plus adjacent areas along strike to the northeast and southwest.
1983	BP carried out line cutting, geological mapping and chip sampling of known mineralized areas, hand trenching, horizontal loop and very low frequency (VLF) electromagnetic surveys, magnetometer surveying and stream sediment geochemistry surveying. Bedrock chip sampling returned anomalous Au values which led to drilling of six drill holes in the Chetwynd Prospect and Hope Pond area (CW-1 to CW-6), and discovery of the Hope Brook Au deposit is generally attributed to these results (McWilliams, 1983b).
1984	BP carried out a surface trenching program along the northeast portion of the AAZ and completed detailed geological mapping and chip sampling of resulting exposures. They

	outlined the 200 m x 400 m wide alteration zone over a strike length of at least 4 km. Seven diamond drill holes were completed and these were followed by additional holes by the end of the year (holes CW-14 through CW-47)
1985	Ownership of the property was transferred from Selco to BP, and further diamond drill holes were completed (CW–48 through CW-114). An initial mineral resource estimate was developed and metallurgical work leading to a demonstration heap leach operation based on a 10,000 tonne surface bulk sample was completed. An economic feasibility study was completed for a combined open pit and underground mining operation with planned milling rate of 3,000 tonnes per day. Hope Brook Au Inc. was subsequently formed as a subsidiary of BP to carry out mining operations at the Hope Brook site.
1986	A total of 96 additional deposit-delineation drill holes were completed. In addition, 5 drill holes were completed for metallurgical sampling purposes, 4 geotechnical holes were drilled in the proposed portal area, 5 geotechnical holes were drilled in the proposed tailings pond area, and a further 5 exploratory holes were drilled to test the AAZ beyond the limits of earlier programs. Construction of site mining and processing infrastructure was initiated and preparations for mining of open pit ore for heap leaching began late in the year.
1987	Commercial open pit production began in May 1987 with ore being placed on heap leach pads until mid-1988, at which time the main milling facility was completed and commissioned. Further geotechnical drilling was carried out and sixteen diamond drill holes were completed.
1988 - 1991	According to provincial government records (NLDNR Mineral Occurrence Database – File 011/O/09/Au 003), Hope Brook Au Inc. produced 304,732 ounces of gold throughout this period. Mining and milling operations were suspended in May 1991. After closure, BP announced its intention to sell the Hope Brook operation as part of a larger corporate positioning away from mining, and Royal Oak was announced as the purchaser late in 1991. Additional surface and underground core drilling programs were carried out during this period to support both mine planning and exploration activities.
1991 - 1997	In late 1991, Royal Oak produced a proven and probable mining reserve estimate* of 8.25 million tons (7.48 million tonnes) at an average Au grade of 0.104 oz/t (3.57 g/t Au), with an expected mine life of seven years and planned production rate of 3,500 tons (3,185 tonnes) per day *(*this estimate is historic in nature, not compliant with NI 43-101 and should not be relied upon).* Commercial production by Royal Oak was initiated in July 1992 and continued until September 1997 at which time the mining operation was closed. During this time, Royal Oak also completed a compilation of historic work in the district and carried out a substantial amount of underground and surface core drilling in the immediate mine area.
2010 - 2014	Castillian Resources/Coastal Gold completed the following work: A review and validation of historic drilling data; re-sampling of historic core; reprocessing of 2008 airborne survey results; re-establishment of the mine survey control ground grid; an environmental screening study; a prospecting and sampling program; a tailings sampling program; a Titan-24 Induced Polarization (IP) survey; 39,320 m of diamond drilling in 139 holes; 155 m of vibracore drilling in 73 holes plus systematic bottom sampling to test tailings deposits; three NI 43-101-compliant mineral resource estimates for the Hope Brook gold deposit; one NI 43-101-compliant mineral resource estimate for the Hope Brook tailings deposit; assessment of underground mining potential; scoping level testwork
2015	Coastal Gold produced an updated mineral resource estimate (Cullen, 2015).

	On July 6, 2015, First Mining Finance Corp. announced that on July 3, 2015, Coastal Gold received the final regulatory order for the acquisition of Coastal Gold by First Mining by way of a plan of arrangement, reported July 8, 2015. Coastal Gold became a subsidiary of First Mining. First Mining subsequently commissioned a resource estimate for the Hope Brook Property
2017	In October 2017, Eagle Mapping Ltd. (Eagle Mapping) was contracted by Coastal Gold to collect aerial LiDAR data and photography for the Hope Brook and Ironbound Hill properties. This data was collected to provide an accurate topographic model to use in the planning of additional exploration activities, 3D modelling, future mine planning and road construction.
2018	In January 2018, PhotoSat of Vancouver, BC were contracted by Coastal Gold to conduct iron oxide satellite image analysis and spectral matching on the Hope Brook Project. The imagery interpretation detected very little iron oxide (FeO) alteration associated with the identified outcrop outside of the project site.
2021-2022	On April 6, 2021, First Mining and Big Ridge Gold Corp. announced a definitive agreement whereby Big Ridge can earn up to an 80% interest in the Hope Brook Gold Project through a two-stage earn-in over five years. From September to November 2021, ClearView Geophysics Inc. carried out a CSAMT Survey (Controlled Source Audio-frequency Magnetotellurics) and Cesium Magnetometer Survey at the Hope Brook Gold Project to map subsurface anomalies to guide continued gold exploration. In May 2021, Big Ridge reported a minerals resource estimate including 5.5 million tonnes of Indicated mineral resources at a gold grade of 4.77 g/ and Inferred resources total 836 thousand tonnes at a gold grade of 4.11 g/t using a 3.0 g/t gold cut-off value. In November 2021, Big Ridge commenced a Phase 1, 25,000 m, drilling program at the Hope Brook Gold Property, completing 3,279 m in 16 drill holes in 2021 and 15,811 m in 45 drill holes in 2022.

6.2 Ironbound Hill Property

Table 6-2 Ironbound Hill Exploration History

1980	Utah Mines Ltd. completed 15.5 miles of line-cutting, 10.8-line miles of magnetometer and VHEM surveying, 8.1 line miles of Max-Min II HEM surveying and collected 511 b-horizon soil samples on the “South Block” of the property, plus 30 miles of line-cutting, 26 line miles of magnetometer and VHEM surveying and 1130 b-horizon soil samples on the “North Block” of the property.
1982 and 1983	Utah Mines completed 7.0-line km of dipole-dipole IP geophysics, detailed soil geochemical surveys and grid geological mapping over the “South Block” of the property. Two diamond drill holes totaling 262 m were drilled to test two small high soil geochemical anomalies with coincident IP anomalies within the altered volcanics. During the summer of 1983, grid lines were extended on the South Block and further dipole-dipole IP surveying, soil sampling and geological mapping was completed.
1984 - 1986	In 1984, BP-Selco Resources completed a farm-in agreement with Utah Mines on the property and performed reconnaissance geological mapping, rock chip collection, lake sediment sampling, reconnaissance and sampling of a 643 line km (250 m line spacing) Questor airborne magnetic survey. Three diamond drill holes were drilled to test an altered zone in an area of anomalous gold geochemistry and an IP anomaly. In 1985, BP-Selco completed a program of trenching (13 trenches and pits), rock chip sampling (319 samples), a 15.4 line-km VLF-EM survey and deep overburden Pionjar sampling (320 samples). In 1986, BP completed a dipole-dipole IP survey on 3 lines, plus an additional 6 drill holes totaling 836.6 m.

2007 and 2008	Roland Quinlan completed prospecting over the property which included the collection of 33 rock samples.
2014 and 2015	Coastal Gold completed a digital compilation of historic exploration data including a review of historic diamond drill core at the Government of Newfoundland and Labrador core storage library in Pasadena. Five samples were collected from historic drill core and analyzed for major and trace element geochemistry.
2017	Coastal Gold completed an exploration drilling program of four drill holes totaling 863 m.

6.3 Historical Drilling

6.3.1 BP and Royal Oak – 1983 to 1997

A total of 316 BP surface drill holes and 138 underground drill holes were completed between 1983 and 1986 (Table 6-3) (Figure 6-1 and Figure 6-2). Royal Oak completed 9 surface holes and 120 underground holes between 1992 and 1997. A total of 152 open pit (OP) series short drill holes completed from the open pit floor by Royal Oak, for local grade assessment, were also completed between 1992 and 1997. The OP grade control holes have not been used for the current or previous resource estimates.

BP surface drilling programs prior to the CE series of 1987 recovered BQ size (36.4 mm diameter) drill core and subsequent programs recovered NQ size core (47.6 mm diameter). Royal Oak surface drilling programs also recovered NQ size core and underground drilling programs by both operators are believed to have predominantly recovered NQ core.

Table 6-3 Summary of Core Drilling Programs by BP and Royal Oak

Operator	Period	Hole Type	Number of Holes	Hole Series
BP	1983-1986	Surface	240	CW, CP, CT
BP	1987-1991	Surface	76	CW, CE,
BP	1987-1991	Underground	138	4960, 5015,5060
Royal Oak	1992-1997	Surface – Open Pit	152	OP
Royal Oak	1992-1997	Surface	9	CE
Royal Oak	1992-1997	Underground	120	4870, 4900, 4930

Figure 6-1 Isometric View: Historical Surface Drill Holes Completed by BP and Royal Oak – 1983 to 1997

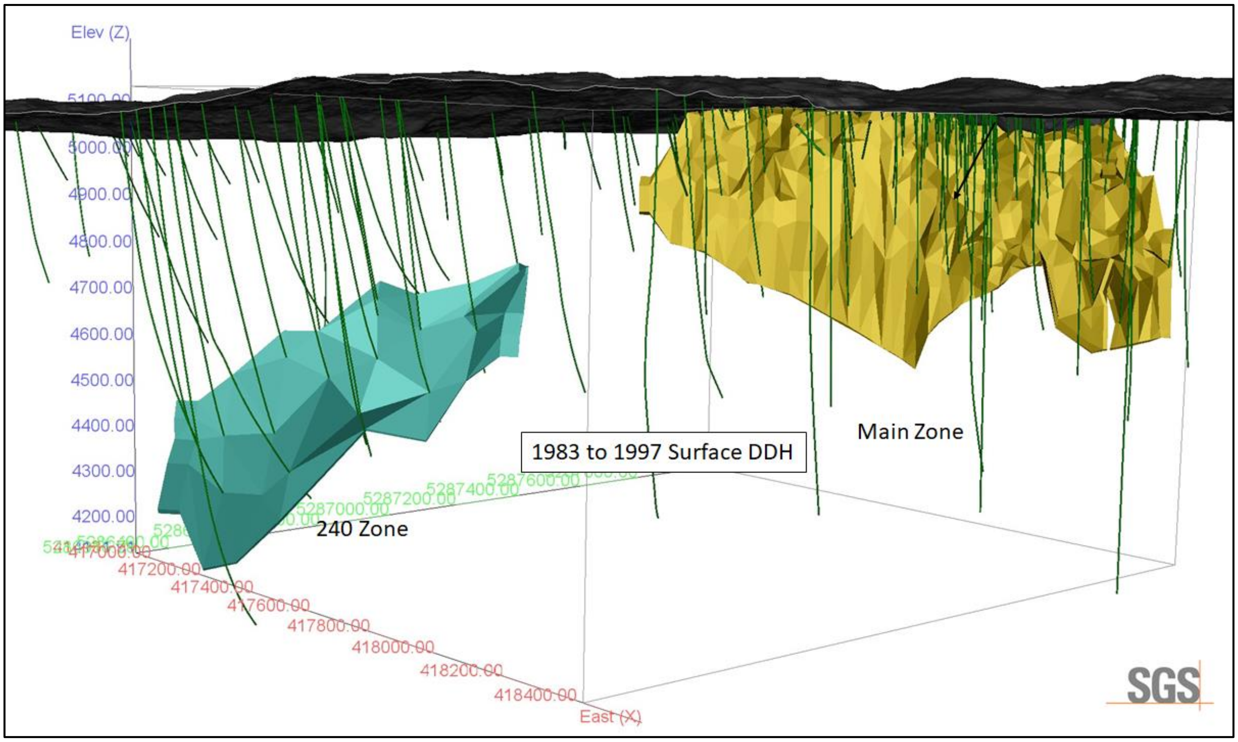
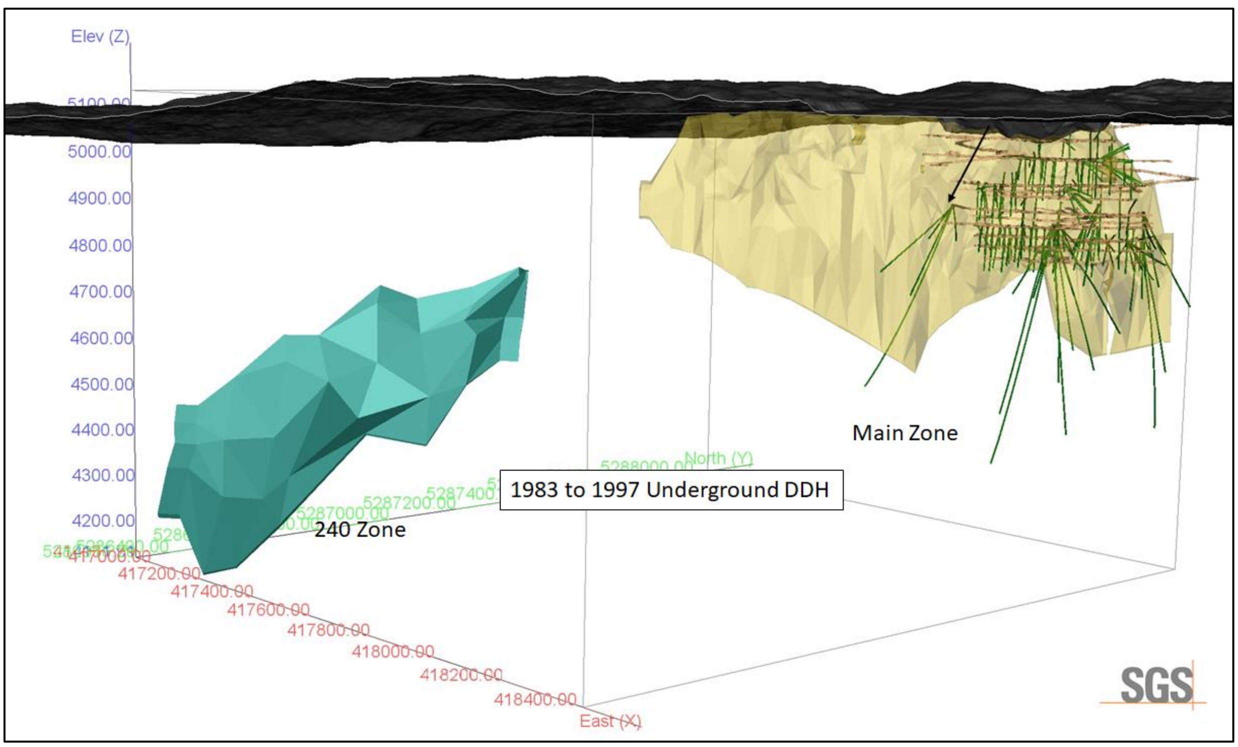


Figure 6-2 Isometric View: Historical Underground Drill Holes (with respect to underground Levels) Completed by BP and Royal Oak – 1983 to 1997



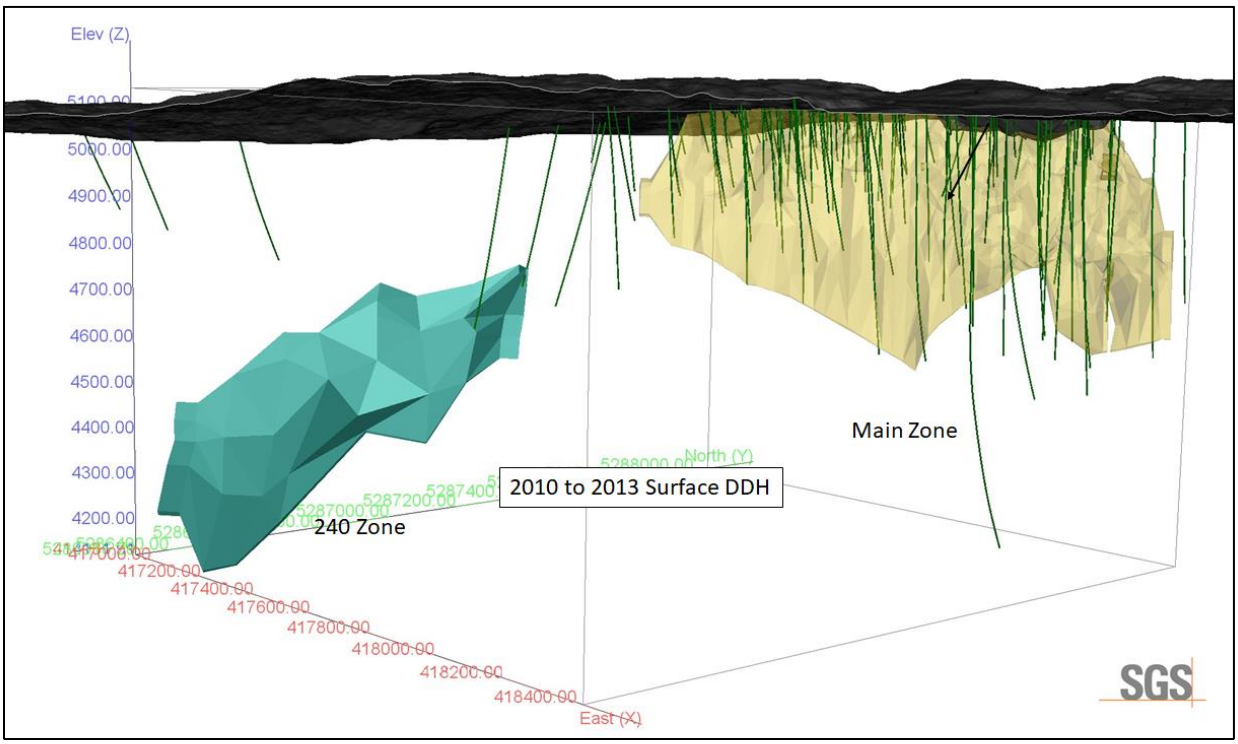
6.3.2 Coastal Gold Programs - September 2010 to October 2013

During this period Coastal Gold completed 139 diamond drill holes and drill hole extensions on the property that total 39,320.5 m of drilling (Table 6-3) (Figure 6-3) (Cullen et al., 2021). Holes were completed in five separate drilling programs that include 10 diamond drill holes totalling 3,421.9m completed between September, 2010 and January, 2011, 67 diamond drill holes totalling 21,350.5 m completed between February, 2011 and December, 2011, 15 diamond drill holes, re-drills and hole extensions totalling 4,549.0 m completed between February 26, 2012 and May 13, 2012, 21 diamond drill holes totalling 5,923.9 m completed between September, 2012 and December, 2012, and 26 diamond drill holes totalling 4,075.2 m completed between August 2013 and October 2013.

Table 6-4 Summary of Coastal Gold Drill Programs 2010 to 2013

Drill Program	Period	Target	No. Holes	Total metres
Program I	Sept, 2010 to Jan, 2011	SW Pit, 240 Zone	10	3,421.9
Program II	Feb, 2011 to Dec, 2011	Mine Zone, SW Pit	67	21,350.5
Program III	Feb, 2012 to May, 2012	Mine Zone, SW Extension	15	4,549.0
Program IV	Nov, 2012 to Dec, 2012	240 Connector	21	5, 923.9
Program V	Aug, 2013 to Oct, 2013	Footwall; SW Pit Extension	26	4,075.2

Figure 6-3 Isometric View: Historical Surface Drill Holes Completed by Coastal Gold – 2010 to 2013



Coastal Gold completed 10 surface diamond holes totaling 3,421.9 m in length between September 2010 and January 2011 (HB10-001 to HB10-010). The objective of the program was first to confirm the presence of mineralization Indicated by historic drill results below the limits of historic mining and at surface to southwest of the open-pit and secondly to test the mineralization potential of the 240 Zone to the southwest and the northeast extension of the mine at depth. This drilling was completed by New Valley Drilling Co. Ltd. using a Discovery EF50 drill rig and NQ core was recovered.

Drilling successfully confirmed the presence of disseminated gold-chalcopyrite-pyrite mineralization hosted by highly silicified sedimentary and volcano-sedimentary rocks both at depth, below the 4800 level of historic mining, and at surface to the southwest of the historic open-pit. Exploratory drill hole HB11-002 targeting mineralization along the northeast extension of the mine at depth returned no significant results and exploratory drill hole HB11-007 targeting the 240 Zone caved short of the target.

Following the 2010 HBGP drill program Coastal Gold completed another surface drilling campaign between February 2011 and December 2011 that consisted of 67 holes totalling 21,350.5 m (HB11-011 to HB11-077). The program's main objective was to delineate mineralization defined by the previous Coastal Gold drilling results below the past-producing underground mine. In addition, several drill holes (HB11-011, HB11-012, HB11-025 to HB11-027, HB11-049, HB11-048, HB11-052 to HB11-055) targeted mineralization on the hanging wall and foot wall of the main deposit exploited by past mining operations. The drilling was completed by New Valley Drilling Co. Ltd. using a Discovery EF50 as the primary drill rig. In April 2011 a Boyles JKS-300 was added as second drill rig and in October 2011 a Boyles JKS-37 was added as a third drill rig. NQ core (47.6 mm diameter) was recovered by the Discovery and JKS-37 rigs and BQTK core (40.6 mm diameter) was recovered by the JKS-300 rig.

Between February 2012 and May 2012 Coastal Gold completed a surface drill program that consisted of 15 holes, re-drills and hole extensions totalling 4,549 m in length (HB12-078 to HB12-090 and HB12-047E). The drilling was completed by New Valley Drilling Co. Ltd. using a Discovery EF50 as the primary drill rig. In March 2012, an Atlas Copco CS1000 drill rig was added as second drill rig and the Boyles JKS-37 and JKS-300 drill rigs were demobilised from site. NQ core (47.6 mm diameter) was recovered by new drills.

This program focused on confirming the locations of workings and major pillars in the mine area (HB12-080E, 087), further testing of the Southwest Extension target area (HB12-089, 090) and preliminary testing of the Northeast target area (HB12-078, 079).

The fourth Hope Brook drilling program by Coastal Gold began on November 3, 2012 and was completed on December 21, 2012. A total of 5,923.9 m of drilling in twenty-one drill holes (HB12-091 to HB12-111) was completed. Six separate targets areas, along a 3.4 km long mineralized trend, were drilled during the program including the Stope 4960-150, the 240 Zone-Mine Zone Connector Target, the Chetwynd Prospect and the Chetwynd South Prospects, the Chetwynd to 240 Connector Target and the NW Target Area. The drilling was completed in these areas in order to continue to expend on the area of known gold mineralization outside of the current HB deposit area.

The drilling was completed by New Valley Drilling Co. Ltd. using a Discovery EF50, an Atlas Copco CS1000, a Nodwell-mounted JKS-300 and a Boyles 37. NQ core (47.6 mm diameter) was recovered by the Discovery, Atlas Copco and Boyles 37 rigs and BQTK core (40.6 mm diameter) was recovered by the JKS-300 rig. As necessitated by occasional poor ground conditions the drill diameter for certain holes was reduced to BQ size drill core (36.4 mm diameter) to allow the drill hole to proceed.

The fifth drilling program at Hope Brook began on August 9, 2013 and was completed on October 10, 2013. A total of 4,075.2 m of drilling in twenty-six drill holes (HB13-112 to HB13-137) were completed. The drill program was designed to test two major target areas; the Footwall Target and SW Pit Extension Target. The drilling was completed by New Valley Drilling Co. Ltd. using an Atlas Copco CS1000 and a Zinex Mining Corp. A5 drill. NQ core (47.6 mm diameter) was recovered by both the Atlas Copco and Zinex A5 drill rigs. As necessitated by occasional poor ground conditions the hole diameter for certain holes was reduced to BQ size drill core (36.4 mm diameter) to allow the drill hole to proceed.

6.4 2021 Mineral Resource Estimate

Big Ridge retained Mercator Geological Services Limited ("Mercator") on March 18th, 2021, to prepare an updated independent MRE and NI 43-101 Technical Report for the HBGP (Cullen et al., 2021). The 2021 MRE was based on validated results for 689 drill holes totaling 141,862 m of drilling, including 138 holes totaling 39,250 m of drilling by Coastal Gold. The estimate reflects a 3.0 g/t gold cut-off value and includes 5.5 million tonnes of Indicated mineral resources at a gold grade of 4.77 g/t. Inferred resources total 836 thousand tonnes at a gold grade of 4.11 g/t (Table 6-5). The gold cut-off value of 3.00 g/t reflects reasonable prospects for eventual economic extraction based on application of conventional underground mining methods such as long hole stoping, historical gold recovery levels that range between 80% and 91% for past production (86% for Coastal Gold testing) and a long-term gold price of US$1,200 per ounce (Cullen et al., 2021).

This 2021 MRE has been superseded by the Indicated and Inferred MRE for the HB deposit reported in Section 14 of this report.

Table 6-5 HB Deposit 2021 Mineral Resource Estimate - Effective April 6th, 2021 (Cullen et al., 2021)

Gold Grade Cut-off (g/t)	Resource Category	Tonnes	Gold Grade (g/t)	Au Ounces
3.0 g/t	Indicated	5,500,000	4.77	844,000
	Inferred	836,000	4.11	110,000

2021 MRE Notes:

- The classification of the 2021 MRE into Indicated and Inferred is consistent with current 2014 CIM Definition Standards - For Mineral Resources and Mineral Reserves
- All figures are rounded to reflect the relative accuracy of the estimate.
- All Resources are presented undiluted and in situ, constrained by continuous 3D wireframe models, and are considered to have reasonable prospects for eventual economic extraction.
- Resources are exclusive of historically mined material.
- Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental permitting, legal, title, taxation, sociopolitical, metal pricing, marketing, or other relevant issues.
- The 2021 MRE is based on 2 three-dimensional ("3D") resource models for the Main Zone and 240 Zones.
- Average rock density values were assigned per zone.
- Gold is estimated for each mineralization domain. Blocks (10x3x5) within each mineralized domain were interpolated using 1.5 metre capped composites assigned to that domain. Grade interpolation utilized multiple pass ordinary kriging methodology with an inverse distance squared check model used for validation.
- Classification of the resource was based primarily on interpolation pass number, distance to the closest informing assay composite and kriged variance.
- The gold cut-off value of 3.00 g/t reflects reasonable prospects for eventual economic extraction based on application of underground mining methods such as long hole stoping, historical gold recovery levels that range between 80% and 91% percent for past production (86% for Coastal Gold testing) and a long term gold price of US$1,200 per ounce. Cost assumptions include underground mining at US$80/tonne, processing at US$15/tonne and general and administration cost at US$5/tonne.

7 GEOLOGICAL SETTING AND MINERALIZATION

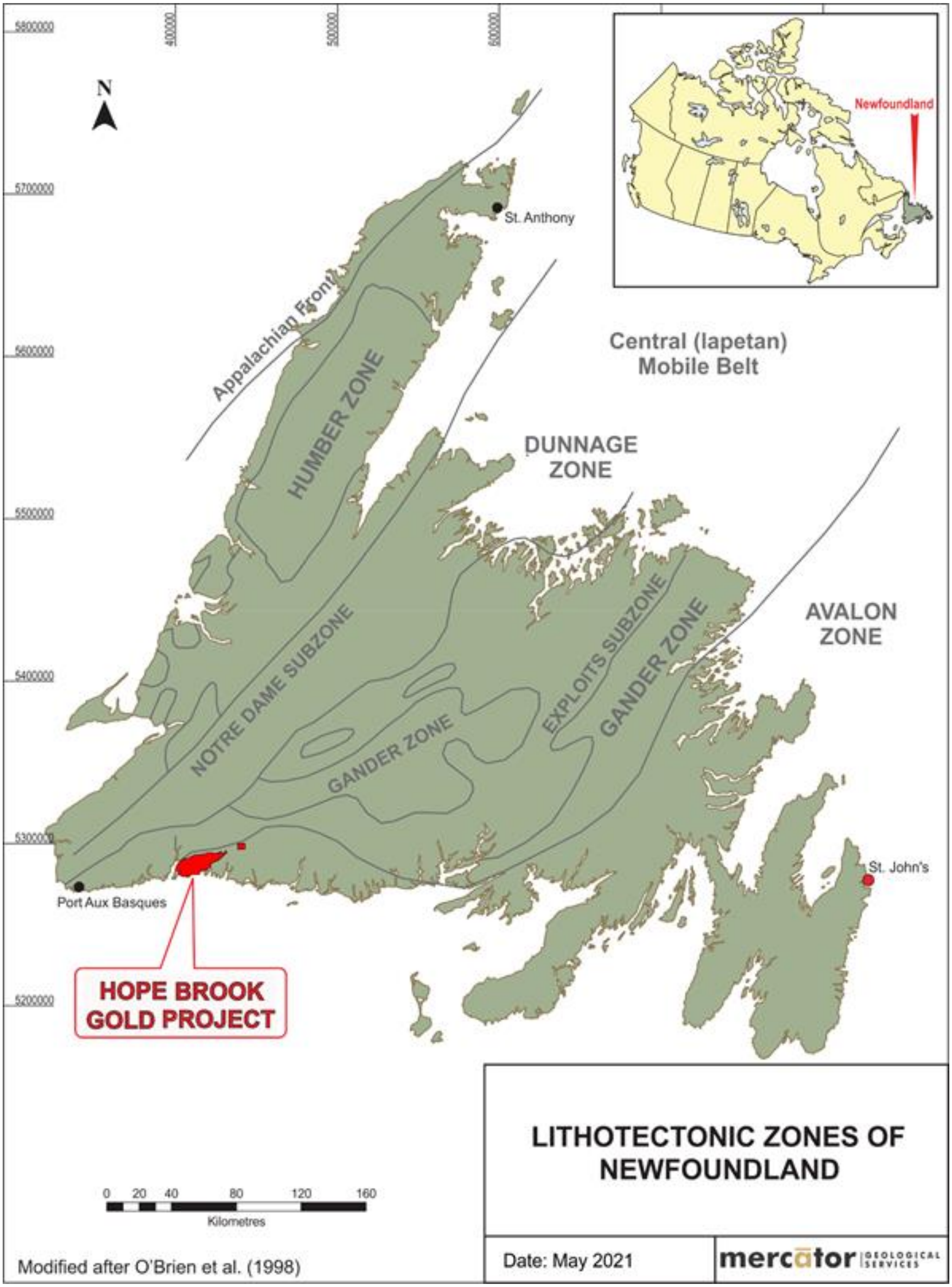
7.1 Introduction

The Property occurs within a tectonically complex zone that has been interpreted by some to occur within the Avalon Zone of the Appalachian Orogen (or a related Avalon Composite Terrane), near its generally east-west trending tectonic contact with adjacent rocks of the Dunnage Zone (Figure 7-1) (Cullen et al., 2021). However, earlier interpretations assigned this area to the Gander Zone. As discussed by O Brien et al. (1998), the Avalon Zone represents a late Neo-Proterozoic (760-540 Ma) assemblage of active plate margin sequences that accumulated prior to development and closure of the Lower Paleozoic Iapetan Oceanic system. Sequences of Avalonian affinity occur throughout much of the Appalachian Orogen and extend from the Avalon Peninsula and southwest coast areas of Newfoundland, through Nova Scotia, New Brunswick and northern New England. From that point southward, more discontinuously distributed outcropping segments occur as far as northern Georgia and subsurface extensions are interpreted to be present in Florida. Onshore exposures of confirmed Avalon Zone affinity are limited in comparison with its interpreted width of at least 600 km in the eastern offshore area of Newfoundland and Labrador.

O' Brien et al. (1998) summarized geological aspects of the Avalon Zone, particularly in context of magmatic history represented in the Newfoundland, and described four major tectono-stratigraphic events, these being ca. 760 Ma, ca. 680-670 Ma, 640-600 Ma and 595-560 Ma. Most significant of these from the perspective of magmatic activity is the 640-560 Ma period when substantial volumes of volcanic and plutonic rocks evolved under back-arc or continental arc settings, sometimes in broad association with terrestrial or marine siliciclastic sequences. These are related in time with development of auriferous, high level hydrothermal alteration systems along the entire length of the Avalon Zone and the Hope Brook gold deposit may be an example of this metallogenic association.

While various plate tectonic models for the Avalonian system have been invoked, an evolving oceanic arc to back arc setting is favoured by O'Brien et al. (1998) after consideration of earlier work such as that presented by Nance and Thompson (1996). Similarity is also noted between Avalon successions and those present in current Pacific Rim settings.

Figure 7-1 Lithotectonic Zones of Newfoundland (from Cullen et al., 2021)



7.2 Regional Geology

7.2.1 Geological Units of Regional Extent

Geological mapping in the HBGP area of southwest Newfoundland includes early work by the Geological Survey of Canada (Cooper, 1954) followed by 1:50,000 scale map sheet work by the Newfoundland government as presented by Chorlton (1978, 1980). Subsequent to discovery of the HB deposit, more detailed investigations of geology in the area between La Poile Bay in the west and Couteau Bay in the east were carried out by O'Brien (1988, 1989), with related discussions of metallogenic and structural evolution following (e.g. O'Brien et al., 1998). Stewart (1992) also contributed to regional geological understanding in addition to deposit scale issues. A detailed geological compilation that covers the main HBGP area was prepared by O'Brien et al. (1991) and a modified version appears in Figure 7-2. Figure 7-3 addresses the Ironbound Hill area further to the east. The Hope Brook gold deposit is identified in Figure 7-2 and occurs within a northeast striking zone of advanced argillic alteration (AAZ of this report) hosted predominantly by the late Proterozoic Whittle Hill Sandstone unit of the interpreted Avalonian sequence. The figure also provides spatial registration for the main late Proterozoic to Devonian bedrock units mapped in the area.

Late Proterozoic bedrock sequences in Figure 7-2 occur south of the Bay d'Est Fault and Bay du Nord Group metasedimentary rocks of the Dunnage Zone are located north of the fault. Chorlton (1978) interpreted all volcano-sedimentary sequences south of the Bay d'Est Fault to be part of the Silurian La Poile Group but results of subsequent mapping and geochronological studies showed this to be incorrect (eg. O'Brien et al., 1991). Sequences of deformed volcano-sedimentary rocks, amphibolite facies gneisses and variably foliated igneous intrusions southeast of Cinq Cerf Brook are now interpreted as constituting an older basement complex to Silurian La Poile Group rocks in the area. Figure 7-3 includes re-assignment of units previously identified as La Poile Group to the Neo-Proterozoic Whittle Hill Sandstone and/or Third Pond Tuff successions.

Foliated, greenschist facies sedimentary and volcanic sequences of the Whittle Hill Sandstone and Third Pond Tuff units, respectively, are the youngest Pre-Silurian basement sequence rocks defined to date in the HBGP area and pre-date, along with quartzo-feldspathic gneisses of the Cinq Cerf Gneiss complex, emplacement of the Roti Intrusive Suite (578±10 Ma to 563±4 Ma (Dunning and O'Brien, 1989), which is the oldest dated intrusive complex in the area. These sequences were also intruded by the Wild Cove Granite (499+3-2 Ma) and younger Ernie Pond Gabbro (495±2 Ma) prior to accumulation of Silurian La Poile Group rocks and emplacement of later Silurian and Devonian intrusions.

7.2.2 Igneous Intrusions

All pre-Silurian rocks were intruded by the multi-phase, calc-alkaline Roti Intrusive Suite that Dunning and O'Brien (1989) describe as having granodiorite, tonalite and quartz feldspar porphyry intrusive phases. Granodiorite of the suite was dated at 578±10 Ma and the Betty's Pond Tonalite at 563±4 Ma (O'Brien et al. 1991, Stewart, 1992). Silurian intrusions also occur in the HBGP area, and include the Wild Cove Granite (499+3-2 Ma), the Western Head Granite (429±2 Ma), Ernie Pond Gabbro (495±2) and Otter Point Granite (419±2 Ma), all of which show at least local evidence of syn-tectonic emplacement.

The youngest Silurian intrusive phases were in part preferentially emplaced along discrete ductile deformation zones such as the Grand Bruit, Cinq Cerf and Bay d'Est Faults, and predated emplacement of the generally undeformed Devonian Chetwynd Granite. The latter constitutes a large, post-orogenic intrusion that occurs northeast of the HB deposit and crosscuts both Proterozoic and Silurian successions as well as ductile deformation fabrics associated with the Cinq Cerf Fault (O'Brien et al., 1991; Stewart, 1992). This intrusion is important to assessment of exploration potential of the HBGP, since it at least locally intruded and thermally metamorphosed rocks of the northeast striking Cinq Cerf Fault, the Hope Brook AAZ and gold-bearing zones that constitute the HB deposit (Yule et al., 1990, Stewart, 1992). Relative age relationships between various igneous emplacement phases pertinent to the HBGP area are graphically summarized in Figure 7-4.

Figure 7-2 Geological Map of the HBGP Area (from Cullen et al., 2021)

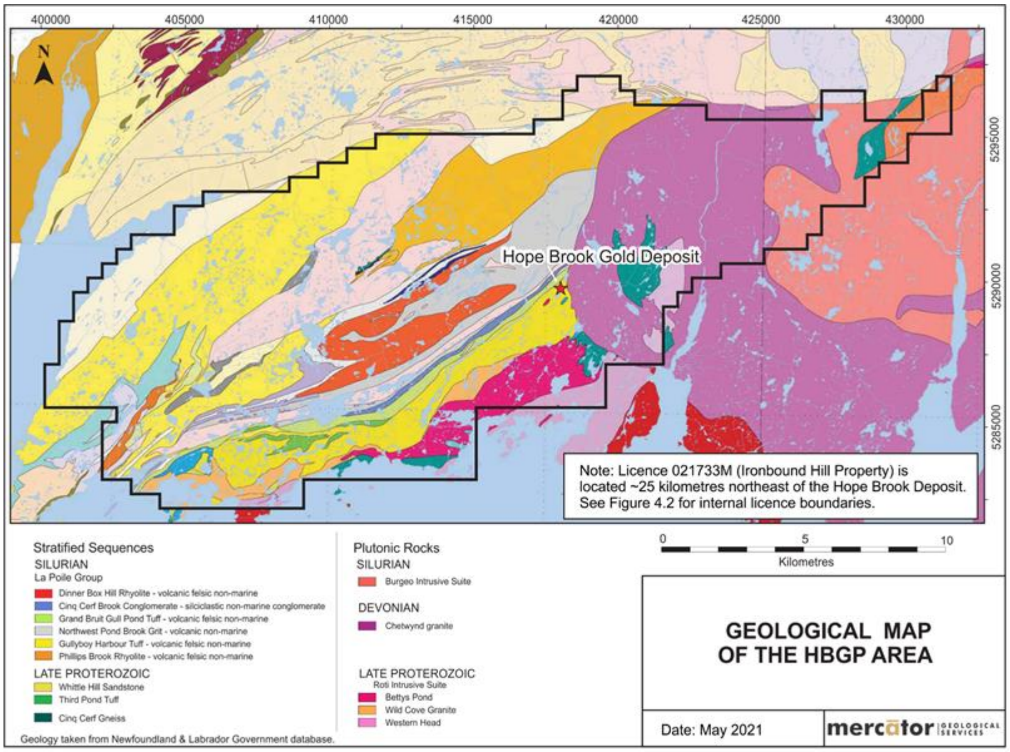


Figure 7-3 Geological Map of the Ironbound Hill Area (from Cullen et al., 2021)

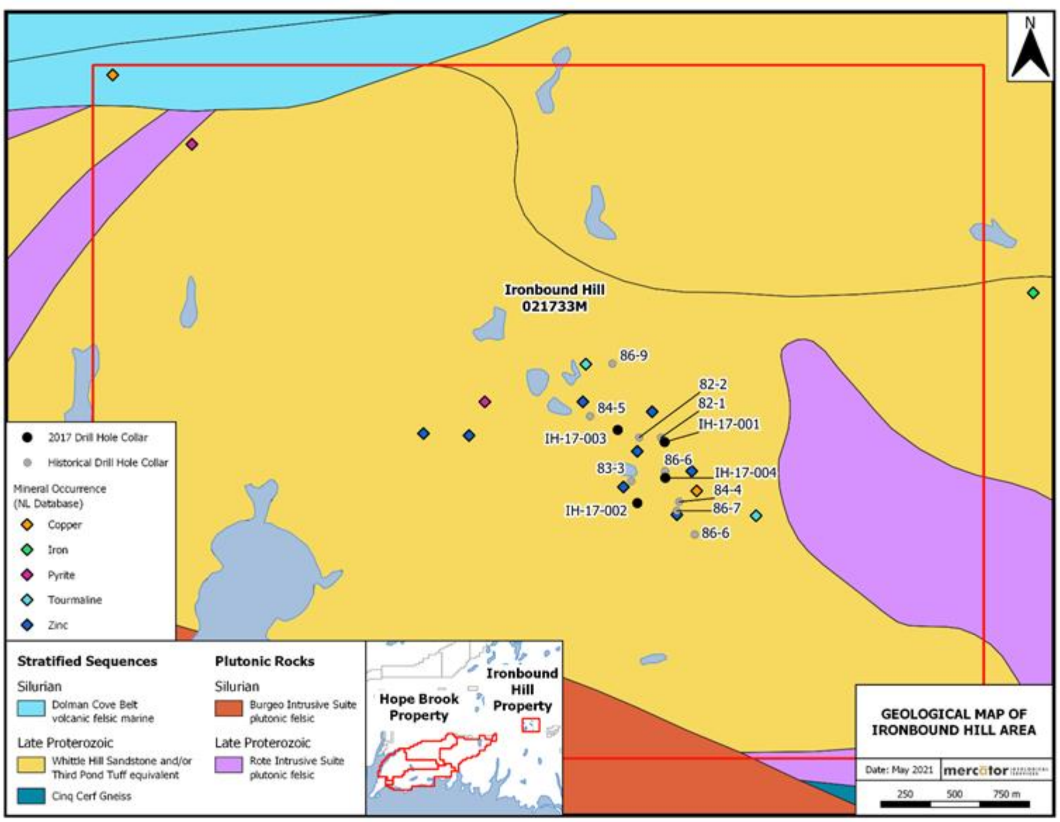
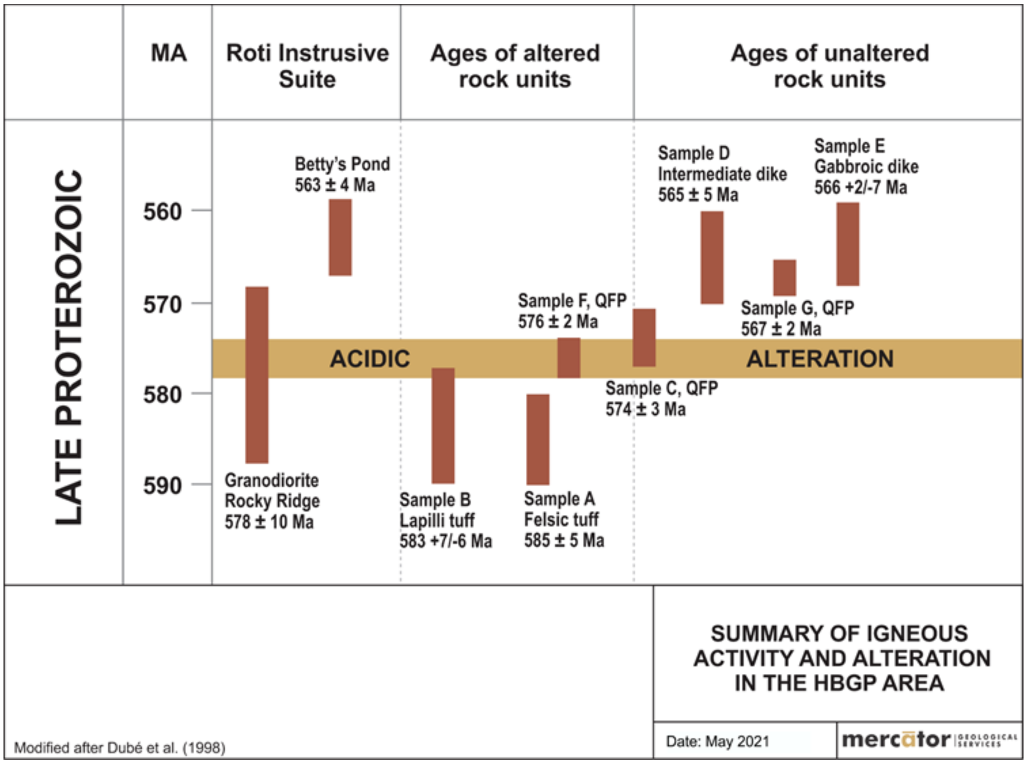


Figure 7-4 Summary of Igneous Activity and Alteration in the HBGP Area (from Cullen et al., 2021)



7.2.3 Regional Deformation and Metamorphism

Bedrock units within the HBGP record a multi-phase deformation history beginning with development of amphibolite facies mineral assemblages in paragneisses and intermediate to felsic orthogneisses of the Cinq Cerf Gneiss complex. While not extensively exposed or studied, these rocks are considered to reflect pre-Late Proterozoic evolution of basement sequences upon which younger cover sequences were deposited and subsequently deformed. Dubé et al. (1998) note that late Proterozoic cover rocks of the Third Pond Tuff and Whittle Hill Sandstone units were affected by folding not seen in Silurian La Poile Group sequences and attributed related northeast trending folds and weak foliation to have developed prior to emplacement of the Wild Cove Granite and Ernie Pond Gabbro mentioned previously. This deformation appears to be correlative in time with development of the Grand Bruit Fault zone that substantially modified the originally unconformable contact between basement rocks of the Cinq Cerf Gneiss and subsequent Proterozoic cover rocks of the Third Pond Tuff and Whittle Hill Sandstone units.

Mid-Silurian rifting resulted in accumulation of felsic and mafic volcanic, epiclastic and clastic sedimentary sequences of the La Poile Group. Closure of associated basins and structural telescoping of these sequences with late Proterozoic stratified sequences and intrusions are interpreted to have occurred during late Silurian tectonism. This produced northeast trending, locally tight folds within the telescoped sequences, as well as regionally important zones of ductile shear. The Grand Bruit Fault was probably re-activated at this time and the important Cinq Cerf Fault that separates La Poile Group sequences from earlier-deformed late Proterozoic cover sequences was developed. The Cinq Cerf Fault is marked by highly strained and locally mylonitized volcanic, sedimentary and intrusive rocks that occur immediately north of the main Hope Brook AAZ, strike northeast, and dip southeast at moderate to steep angles. Alteration zone lithologies are affected by the ductile high strain fabrics. Both O'Brien et al. (1991) and Dubé et al. (1998) interpreted the Cinq Cerf Fault to be a regionally significant thrust that developed during basin closure orogenic activity.

At the regional scale, the Cinq Cerf Fault is one of several east to northeast trending high strain zones that cut La Poile Group and older sequences and then merge with the Bay d'Est Fault zone. Some poorly defined northeast shears of this association may be related to gold - bearing veins and alteration zones within the La Poile Group such as those at Old Mans Pond and Phillips Brook.

7.3 Mineralization

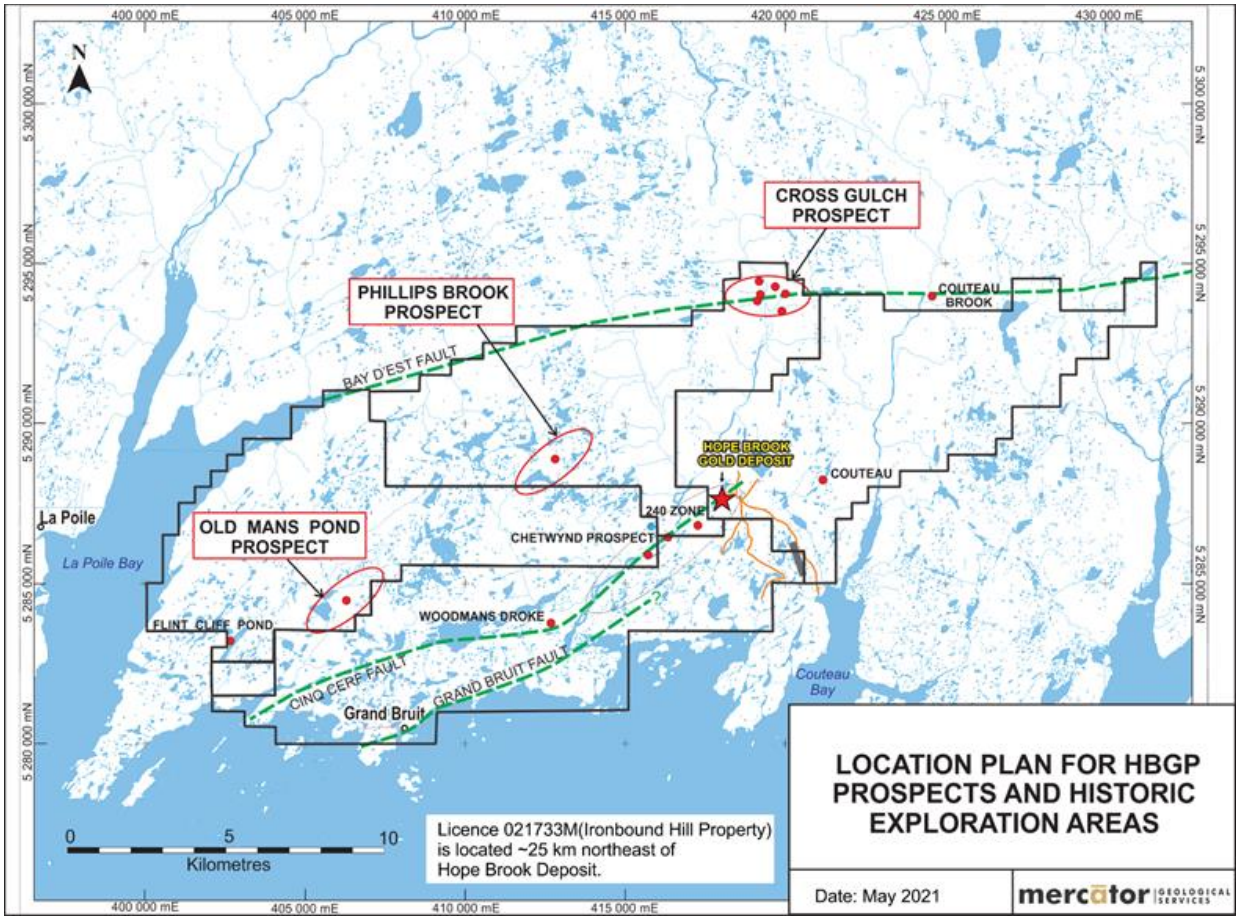
7.3.1 Introduction

The Hope Brook gold deposit and associated AAZ are of primary importance with respect to the HBGP. However, several other bedrock gold occurrences are present within the HBGP that differ from Hope Brook. The most prominent examples of such were noted previously as being those in the Old Mans Pond, Phillips Brook and Cross Gulch areas (Figure 7-5). Each of these areas has been investigated through historic exploration programs that typically included geological, geophysical and geochemical surveys, surface trenching and limited amounts of core drilling.

Drilling has locally confirmed subsurface gold-bearing intervals in each area but mineralized zones of economically significant proportions have not been defined to date.

For completeness of HBGP exploration potential assessment, styles of gold mineralization seen at both the HB deposit and the above-named occurrences are described below. However, the Hope Brook style of mineralization is considered to be most important.

Figure 7-5 Location Plan for HBGP Prospects and Historic Exploration Areas (from Cullen et al., 2021)



7.3.2 Hope Brook Deposit

7.3.2.1 Introduction

As summarized earlier, the Hope Brook gold deposit is a large, disseminated gold - chalcopyrite-pyrite deposit hosted by highly altered sedimentary and volcano-sedimentary rocks of the late Proterozoic Whittle Hill Sandstone and Third Pond Tuff successions, similarly altered felsic porphyry dikes and sills related to the Roti Intrusive Suite and variably altered later mafic dikes and sills. Zones hosting gold mineralization of economic interest typically bear evidence of intense silicification and occur within the AAZ, a broad envelope of advanced argillic alteration that can be traced for up to 8 km southwest of the deposit. The Devonian Chetwynd Granite appears to truncate the alteration zone and associated gold-copper mineralization on its northeast limit. Intensity of the advanced argillic alteration and impact of superimposed ductile deformation along the Cinq Cerf Fault have obscured original rock fabrics in many areas of the deposit, but sufficient information exists to provide a picture of mineralization history, timing and character. These aspects of the deposit are presented below in summary form using a descriptive framework based on nature of host rocks, alteration, structural geology and mineralogy.

7.3.2.2 Distribution of Deposit Area Lithologic Sequences

Geology of the deposit area as summarized by O'Brien et al. (1998) was presented earlier in

Figure 7-2. Progressing from the southeast to the northwest across the area presented, a late Proterozoic mafic dike and sill complex occurring in the southeast shows a northeast striking contact with a 300 m to 400 m wide zone of quartz feldspar porphyry sills and dikes of the Roti Intrusive Suite that both intrude and show strike continuous transition to highly silicified rocks of the Whittle Hill Sandstone unit that comprise the main gold-bearing zones of the HB deposit. The northeast striking and steeply southeast dipping Cinq Cerf Fault marks a ductile shear zone structural transition from the late Proterozoic deposit sequences to deformed subaerial felsic tuffaceous, epiclastic and sedimentary rocks of the Silurian La Poile Group. Focus of the current deposit geology and mineralization discussion is restricted to the altered and mineralized section occurring on the southeast side of the Cinq Cerf Fault Zone.

7.3.2.3 Deposit Area Alteration

The deposit occurs within the AAZ, a large hydrothermal alteration envelope that is bounded to the northwest by highly strained, but apparently unaltered, rocks of the Whittle Hill Sandstone unit. Alteration to the southeast, within the Roti Intrusive Suite sill-dike complex, is present for up to 400 m across strike in the main deposit area where both advanced argillic and massive silicification stages of hydrothermal alteration are present, with the former being more spatially extensive than the latter (McKenzie, 1986). Field and laboratory evidence presented by Yule (1989) and also Stewart (1992) shows that major silicification stages predated development of the extensive advanced argillic alteration assemblage, but that both appear to have resulted from the same alteration system. Salient features of the main alteration stages associated with Hope Brook gold mineralization described by the previously referenced workers are presented below.

7.3.2.4 Advanced Argillic Alteration (AAZ)

The AAZ primarily affects rocks of the Roti Intrusive Suite's QFP sill-dike complex that adjoins the main gold zone to the southeast. Effects of this system define the AAZ that extends from the deposit area southwestward to its mapped limit west of the Cinq Cerf River. Presence of pyrophyllite, kaolinite, andalusite, sericite, paragonite, diaspore, alunite, quartz and rutile in varying proportions characterize the zone and the following three subzones were identified by Stewart (1992) based on mineralogy and relative proportions of associated silicic alteration: (1) advanced argillic subzone lacking in significant silicification and showing 1-3% pyrite and minor rutile (2) advanced argillic subzone containing 1-5% pyrite and minor rutile, cm to m thick silicic lenses and mottled zones consisting of aggregates of randomly oriented andalusite, variably altered to kaolin or pyrophyllite, and (3) advanced argillic subzone with up to 5% pyrite, local rutile and 5 to 10% alunite. Subzones (1) and (2) were noted as typically consisting of rocks containing broadly distributed rutile and blue quartz eyes that reflect a Roti Intrusive Suite protolith. In contrast, subzone (3) lacks widely distributed rutile and blue quartz, indicating a Whittle Hill Sandstone protolith that was only locally intruded by rutile and porphyry dikes.

7.3.2.5 Silicification

Silicification associated with the mineralizing system at Hope Brook was extensive and three subzones have been defined on the basis of color, texture and associated pyrite, gold and copper contents. Lithogeochemical studies have shown that all stages of silicification are characterized by extensive leaching of Al_2O_3, MgO, CaO, Na_2O and K_2O. The summary descriptions of each subzone presented below are directly based on detailed descriptions reported by Stewart (1992).

Stage 1 – Buff Silicification: The first stage of massive silicification is characterized by buff to light grey color and is typically either barren or only weakly mineralized with respect to gold. This stage is regional in extent and occurs throughout the length of the mapped Hope Brook alteration zone. Disseminated pyrite is common at 2-3% levels as is minor disseminated rutile. Rocks affected by this stage of alteration frequently show original fragmental textures or fine-grained intervals that contain either sub-angular or sub-rounded blue quartz eyes.

The geochemical signature of these rocks includes low levels of gold, copper, arsenic and antimony but they typically lack gold grades of economic interest.

Stage 2 – Grey Silicification: Most gold mineralization of economic interest occurs in zones characterized by massive grey silicification plus variable amounts of disseminated sulphides, primarily in the form of pyrite and lesser chalcopyrite and bornite. Traces of tennatite, galena, mawsonite (Cu6Fe2SnS8) and rucklidgeite (BiPb3Te4) have also been reported. Three subzones of this stage are recognized, these being (a) a pyrite rich grey silicic subzone (the Pyrite Cap), (b) the main gold deposit subzone and (c) a low gold grade subzone.

Pyrite Cap Subzone (pyritic silicified subzone of current report): This grey silicic subzone contains 15 % to 30 % pyrite as a disseminated to locally sub-massive phase and occurs structurally below the main gold zone and immediately above the Cinq Cerf Fault. Multiple tabular lenses of silicified material comprise the zone and are separated by variably strained to mylonitic schists developed through deformation of non-silicified AAZ rocks. Strike and dip continuity of individual silicified lenses is substantial. The zone is up to 100 m in width but decreases in this dimension to the southwest. Dip continuity to at least 500 m below surface is shown by drilling results in the deposit area and a potentially correlative unit occurs at the Chetwynd Prospect to the southwest. However, mapping and limited drilling results indicate that the subzone transitions to the southwest into more isolated and smaller lenses occurring within Stage 1 - Buff Silicification and that it may show a shallow (20-25 degree) southwest plunge away from the main deposit area. This stage of silicification is geochemically anomalous in gold, copper, lead, antimony, barium, silver and mercury.

Main Deposit Subzone: The main gold zone at Hope Brook is hosted by light grey massively silicified rocks characterized by 1% to 5% vuggy porosity and <5% to 10% total sulphides occurring as either disseminated phases or as thin veinlets and aggregates that often parallel the dominant deformation fabric present in the rocks. Pyrite is the dominant sulphide present in the first 60 m to 80 m below surface in the main deposit area but below that level increasing amounts of chalcopyrite and bornite are present, often occurring as vug-filling phases. Quartz-chalcopyrite and quartz-pyrite veins and breccias locally cross-cut this silicification stage and in some instances carry strongly elevated gold values. Geochemically anomalous levels of silver, zinc, arsenic, antimony, mercury and tin characterize the subzone along with rutile and low levels of blue quartz eye fragments. Gold grades in this subzone typically exceed 1.5 g/t Au and highest grades tend to show spatial association above 2.5 g/t Au.

Lower Gold Grade Subzone: The main gold bearing subzone described above is surrounded by grey silicified sections showing minor amounts of disseminated pyrite (<3%) that occur in large, spatially coherent lenses of silicified material separated by highly strained to mylonitic rocks of the AAZ. Gold grades less than 1.0 to 1.5 g/t Au generally characterize this subzone and it typically lacks the vuggy character of the higher-grade subzone. A lower, natural cut-off value around 0.5 g/t Au is also notable.

Stage 3 – Propylitic and Sericitic Alteration: The main AAZ defines the most obvious alteration imprint at Hope Brook. However, evidence of this alteration phase lessens to the southeast and is absent to northeast of the Cinq Cerf Fault. Evidence of a lower grade alteration assemblage consisting of chlorite, epidote, sericite, calcite and biotite that is marginal to the larger AAZ occurs southeast of the deposit area and may constitute a more distal propylitic-sericitic subzone related to the same system. However, the significance of this poorly documented assemblage is not clear.

7.3.3 **Structural Geology**

7.3.3.1 Structural Summary

Several stages of deformation have affected rocks in the HBGP area. Importantly, deformation of altered and gold-mineralized zones at Hope Brook was locally intense and contributed to the current spatial disposition of mineralized zones of economic interest. The first deformation event (D1) resulted in development of northeast trending and southwest plunging folds and related S1 foliation in late Proterozoic Whittle Hill Sandstone and Third Pond Tuff sequences prior to emplacement of the 499 +3-2 Ma Wild Cove Granite, but potentially during or after development of the main advanced argillic stage alteration and associated gold mineralization.

D1 was followed by Silurian deformation (D2) that produced a heterogeneously developed S2 fabric and accommodated northwest directed structural imbrication of late Proterozoic successions and older Cinq Cerf Gneiss northwestward over sedimentary and volcanic or volcaniclastic sequences of the Silurian La Poile Group. The Cinq Cerf Fault and Bay d'Est Fault systems played related and substantive roles in accommodating D2 strain and the dominant fabric seen in the deformed AAZ rocks at Hope Brook is S2. At the deposit scale, the Cinq Cerf Fault marks the northern limit of the AAZ and similar, but less extensively defined, faults occur in the structural hangingwall of the main silicified zones of the deposit. Fabric intensity associated with D2 ranged from weak foliation development in La Poile Group rocks and syn-tectonically emplaced Silurian intrusions, to mylonitic or ultra-mylonitic layering in the Cinq Cerf Fault, 51 Fault or Bay d'Est Fault systems. S2 fabrics typically wrap around large and small lenses of silicified material within the AAZ and also affect mafic dikes that were emplaced after both D1 and development of silicified zones of the main mineralizing stage (Stewart, 1992; Dubé et al., 1998).

Impacts of D2 deformation are important to assessment of HBGP exploration potential, particularly along the extensive AAZ that contains the main gold zones defined to date. Foremost among potential impacts of D2 deformation are (1) shape modification of mineralized zones to reflect ductile shear-zone related finite strain patterns within and across the Cinq Cerf Fault, (2) presence of tight to isoclinal folding within the AAZ, with attendant structural thickening of altered and silicified zone widths in hinge areas or development of detached fold closures within zones of highest shear strain, (3) down-dip termination or across-strike step over of gold-bearing silicified zones due to effects of (2) above, and (4) presence of large scale boudinage structuring of silicified zones, with associated thinning or termination of such zones along geometrically persistent pinching or neck-line trends.

7.3.3.2 Mafic Dikes in Mineralized Zone

Multiple phases of mafic dikes occur in the deposit area and were emplaced at different stages of AAZ history (Yule, 1989, Yule et al., 1990). Mapping results from the 4960 m mining level presented by Dubé et al. (1998) show that mafic dikes extensively cross-cut gold-bearing silicified zones that had been developed for mining and Stewart (1992) presented comparable results based on surface mapping data. Three preferred dike strike orientations are apparent in Figure 7-6, these being (1) northeast, parallel to S2 and silicified zone margins, (2) east-west, at approximately 45 degrees to (1) above and (3) north-south, at approximately 45 degrees to (1) above. Stewart (1992), Yule (1989) and Dubé et al. (1998) all recognized that mafic dike emplacement was multi-phase, with a significant phase post-dating development of the AAZ and being syn-kinematic with D2 deformation. This phase of mafic emplacement introduced significant volumes of non-mineralized material into the gold bearing silicified zones of mining interest and presented a difficult to predict dilution factor with respect to estimation of mineral resources and reserves and subsequent mine planning (Deptuck, 1991). Earlier mafic dikes showing effects of the advanced argillic alteration system are also present, as are post D2 dikes that cross-cut all lithologies except the Devonian Chetwynd granite. Substantial volumes of mafic dike material occur southeast of the deposit in an intermediate to mafic dike-sill complex.

7.3.3.3 Mineralogy of Gold-Bearing Zones

Deposit mineralogy and distribution of gold and trace elements within the advanced argillic alteration envelope at Hope Brook was discussed in detail by Stewart (1992) and was summarized earlier by McKenzie (1986) and Yule et al. (1990). Gold typically occurs as a very fine grained and broadly disseminated phase within the grey and vuggy grey silicification subzones of the deposit but also occurs at trace to low grade (< 1.5 g/t Au) levels in other altered and variably silicified rocks of the AAZ. The principal sulphide phase present at Hope Brook is pyrite, which occurs as disseminated grains to sub-massive aggregations that account for up to 30% of rock volume locally, as seen in the pyritic silicified subzone. Chalcopyrite is second in relative sulphide phase abundance and occurs within the major gold-bearing silicified zones as disseminations, irregular patches or pervasive networks of veinlets superimposed on silicification. Bornite is also locally present and typically accompanies chalcopyrite. Gold occurs in its native form as sub-microscopic grains included in silicification stage quartz, pyrite or chalcopyrite as well as on surfaces of sulphide grains (Yule et al., 1990). The grey, vuggy silicification subzone that corresponds with areas of the deposit having gold grades typically exceeding 1.5 g/t

Au shows up to 5% vugs measuring less than 3 mm in diameter which are locally filled by pyrite or chalcopyrite. Higher grades within this subzone show spatial association above about 2.5 g/t Au. Isolated high-grade quartz–sulphide veins and breccias locally cross-cut the main silicified zones of the deposit and show gold grades as high as 285 g/t Au. These occur as cm to m wide units containing native gold as well as telluride phases such as tellurobismuthite, calaverite and aikinite. Trace to minor amounts of tennatite, galena, mawsonite and rucklidgeite have also been described from the deposit in combination with previously mentioned phases, these account for geochemically elevated levels of silver, zinc, arsenic, antimony, mercury and tin in the deposit (NLDNR Mineral Occurrence Database Report 11O/9/Au-003).

7.3.4 Metal Zonation and Geometry of Gold Distribution

Spatial zonation with respect to gold, copper and silver levels within the most densely drilled area of the HB deposit was documented by Dubé et al (1998) on the basis of analytical database results made available from Royal Oak. Figure 7-7 presents gold distribution results of this study within the densely sampled range of the deposit between Line 11400m E and Line 12000m E of the mine grid. Gold distribution shows a higher-grade core zone that plunges moderately grid west toward an area incompletely tested at that time by drilling. A secondary grade trend is also present that plunges to grid east at about 50 degrees within the vertical projection plane. Dubé et al (1998) also note that gold/silver ratios between 1:5 and 1:7 apply to the deposit area for which data were available.

Gold and copper grade patterns within the deposit were also evaluated by BP in the mineral resource study by Carter (1985). This was based on 75 drill holes. The ‘gold grade x silicified zone horizontal width’ parameter (Figure 7-8) defines trends similar to those developed from the larger data set accessed by Dubé et al. (1998). Evidence of the two plunge trends are apparent in both datasets and broadly correspond with at least some boudinage thinning trends recorded in field observations.

Lateral zonation of gold and copper along the strike of the AAZ could not be clearly assessed for this report due to lack of data. However, gold is associated with silicification, chalcopyrite and bornite at the Chetwynd Prospect, approximately 2 km to the southwest of HB deposit. This area does not show massive silicification at surface to the degree seen at the HB deposit but does show multiple interlayered thinner zones of silicified and AAZ rocks.

Figure 7-6 Mafic Dike Distribution on the 4960 Level of Hope Brook Mine (from Cullen et al., 2021)

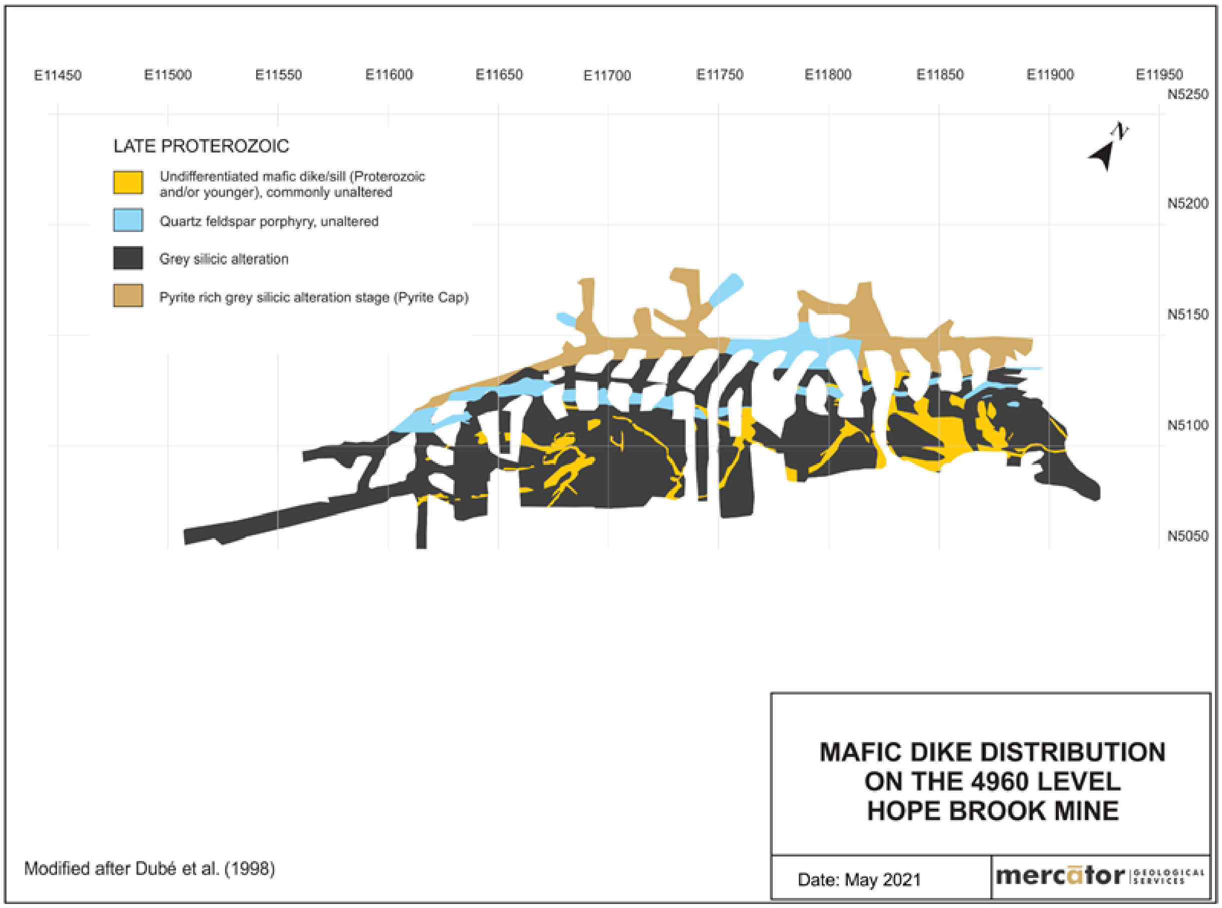


Figure 7-7 Longitudinal Section of Contoured Gold (G/T) Grades in HB Deposit (from Cullen et al., 2021)

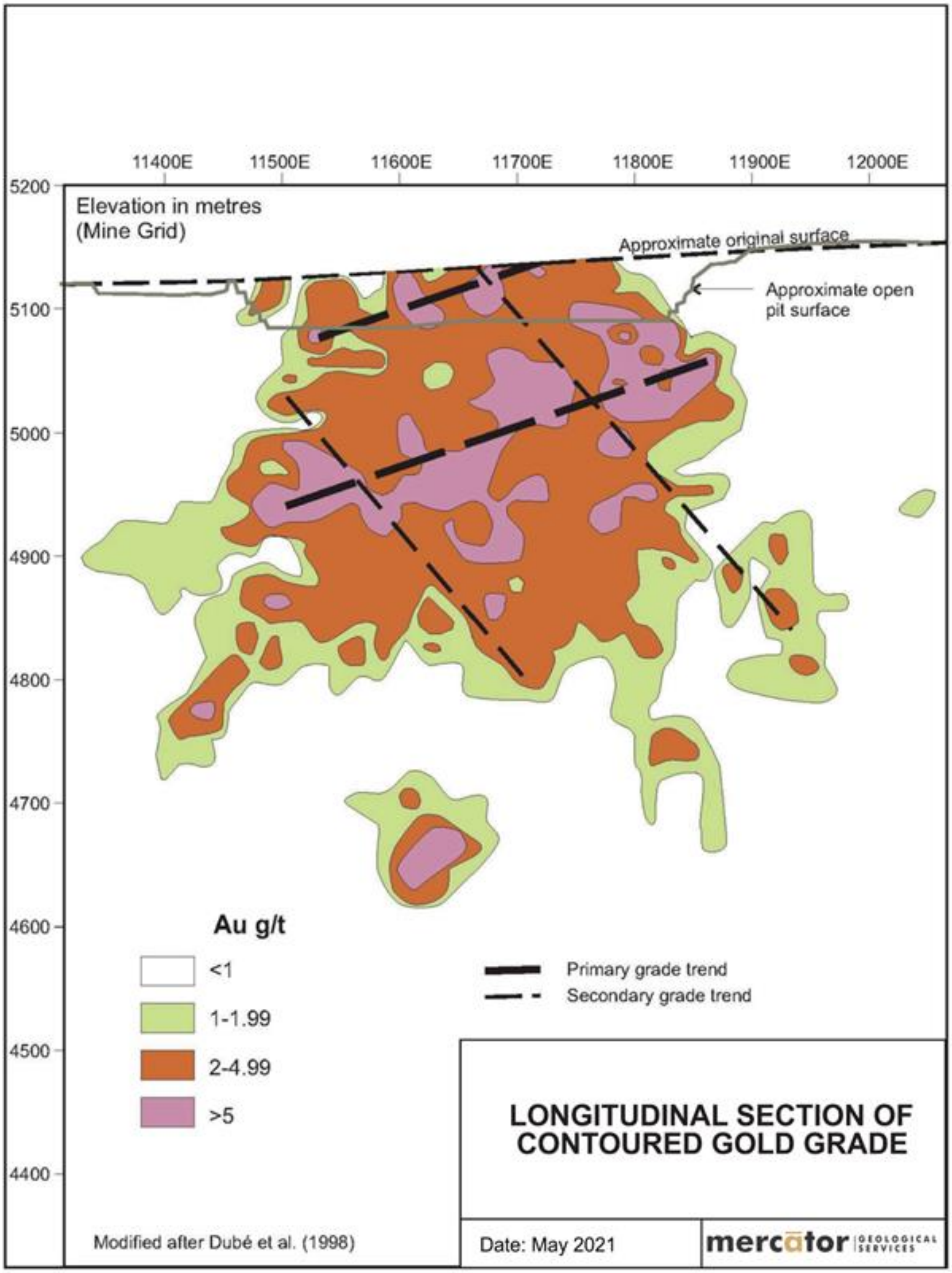
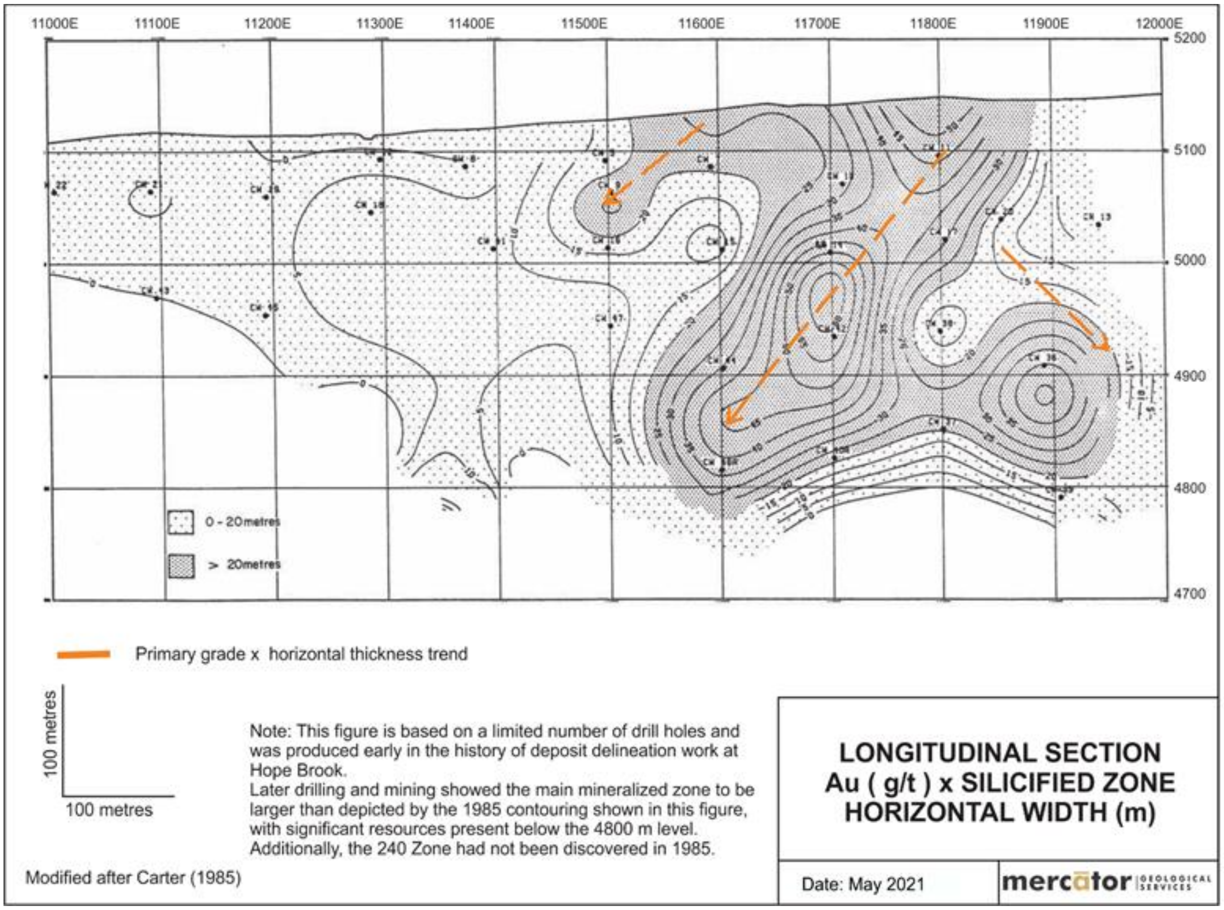


Figure 7-8 Longitudinal Section of Gold (G/T) X Silicified Zone Horizontal Width (m) (from Cullen et al., 2021)



7.3.5 Other Gold Occurrences and Mineralization Styles

7.3.5.1 Introduction

A younger style of gold mineralization distinct from that represented by the HB deposit and the Ironbound Hill occurrence also occurs within HBGP holdings. This consists of quartz or quartz-carbonate vein arrays that in some instances show associated low-grade, disseminated gold in strongly carbonate-altered immediate host rocks. This style of mineralization is primarily hosted by volcano-sedimentary sequences of Silurian age that were affected by deformation associated with the regionally significant Bay d'Est fault zone and related secondary shears. The most prominent examples of this mineralization are found in the Old Mans's Pond, Phillips Brook and Cross Gulch gold occurrences, all of which occur on the HBGP holdings (see previous for occurrence locations).

7.3.5.2 Old Man's Pond

This gold occurrence is located 12 km west-southwest of the HB deposit and is hosted by subaerial tuffaceous and volcaniclastic rocks of the Silurian La Poile Group adjacent to their contact with the Silurian Hawk's Nest Pond Porphyry intrusion. Gold mineralization in this area occurs in quartz vein arrays with associated silicification, arsenopyrite, sphalerite, galena and chalcopyrite, hosted by a sericitic alteration zone developed in variably foliated rocks that measures up to 200 m in width and 1 km or more in length. Disseminated pyrite occurs within the alteration zone at low levels (<2 %) and visible gold has been reported from several samples collected in this area. The most prominent vein system defined to date is termed the "AT Vein" and has been tested by trenching and limited core drilling results over approximately 750 m of northeast trending strike length. The vein varies in width from a few cm to 0.80 m and locally shows quartz vein array stockwork zones 2m to 5m in width. Gold grades reported range from detection limit levels to greater than 30 g/t, with the best weighted average gold grade (uncut) from trench sampling by Long Range Resources Limited being 167.87 g /t Au (4.897 oz/ton) over a trench chip sample length of 0.80 m (Dearin, 1989). Initial testing of down-dip extensions and other alteration targets in the vicinity through 8 core BQ size holes did not return encouraging results. Gold mineralization and associated alteration at this occurrence post-dated the main stage of HB deposit mineralization and may be related to a subsidiary splay of the Bay d'Est Fault.

7.3.5.3 Phillips Brook

This gold occurrence is located 7.5 km west-northwest of the HB deposit and is hosted by sheared and altered tuffaceous volcanic, volcaniclastic and sedimentary rocks within the Silurian La Poile Group, adjacent to their contact with the Silurian Hawk's Nest Pond Porphyry intrusion. The prospect was discovered in 1984 by Dolphin Exploration Ltd. and subsequently assessed primarily by that company. In 1996 Royal Oak carried out a limited (2 hole) drilling program on the property that confirmed earlier exploration results. Gold mineralization as occurs in an altered and sheared zone parallel to the northeast striking and east dipping contact of tuffaceous and rhyolitic rocks with the Hawks Nest Pond Porphyry. Alteration is characterized by presence of sericite, chlorite, pyrite and carbonate in the variably sheared and fractured host rocks. Gold mineralization occurs in three zones along the northeast contact zone, these being the East, Central and West Zones, and best gold grades correspond with areas of greatest alteration and highest disseminated pyrite content. The mineralized trend has been tested by eight diamond drill holes to date over a strike length of 2.2 km, with 6 of these completed by Dolphin and 2 by Royal Oak. Drilling results are most definitive in the West Zone, where results from six drill holes intercepted low grade gold mineralization (typically < 2.0 g/t Au) at various locations along a strike length of approximately 1.5 km. True sample thicknesses are not known but weighted average gold grades for selected mineralized intervals range between 2.36 g/t over 1.1 m Au in Dolphin hole 89-1, beginning at a depth of 13.6 m, and 0.75 g/t Au/48.5 m in Royal Oak hole 96-7 beginning at a depth of 86.5 m (Cormier, 1996).

As was the case at Old Man's Pond, gold mineralization and associated alteration at this occurrence post-date the main stage of HB deposit mineralization and may be related to a subsidiary splay of the Bay d'Est Fault.

7.3.5.4 Cross Gulch Area

This area of gold occurrence is located 12.5 km north of the HB deposit and is centered on the east-west trending Bay d'Est Fault that forms the boundary between Avalon Zone rocks south of the fault and Dunnage Zone rocks to the north. Noranda originally discovered bedrock gold occurrences in this area at Cindy's, Suzanne's, Lynda's and Gulch Brooks and Royal Oak subsequently carried out further assessment of the prospects. Two styles of gold mineralization are present in this area, the first, developed at Cindy's, Susanne's and Lynda's brooks is hosted by amphibolite grade metasedimentary rocks that form part of the Silurian Bay du Nord Group. Gold in these locations generally occurs in alteration zones showing sericite, pyrite and variable degrees of carbonate alteration and silicification. In some instances, it is associated with complex quartz vein arrays showing brecciation textures. A second style of gold mineralization also occurs south of the Bay d'Est Fault and is associated with quartz veining in variably sheared, carbonate altered, arsenopyrite-bearing slates or within sheared zones of pyritic, sericite schist that mark splays of the Bay d'Est Fault. The Gulch Brook occurrence is the most prominent example of this style tested to date. Not all occurrences in this area are on HBGP claims.

Weakly developed gold mineralization at grade levels typically less than 1.0 g/t Au has been defined to date at the various occurrences in this area. The Gulch Brook occurrence is the most thoroughly assessed to date and has been tested by 10 core drilling holes Results from this area define two sub-parallel zones of gold bearing sericitic schist showing local silicification, pyrite and quartz veining that are tentatively correlated along approximately 225 m of strike length. Intercept thicknesses range between 1.5 m and 6 m down hole and merging of the two zones may occur locally. True thicknesses of mineralized intervals are narrow, but not currently well defined. Gold bearing character was confirmed to a depth of approximately 110 m below surface by the drilling and the alteration trend remains open in all directions.

Gold mineralization and associated alteration at this occurrence post-date the main stage of HB deposit mineralization and may be related to a subsidiary splay of the Bay d'Est Fault. Similarity exists with alteration and gold occurrence styles described above for the Phillips Brook and Old Mans Pond areas.

8 DEPOSIT TYPES

The HB deposit occurs within a zone of extensive advanced argillic alteration (AAZ) hosted by late Proterozoic sedimentary, volcanic, and intrusive rocks (Cullen et al., 2021). Stewart (1992) described geological, geochemical, and geochronological aspects of the deposit which followed earlier focused discussions of alteration mineralogy by Kilbourne (1985), surface geology and mafic dike relationships by Yule (1989) and general lithologic attributes by McKenzie (1986) and Woods (1984). Subsequently, O'Brien et al. (1998) and Dubé et al. (1998) placed emphasis on structural history of the deposit and its placement within the broader metallogenic framework of the northern Appalachians. More recent work by Coastal Gold has added to the technical documentation of alteration and mineralization that characterize the deposit. All workers clearly identified intense hydrothermal alteration and spatially associated silicification as key components of the mineralizing system that gave rise to the deposit. However, differences exist with respect to interpreted placement of the HB deposit mineralizing system in the time/space context of the orogen and some of these bear directly on deposit classification. Important attributes of the deposit and their relevance to its classification are presented below in section 8.1.

In addition to the HB deposit, several gold occurrences associated with Silurian or younger sericitic alteration, quartz veining and carbonate alteration and silicification have also been documented within the HBGP area. None of these is substantial in size or gold grade as presently defined, but spatial association with the large Bay d'Est Fault or its secondary splays, and possibly with Silurian magmatic activity, indicates that potential for more significant mineralization is present. Classification of this style of occurrence is addressed below in section 8.3.

8.1 Summary Description of HB Deposit

The HB deposit and associated AAZ are situated in the structural hanging wall of the Cinq Cerf Fault that accommodated late Silurian reverse and strike-slip ductile shear (Cullen et al., 2021). They are hosted by intensely to moderately deformed and altered sandstones and tuffaceous volcanic rocks of the Whittle Hill Sandstone and Third Pond Tuff units which are late Proterozoic in age. The AAZ is interpreted to have developed through structurally focused hydrothermal processes related to emplacement of the late Proterozoic Roti Intrusive Suite and was subsequently deformed during Silurian deformation related to structural stacking of Proterozoic sequences northwestward over sequences of the adjacent Dunnage Zone.

Widespread presence of pyrophyllite, kaolinite, sericite, quartz, diaspore, alunite and andalusite define the AAZ and surround multiple tabular zones of intense silicification that occur along its currently mapped length. These define a continuous northeast trending zone that measures approximately 8 km in length and reaches 400 m or more in width in the deposit area. The zone thins to the southwest along strike to widths of less than 50 m.

Two main stages of silicification have been documented in the AAZ, the first being a widely distributed buff stage that typically is barren, or at best poorly mineralized with respect to gold, and the second is a grey, slightly vuggy stage that post-dated buff silicification and hosts most of the gold and copper mineralization of economic interest. Gold typically occurs as very fine- grained disseminations within rocks affected by the grey silicification stage and is frequently accompanied by chalcopyrite, lesser bornite or minor amounts of tennantite or enargite that occur as disseminations or in fracture filling vein settings that cross-cut silicification. Finely distributed pyrite commonly occurs in silicified rocks of both stages and ranges in concentration from nil to as much as 30% or more locally. The latter case is generally restricted to a correlatable pyrite rich silicified fragmental unit termed the "Pyrite Cap" that occurs structurally below the main gold-bearing silicified zones.

Study of timing and sequencing of hydrothermal alteration and associated gold mineralization has been focused on definition of relationships between various intrusive phases that occur in and around the alteration zone that hosts the deposit. These interpreted relationships show that the Roti Intrusive Suite and related porphyry dikes were emplaced during the hydrothermal alteration sequence and were affected to varying degrees by ongoing alteration and gold-mineralizing processes. Dated Silurian intrusions cross-cut AAZ zone rocks but are also affected by Silurian deformation associated with structural stacking of the assumed Avalon Zone sequences northwestward over those of the Dunnage Zone along east dipping ductile thrust zones such as the Cinq Cerf Fault and Bay d'Est Fault. These relationships constrain aluminous alteration and gold mineralization as being generally coeval with emplacement of the Roti-Intrusive Suite but clearly pre-dating the major Silurian deformation imprint seen in this area.

On the basis of immobile trace element data, Stewart (1992) argued that altered and silicified rocks within the AAZ were Roti Intrusive Suite sills and/or dikes that accompanied or pre-dated structurally focused main stage silicification and gold mineralization. However, he also invoked continued evolution of the mineralized zones during Silurian deformation and igneous activity with important upgrading of gold grades in earlier-mineralized silicified zones resulting from contact metamorphic effects of the Devonian Chetwynd Granite.

8.2 Ironbound Hill Prospect

Big Ridge's Ironbound Hill prospect is located 25 km northeast of the HB deposit and locally shows similar styles of pyritic, aluminous and silicic alteration as seen at Hope Brook. Host rock sequences are considered to be of similar age and general lithology and to reflect the same style of mineralizing event.

There are several showings in the area that contain disseminated to stringer pyrite with minor base metal sulphides, barite and accessory silver and gold. The showings are hosted within altered felsic volcanics and sedimentary rocks that are considered for current purposes to belong to the Neoproterozoic Third Pond Tuff and Whittle Hill Sandstone units present at the nearby HB deposit. The volcanic and sedimentary sequence in the area was described by BP staff as fine-grained, siliceous felsic volcanics and fine-grained volcaniclastic sedimentary rocks.

BP drilled 11 core holes in the area in the 1980's and hole 82-1 is representative of the mineralization present. It encountered traces of disseminated galena and sphalerite over 60 m with the best interval grading 4.35 % Pb, 11.2 % Zn, 1.13 oz/t Ag and 6.6% barite over 0.46 m beginning at a downhole depth of 51.57 m.

Four core holes were completed by First Mining at Ironbound Hill in 2017 and these returned results generally comparable to the earlier BP holes. Drill hole IH-17-004, drilled approximately 35 m south of BP drill hole 86-6, returned the best gold values, these being 0.33 g/t Au over 4 m from 82 m to 86 m and 0.50g/t Au over 4 m from 129 to 133 m. No significant sulphide mineralization was encountered in the drill hole.

Trace element and REE patterns identified by Coastal Gold at the site indicate that the Ironbound Hill intrusive rock and Roti Intrusive Suite rocks at Hope Brook have a common magmatic source.

8.3 Summary Description of Other Gold Occurrences of the HBGP

Sericitic alteration zones in variably foliated to sheared rocks associated with the Bay d'Est Fault or with possible northeast trending secondary splays that cross la Poile Group or Bay du Nord Group rocks occur within the HBGP and locally host gold mineralization. The most prominent examples of such occur at the Old Man's Pond, Phillips Brook and Cross Gulch gold occurrences. Gold mineralization in these settings is typically low grade (< 2 g /t Au), associated with quartz vein arrays and/or zones of silicification and accompanied by pyritic sulphide mineralization and extensive carbonate alteration. Infrequent high grade gold values in quartz vein samples have also been returned. Mineralized zones are associated with altered and sometimes sheared La Poile Group volcanics, sedimentary rocks and felsic porphyries or Bay du Nord Group schists and meta-sedimentary rocks that locally show well developed strike and dip continuity.

8.4 Deposit Models and Classification

O'Brien et al. (1998) reviewed HB deposit attributes in the context of other gold deposits within Avalonian sequences of the Appalachians and also with respect to the genetic models considered most applicable. They note that the origin of the AAZ and associated gold mineralization within an epithermal system was originally proposed by BP staff during the 1983-1985 exploration period and described by Woods (1984). Stewart (1992) attributed initial, structurally focused development of mineralization to the influence of the Roti-Intrusive Suite, with modification through Silurian tectonism and igneous activity. Emplacement of the Devonian Chetwynd

Granite was interpreted as having imparted a contact aureole metamorphic effect of gold grade enhancement in the most northeasterly part of the AAZ. Subsequent to the above, Dubé et al. (1998) reported that U-Pb age dating of pre/early alteration and post alteration quartz feldspar porphyry dikes established the age of the main stage of gold mineralization as being between 578 and 574 Ma. In combination with other well documented attributes of the deposit, they further determined that the causative hydrothermal alteration system was of the high sulphidation type commonly seen in association with acid-sulphate type epithermal systems.

Evolving geological understanding with respect to the AAZ and associated gold mineralization shows that it is similar to high sulphidation type alteration mineral suites commonly associated with epithermal systems. However, preserved textural features denoting a high crustal level, such as multi-stage or crustiform veining and complex hydrothermal breccias are lacking. In contrast, mineralized zones show widespread distribution of very fine grained, disseminated gold and sulphides associated with intense silicification that overprints an enigmatic pre-existing foliation that could be primary in origin or may in part be related to late Proterozoic deformation. This suggests a deeper level of AAZ development, possibly within or adjacent to an evolving structural zone that was exploited by Roti Intrusive Suite quartz feldspar porphyry and mafic dikes.

Collaborative research carried out over several years by Coastal Gold, Memorial University and Western University further supports earlier interpretation of deposit association. This work includes mineral liberation analysis and oxygen stable isotope analysis of samples from the Property. Results are interpreted as showing that gold mineralization across the entire Property was likely deposited from a single fluid source. The oxygen stable isotope work suggests that fluids responsible for gold mineralization had a similar geochemical composition and are likely part of a single large event driven by a major magmatic-hydrothermal system at depth. Results have also been interpreted as possibly indicating that the HB deposit may represent a transition from mesothermal to epithermal style mineralization (Bannerjee, 2014).

Based on results of the various deposit studies completed to date, the HB deposit is considered for report purposes to be a late Proterozoic, high sulphidation mineralizing system characterized by disseminated gold that shows deep epithermal affinity, with a possible original structural focus and genetic association with the Roti Intrusive Suite. Figure 8.3 presents a schematic representation of this setting. The Bay d'Est Fault (shear zone) system is also interpreted to have exerted a substantial control on localization of the second style of orogenic gold mineralization that occurs within the HBGP. Presence of brittle-ductile bedrock textures in association with the sheared and altered gold bearing zones supports this contention.

Big Ridge's Ironbound Hill prospect located northeast of the HB deposit locally shows similar styles of pyritic, aluminous and silicic alteration as seen in the vicinity of the HB deposit, and host rock sequences of similar age and general lithology and present. Roti Intrusive Suite intrusive rocks are present in the prospect area and the style of style of alteration and mineralization identified to date at this location is similar to that seen at Hope Brook. The prospect is therefore classified in common with Hope Brook as having developed from a late Proterozoic, high sulphidation mineralizing system with deep epithermal or porphyry affinity.

Epithermal gold deposits associated with both high and low sulphidation hydrothermal systems have been described at several locations within the Avalon Zone of the Northern Appalachians. The most prominent of these in Canada, other than the HB deposit, occur in eastern Newfoundland, where low sulphidation systems of broadly similar age to Hope Brook occur in two separate belts, one on the Avalon Peninsula and one on the adjacent Burin Peninsula. The former trend is hosted primarily by 600-640 Ma subaerial pyroclastic sequences of the Harbor Main Group, and the latter by subaerial pyroclastics of the 600-560 Ma Marystown Group.

Prominent examples of Avalonian gold deposits having economic size and grade also occur in the southern portion of the Appalachian orogen in the Carolina Slate Belt. These include the Haile, Brewer, Ridgeway and Barite Hill gold deposits. Gold mineralization in these settings is hosted by late Proterozoic, subaerial, intermediate to felsic volcanic rocks and overlying epiclastic sedimentary sequences that were affected by advanced argillic alteration and silicification. While some deposits such as Brewer show metal associations indicative of high sulphidation epithermal systems, origin of others such as Haile and Ridgeway are less clear, with marine exhalative, syntectonic epithermal and structurally controlled/metamorphic models proposed through time (Spence et al., 1980; Gillon et al., 1995 and Hayward, 1992).

8.5 Ironbound Hill Prospect

There are several mineralized showings in the Ironbound Hill area that typically comprise disseminated to stringer pyrite with minor base metal sulphides, barite and accessory silver and gold. The showings are hosted within altered felsic volcanics and sedimentary rocks that are considered for current purposes to belong to the Neoproterozoic Third Pond Tuff and Whittle Hill Sandstone units present at the nearby HB deposit. The volcanic and sedimentary sequence in the area was described by BP staff as fine-grained, siliceous felsic volcanics and fine-grained volcaniclastic sedimentary rocks.

9 EXPLORATION

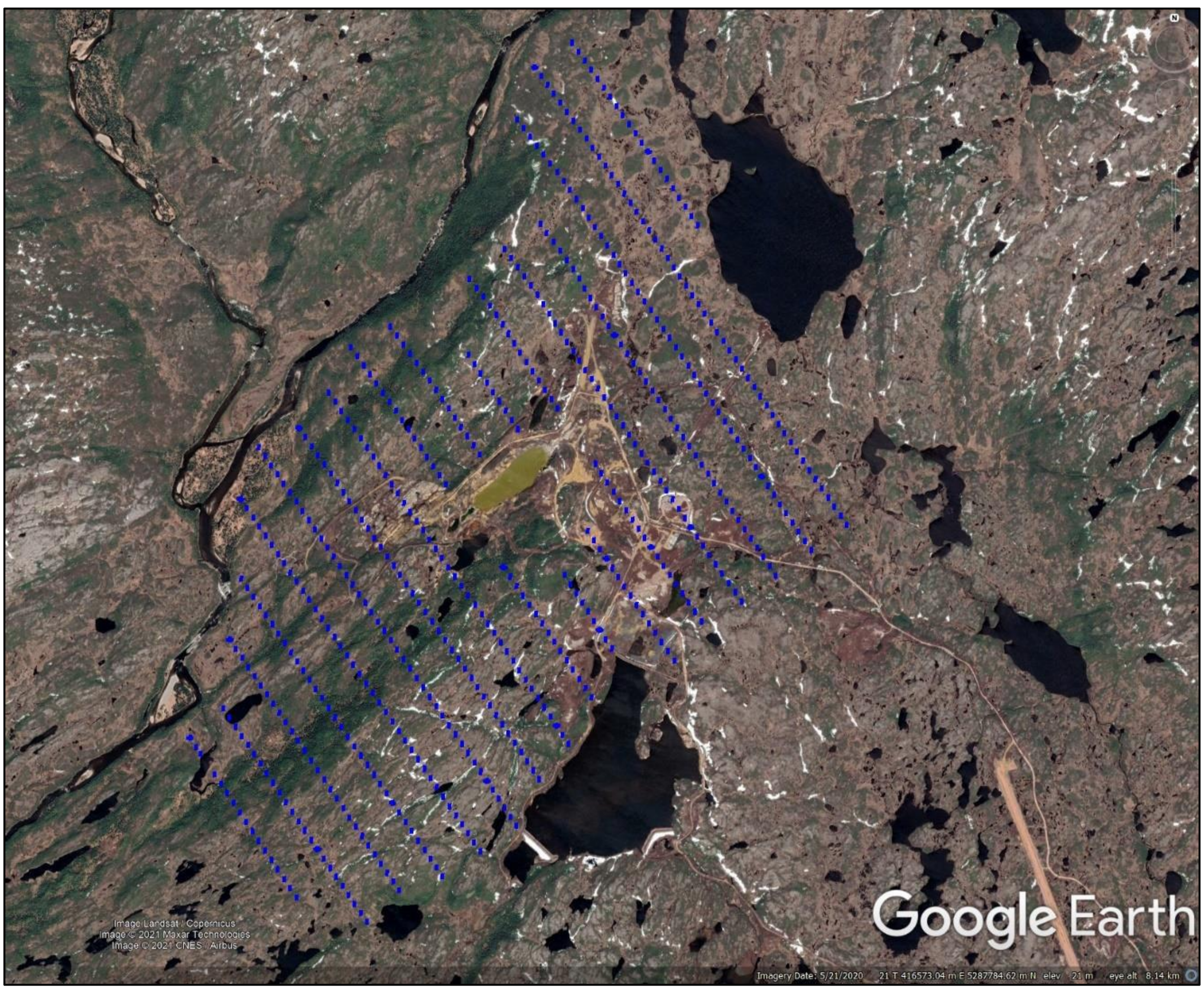
ClearView Geophysics Inc. (“ClearView”) of Brampton, Ontario was engaged by Big Ridge Gold Corp. to carry out a CSAMT Survey (Controlled Source Audio-frequency Magnetotellurics) and Cesium Magnetometer surveys at the HBGP. The fieldwork was completed in September and October, 2021. The purpose of the work was to map subsurface anomalies to guide follow-up gold exploration in combination with previous induced polarization and Titan-24 surveys (ClearView, 2021).

The purpose of conducting the CSAMT survey is to deepen the geophysical responses at the HBGP and improve targeting of mineralized zones beyond the limits of the current drilling database and historic geophysical surveys.

The survey was preceded by several weeks by a line-cutting campaign completed by Brinson’s Line Cutting of Change Islands, NL. Brinson’s completed 30.3 line-km of cut measured and picketed lines across the Hope Brook Mine area. A total of 28.85 line-km were surveyed once un-surveyable topographical gaps were taken into consideration.

The CSAMT sounding locations are indicated with blue dots in the following Figure 9-1. Grid access was by ATV’s (all-terrain vehicles) and foot-paths from gravel roads and trails. The survey lines were brushed out and re-established using hand-held GPS receivers.

Figure 9-1 CSAMT Soundings Location Map



9.1 Reported Survey Results

ClearView Geophysics geophysicist Joe Mihelcic, P.Geo, P.Eng provided an interpretation and recommendations based on survey CSAMT results and other geophysical information provided by Big Ridge. The interpretation and conclusions are reproduced here from the Report.

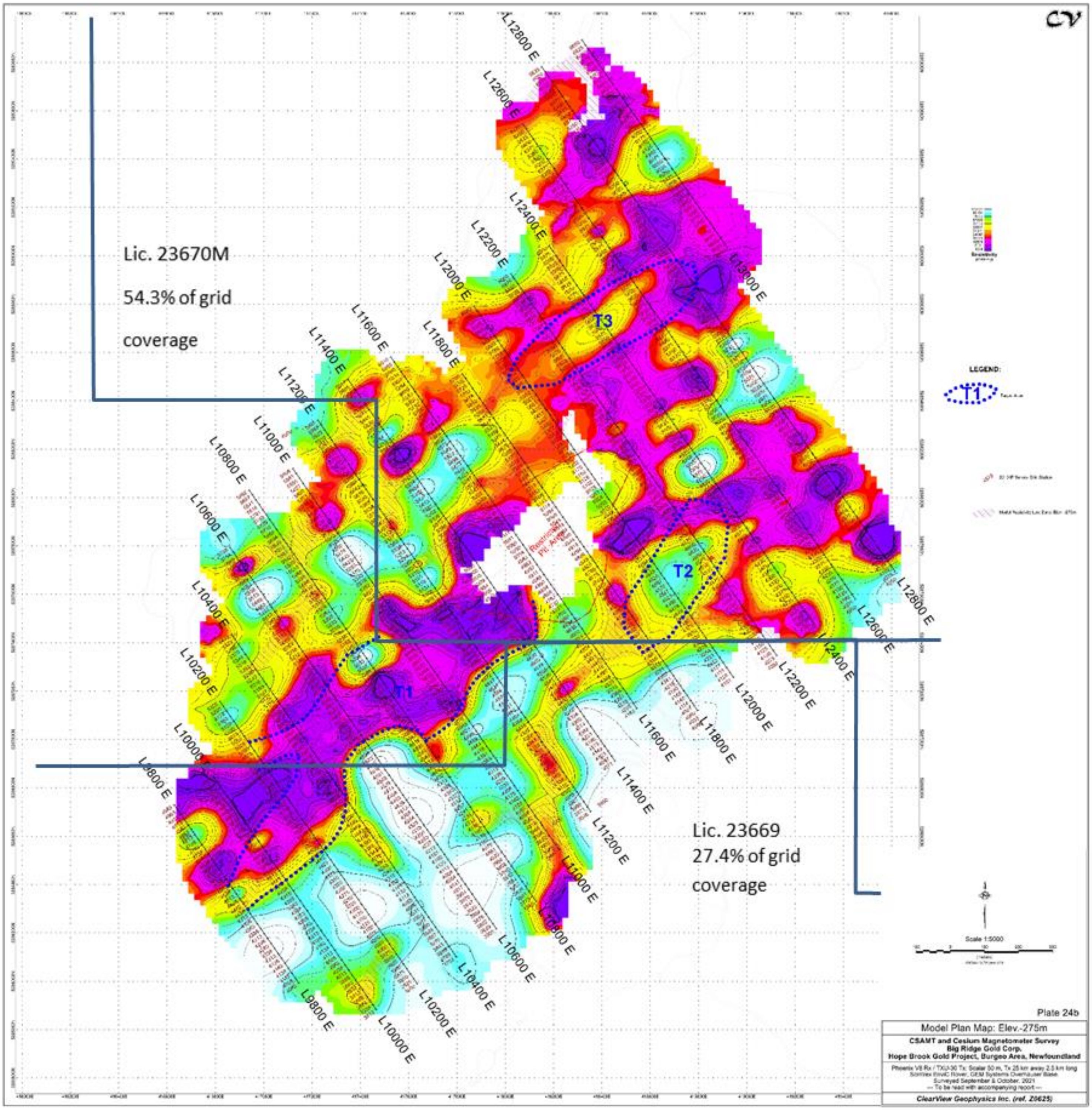
The interpretation of the CSAMT data was complemented by the Cesium Magnetometer data collected over the CSAMT survey lines (Clearview, 2021).

A geophysical signature of gold mineralization at the site was developed based on a comparison of historic borehole data with the Spectral IP/Resistivity data. In general, long Spectral IP Tau with high Spectral IP 'c' correspond to coarse sulphides, whereas short Spectral Tau can result from disseminated or fine grained sulphides. For example, up to 10% pyrite was noted near surface to approximately 45 metres deep through borehole HB12-101. This borehole was drilled between L10400E and L10600E. Long Tau are anomalies noted as displayed in Plate 23. However, there are no corresponding gold values associated with these long Tau anomalies. Further down this same borehole to between ~365 metres and ~372 metres within a 'Silicic Alteration Zone' with ~5% pyrite, much better gold assays are noted.

Target mineralization is expected to have above background resistivity resulting from silicification and low and/or 'flat' local magnetics associated with alteration. The long spectral Tau values highlighted in Plate 23 are useful for identifying general regions of potential gold mineralization. Gold mineralization is likely directly associated with short spectral Tau values and weak to moderately high Spectral (Magnetic Induced-Polarization (MIP)) response. The MIP amplitude is the calculated theoretical zero-time chargeability that can generally indicate 'quantity of sulphides'.

Three broad target areas, T1 through T3, have been identified (Figure 9-2). They all satisfy the geophysical signature requirements for potentially economic deposits of gold. The Mag3D ground-based cesium magnetics inversion models are presented digitally as a 3D voxel and colour contour plan grids at 25-metre depth intervals to 2 kilometres deep. Overall, these models generally indicate low magnetics through these target areas.

Figure 9-2 Hope Brook CSAMT Model Plan Map (-275 M Level) Showing Interpreted T1, T2, T3 Anomalous Zones and Percent Grid Coverage by Mineral License (Clearview, 2021)



Target T1

This target area is historically well known and has been drill tested in numerous locations. The target outline is based on the -275m Elevation CSAMT results presented in Plate 24b (of the ClearView Report). It outlines local resistivity high zones within the overall resistivity low region that extends southwest from the 'Restricted Pit Area'.

The general outline of the CSAMT local high resistivity zones varies with depth as displayed in Plate 1 through Plate 11 and Plate 24a through Plate 24e. The magnetic profiles and plan maps indicate peak magnetic responses are mostly seen along or near the boundaries as indicated for T1. Therefore, the magnetic mineralization extends to near or at surface at these boundaries. Whether this indicates corresponding limbs of a fold or separate lithologies is uncertain. The n=2 IP Chargeability plan map presented in Plate 21, the n=8 Spectral IP Tau values indicated in Plate 23 and the pseudosection plots presented in Plate 4 through Plate 16 indicate numerous responses ranging from weak to strong, and short Tau to long Tau anomalies. The target region is complex and likely branches off beyond the survey limits in the southwest as indicated.

Target T2

This target area is located east-southeast of the 'Restricted Pit Area' andis over 600 metres long. The Spectral IP/Resistivity survey indicate high chargeability and resistivity variability in this area. Numerous long spectral Tau values are also indicated in Plate 23. The CSAMT data indicate relatively high variability with depth but overall, a resistivity-high region.

T2 is also located within a broad magnetics low arc that is oriented north south in this location. Within this broad magnetics low, the ground-based cesium magnetics data indicate relatively high variability. Significantly, a broader magnetics high zone on L11600E immediately southwest of T2 does not extend northeast into T2, as displayed in Plate 20. This could indicate an offset fault and/or an alteration zone that extends to the 'Restricted Pit Area'.

Target T3

Target T3 is situated somewhat symmetrically opposite of T2 on the north side of the 'Restricted Pit Area'. Cesium magnetics data were collected on survey lines spaced 50 metres apart over the western part of T3. The magnetics profiles and plan views indicate low amplitude but well-defined continuity across the target area, especially between the 50-metre in-fill survey lines. Spectral IP chargeability values are generally weak in this area (i.e., less than ~6 mV/V); however, there are discrete long Tau values noted which could indicate minor quantities of coarse-grained sulphides.

The broad-based airborne data presented in Plate 20 indicate T3 is at a regional arc-shaped contact between a magnetic low to the south and 'blocky' magnetics high sub-zones to the north. This arc is similar in shape and offset to the north of the airborne magnetic anomaly within the 'Restricted Pit Area'. Therefore, T3 could be at a dilation zone that could be favourable for gold bearing hydrothermal fluids. The CSAMT depth sections and plan maps display T3 as a predominantly high resistivity area for most of the deeper depths.

The results of the CSAMT and Magnetometer Survey will be further combined with historical geophysical survey results and the HB deposit geological and drill databases to model additional targets, in part by contrasting conductivity and resistivity results from different surveys with known geology. This work is planned for 2022.

10 DRILLING

The following is a description of drilling completed on the Property by Big Ridge, since acquiring the property. Big Ridge has completed 61 surface drill holes for 19,090 m from October 2021 to August 2022 (Figure 10-1) (Table 10-1). Significant drill results are presented in Table 10-2.

The 2021-2022 drill program was completed by Cyr Drilling International Ltd. (“Cyr Drilling”) of Sunnyside, Manitoba. Surface drilling by Cyr Drilling recovered NQ size core (47.6 mm diameter).

All drill holes were initially spotted using a simple hand held GPS system. The drill rig is aligned to the correct azimuth by aligning the drill rig boom to a spotted front and back sight and the dip angle or inclination is determined by a clinometer attached to the drill rig boom. The final drill hole collar locations are surveyed by Big Ridge Gold personnel using a Reflex ACT III instrument. All drill hole locations were planned and recorded in UTM NAD83 Zone 21N coordinate space.

For down hole surveying Big Ridge Gold used a Reflex EZ-TRAC downhole survey tool.

2021 – 2022 Drilling Highlights:

- Drill hole HB-21-152 intersected 5.84 g/t Au over 14.8 m **including 19.9 g/t Au over 3.4 m**
- Drill hole HB-21-142 intersected 5.58 g/t Au over 6.1 m **including 25.2 g/t Au over 0.5 m**
- Drill hole HB-21-138 intersected 1.98 g/t Au over 23.1 m **including 5.30 g/t Au over 5.89 m.**
- Drill hole HB-21-148 intersected 1.09 g/t Au over 33.0 m **including 4.52 g/t Au over 4.1 m**
- Drill hole HB-22-158 intersected 1.64 g/t Au over 20.8 m **including 5.77 g/t Au over 4.7 m**
- Drill hole HB-22-159a intersected 1.41 g/t Au over 15.1 m **including 3.25 g/t Au over 4.2 m**.
- Drill hole HB-22-167 intersected 6.43 g/t Au over 3.2 m **including 12.9 g/t Au over 1.1 m**
- Drill hole HB-22-168 intersected **5.8 g/t Au over 1.7m**.
- Drill hole HB-22-178 intersected 0.95 g/t Au over 11.7 m **including 8.86 g/t Au over 1.0 m**
- Drill hole HB-22-179 intersected 0.95 g/t Au over 32.6 m **including 2.83 g/t Au over 8.7 m**
- Drill hole HB-22-182 intersected 0.86 g/t Au over 31.3 m including **5.38 g/t Au over 1.0 m and 1.28 g/t Au over 11.8 m**.
- Drill hole HB-22-185 intersected 0.64 g/t Au over 13.3 m **including 2.37 g/t Au over 1.6 m**
- Drill hole HB-22-192 intersected 0.93 g/t Au over 17.0 m **including 1.25 g/t Au over 9.0 m and 1.54 g/t Au over 1.0 m and 4.63 g/t Au over 1.0 m**
- **Drill hole HB-22-193 intersected 17.5 g/t Au over 1.0 m**
- Drill hole HB-22-198 intersected 0.47 g/t Au over 87.0 m **including 4.40 g/t Au over 2.0 m, 1.10 g/t Au over 2.0 m and 2.50 g/t Au over 7 m.**

Figure 10-1 Isometric View: Location of 2021-2022 DDH With Respect to Historical DDH and the HB Deposit Models

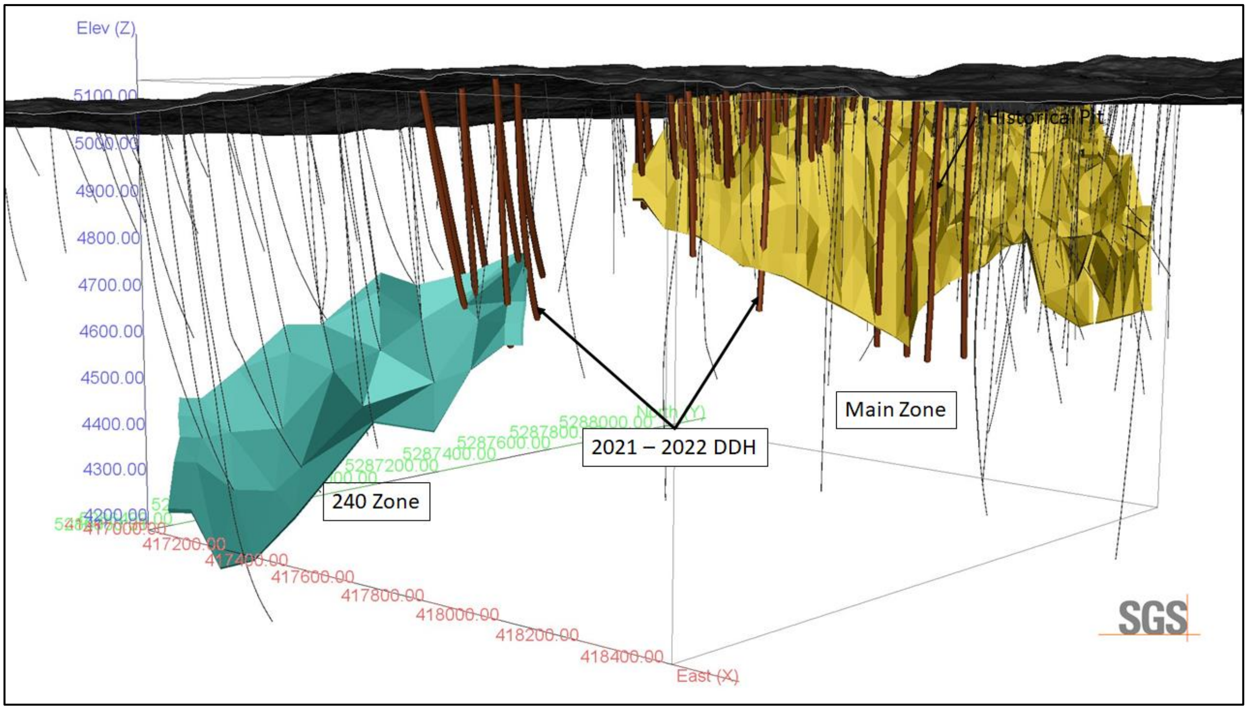


Table 10-1 Location, Orientation and Depth Data for Program the 2021-2022 DDH: NAD83 / UTM zone 21N

HOLE-ID	LOCATIONX	LOCATIONY	LOCATIONZ	LENGTH	AZIMUTH	DIP
HB-21-138	417714.65	5287516.77	5122.20	230.00	323.64	-55.33
HB-21-139	417693.52	5287507.39	5121.60	161.00	322.49	-55.59
HB-21-140	417730.09	5287495.55	5124.40	191.00	327.07	-62.52
HB-21-141	417744.17	5287507.10	5125.80	194.00	321.9	-63.99
HB-21-142	417708.80	5287488.14	5123.30	221.00	327.12	-68.67
HB-21-143	417768.68	5287567.51	5119.10	164.00	328.52	-55.21
HB-21-144	417700.23	5287481.85	5123.20	236.00	321.7	-75.91
HB-21-145	417820.40	5287565.62	5120.90	194.00	320.18	-53
HB-21-146	417699.08	5287451.95	5125.00	209.00	320.25	-57.69
HB-21-147	417699.08	5287451.95	5125.00	266.45	318.63	-66.77
HB-21-148	417820.40	5287565.62	5120.90	216.00	318.97	-63.53
HB-21-149	417794.66	5287498.57	5124.80	260.00	316.13	-63.12
HB-21-150	417849.83	5287625.10	5122.80	157.00	315.02	-50.01
HB-21-151	417810.20	5287511.94	5124.70	209.00	327.39	-48.8
HB-21-152	417865.26	5287646.35	5123.40	140.00	321.16	-54.41
HB-21-153	417810.20	5287511.94	5124.70	230.00	327.95	-55.78
HB-22-154	417810.20	5287511.94	5124.70	265.00	326.17	-64.5
HB-22-155	417811.06	5287548.08	5120.00	215.00	318.73	-51.23
HB-22-156	417829.50	5287527.73	5122.00	254.00	321.21	-55.24

HOLE-ID	LOCATIONX	LOCATIONY	LOCATIONZ	LENGTH	AZIMUTH	DIP
HB-22-157	417829.50	5287527.73	5122.00	278.00	319.39	-60.46
HB-22-158	417647.84	5287499.62	5125.10	191.00	325.75	-78.92
HB-22-159A	417845.98	5287568.80	5120.90	218.00	321.5	-61.24
HB-22-160	417593.64	5287393.60	5113.70	161.00	325.71	-57.77
HB-22-161	417845.98	5287568.80	5120.90	269.00	324.88	-66.85
HB-22-162	417521.46	5287281.09	5103.70	230.00	323.65	-45.71
HB-22-163	417521.46	5287281.09	5103.70	209.00	323.68	-59.08
HB-22-164	417644.83	5287480.77	5125.60	158.00	326.67	-52.53
HB-22-165	417644.83	5287480.77	5125.60	189.00	322.56	-71.48
HB-22-166	417575.00	5287361.17	5108.80	176.00	332.41	-59.09
HB-22-167	417644.83	5287480.77	5125.60	221.00	314.5	-80.78
HB-22-168	417566.49	5287349.40	5108.40	155.00	324.51	-45.28
HB-22-169	417566.49	5287349.40	5108.40	188.00	326.53	-59.38
HB-22-170	417566.49	5287349.40	5108.40	260.55	333.39	-73.52
HB-22-171B	418201.18	5287568.12	5166.40	704.37	322.52	-68.79
HB-22-172	417602.98	5287452.01	5118.10	182.00	333.96	-59.84
HB-22-173	417602.98	5287452.01	5118.10	173.00	331.6	-74.01
HB-22-174B	417676.58	5287330.27	5120.20	272.00	326.62	-43.86
HB-22-175	417676.58	5287330.27	5120.20	290.00	326.03	-51.61
HB-22-176	417636.68	5287232.06	5122.80	317.00	324.42	-46.26
HB-22-177	417636.68	5287232.06	5122.80	320.00	325.1	-54.17
HB-22-178	417663.35	5287256.97	5126.10	311.00	327.04	-45.55
HB-22-179	417663.35	5287256.97	5126.10	335.00	327.7	-52.42
HB-22-180B	418152.13	5287517.30	5163.50	701.00	323.85	-70.93
HB-22-181	417592.31	5287174.12	5124.00	320.00	319.95	-41.92
HB-22-182	417592.31	5287174.12	5124.00	359.00	324.13	-52.76
HB-22-183	417737.60	5287299.62	5133.90	320.00	324.12	-44.25
HB-22-184	418137.70	5287452.35	5158.50	692.00	318.85	-67.6
HB-22-185	417737.60	5287299.62	5133.90	380.00	323.68	-54.04
HB-22-186	417737.60	5287299.62	5133.90	350.00	325.67	-48.23
HB-22-187	418095.82	5287410.17	5151.60	668.00	320.02	-66.99
HB-22-188	417665.94	5287257.71	5126.70	362.00	329.04	-67.66
HB-22-189	417665.94	5287257.71	5126.70	399.00	330.13	-72.52
HB-22-190	417772.34	5287405.81	5125.30	518.00	324.89	-78.51
HB-22-191	417546.38	5286844.20	5147.70	611.00	318.93	-52.37
HB-22-192	417549.06	5286777.14	5158.70	567.53	323.92	-54.74
HB-22-193	417546.38	5286844.20	5147.70	639.40	317.83	-62.03
HB-22-194	417549.06	5286777.14	5158.70	683.00	323.62	-65.52
HB-22-195	417448.38	5286778.86	5136.00	545.00	322.19	-55.45
HB-22-196	417397.91	5286712.83	5133.00	541.00	334.12	-56.66
HB-22-197	417448.38	5286778.86	5136.00	614.00	319.68	-66.14
HB-22-198	417397.91	5286712.83	5133.00	653.00	333.47	-65.55

Table 10-2 Significant Drill Results for Drilling Completed by Big Ridge – from Big Ridge News Releases Dated April 5, April 26, June 28 and October 13, 2022, and February 21, 2023 (posted on SEDAR under Big Ridge's Profile

April 5, 2022

Hole		From (m)	To (m)	Length (m)	Au g/t	Cu %	Interval Lithology
HB-21-153		pending					
HB-21-152		52.2	67.0	14.8	5.84	0.16	Vuggy Silicified Zone, breccia cpy, py, VG
HB-21-152	incl.	61.0	64.4	3.4	19.9	0.26	
HB-21-151		pending					
HB-21-150		52.3	60.2	7.9	4.24	0.37	Vuggy Silicified Zone, cpy, py, fluorite
HB-21-149		183.0	188.4	5.4	0.98	-	Argillic Alteration zone, py, fluorite
HB-21-148		pending					
HB-21-147		149.7	154.4	4.8	2.36	0.05	Vuggy Silicified Zone, py
HB-21-146		123.3	131.0	7.8	2.24	0.13	Vuggy Silicified Zone, breccia, cpy, py
HB-21-146	incl.	125.0	127.7	2.7	3.36	0.24	
HB-21-145		107.2	112.7	5.5	1.99	-	Vuggy Silicified Zone, py, fluorite
HB-21-144		112.9	116.0	3.1	0.95	-	Argillic Alteration Zone, py
HB-21-144		124.2	128.4	4.2	0.90	0.05	Vuggy Silicified Zone, py
HB-21-143		39.0	41.8	2.8	1.79	0.19	Vuggy Silicified Zone, cpy, py
HB-21-143		50.0	52.6	2.6	1.51	0.26	Vuggy Silicified Zone, cpy, py
HB-21-143		67.3	70.0	2.7	5.63	0.24	Vuggy Silicified Zone, cpy, py
HB-21-142		86.5	89.0	2.5	1.71	0.27	Vuggy Silicified Zone, cpy, py
HB-21-142		102.2	108.3	6.1	5.58	0.04	Vuggy Silicified Zone, cpy, py, VG
HB-21-142	incl.	105.5	106.0	0.5	25.2	-	
HB-21-141		96.5	105.1	8.6	1.47	-	Vuggy Silicified Zone, py
HB-21-141	incl.	97.9	100.1	2.2	3.15	-	
HB-21-140		104.9	122.1	17.2	0.98	0.2	Vuggy Silicified Zone, cpy, py
HB-21-140	incl.	113.0	115.4	2.4	2.70	0.79	
HB-21-139		54.4	71.0	16.6	2.53	0.15	Vuggy Silicified Zone, cpy, py, mafic dyke
HB-21-139	incl.	60.8	66.8	6.0	3.86	0.26	
HB-21-138		60.4	83.5	23.1	1.98	0.05	Vuggy Silicified Zone, cpy, py, Argillic Alteration Zone, mafic dyke
HB-21-138	incl.	63.36	69.25	5.89	5.30	0.17	

1. Intervals are presented in core length; holes are generally planned to intersect mineralization as close to perpendicular to strike as possible; true widths are estimated to be 75% of downhole length when hole and mineralized horizons orientations are considered.
2. Assay results presented are not capped. Intercepts occur within geological confines of major zones but have not been correlated to individual structures/horizons within these zones at this time.
3. Vertical depth is measured from the surface to the mid-point of the reported interval.

Hole		From (m)	To (m)	length (m) [1]	Au g/t [2]	Cu % [2]	Interval Lithology
HB-21-148		93.5	96.1	2.6	1.79	-	Vuggy silicified zone, mafic dyke
		110.7	143.7	33.0	1.09	0.07	Vuggy silicified, Argillic (Qtz Pyrophyllite) and mafic dyke units
	incl.	110.7	114.8	4.1	4.52	0.53	Vuggy silicified zone, py
	incl.	140.0	143.7	3.7	1.59	-	Argillic (Qtz Pyrophyllite) Zone, Vuggy silicified zone
HB-21-151		118.1	120.3	2.2	0.95	-	Silicified Argillic (Qtz Pyrophyllite) Zone,
		144.3	155.3	11.0	1.50	-	Vuggy silicified, Argillic (Qtz Pyrophyllite) and mafic dyke units
	incl.	145.3	149.8	4.5	2.08	-	
HB-21-153		141.0	171.5	30.5	1.27	0.18	Vuggy silicified zone, Argillic (Qtz Pyrophyllite), intermediate and mafic dyke units
	incl.	144.4	150.2	5.8	2.82	0.90	Vuggy silicified zone, py
HB-22-154		170.1	179.8	9.8	0.94	-	Vuggy silicified, Argillic (Qtz Pyrophyllite) and mafic dyke units
		196.0	201.9	5.7	1.23	-	Argillic (Qtz Pyrophyllite) zone
HB-22-155		107.8	119.5	11.7	1.61	-	Vuggy silicified zone, 5% py
	incl.	107.8	113.0	5.2	3.10	-	
HB-22-156		156.0	161.0	5.0	0.97	-	Vuggy silicified zone, mylonite
		166.0	167.7	1.7	1.24	-	Vuggy silicified zone, py
HB-22-157		172.4	182.9	10.5	0.60	-	Argillic (Qtz Pyrophyllite) zone
HB-22-158		46.0	50.0	4.1	0.89	-	Vuggy silicified zone, py
		70.6	91.3	20.8	1.64	-	Mylonite zone with Grey vuggy silicified units
	incl.	72.0	76.7	4.7	5.77	0.07	Vuggy silicified zone, py
HB-22-159a		121.7	136.8	15.1	1.41	0.23	Vuggy silicified zone and mafic dyke
	incl.	122.2	126.4	4.2	3.25	0.75	Vuggy silicified zone, py, cpy
HB-22-160		87.3	101.8	14.5	1.32	0.05	Vuggy silicified zone and mylonite

1. Intervals are presented in core length; holes are generally planned to intersect mineralization as close to perpendicular to strike as possible; true widths are estimated to be 75% of downhole length when hole and mineralized horizons orientations are considered.

2. Assays results presented are not capped. Intercepts occur within geological confines of major zones but have not been correlated to individual structures/horizons within these zones at this time.

Hole Number		From (m)	To (m)	Length (m)	Au g/t	Cu %	Interval Lithology
HB-22-161		137.6	146.2	8.6	1.11	0.09	Vuggy silicified and mafic dyke units
HB-22-161	Incl.	142.3	144.7	2.3	2.38	0.29	
HB-22-161		167.5	171.0	3.51	1.62	-	Argillic (Qtz Pyrophyllite) and mylonitic units
HB-22-162					NSV		
HB-22-163					NSV		
HB-22-164		58.0	64.8	6.8	1.22	0.08	Vuggy silicified, Argillic (Qtz Pyrophyllite) and mafic dyke units
HB-22-164	Incl	59.3	60.8	1.5	2.4	0.07	
HB-22-165		97.3	102.3	5.0	1.42	-	Vuggy silicified and mafic dyke units
HB-22-165	Incl	97.3	99.6	2.3	2.26	-	
HB-22-166		89.0	106.9	17.9	1	-	Vuggy silicified, Argillic (Qtz Pyrophyllite), mafic dyke and mafic/felsic tuffaceous interbed units
HB-22-166	Incl	105.3	106.9	1.6	2.6	-	
HB-22-167		117.1	120.6	3.2	6.43	-	Vuggy silicified, Argillic (Qtz Pyrophyllite) and mafic dyke units
HB-22-167	Incl	117.1	118.6	1.1	12.9	-	
HB-22-168		99.3	100.9	1.7	5.81	-	Vuggy silicified unit
HB-22-169		81.0	82.0	1.0	2.22	-	Vuggy silicified unit
HB-22-169		96.0	102.0	6.0	1.21	-	Vuggy silicified, Argillic (Qtz Pyrophyllite) units
HB-22-169	Incl	96.0	97.1	1.1	3.94	-	
HB-22-170		125.5	139.0	13.5	0.83	0.09	Vuggy silicified and mafic dyke units
HB-22-170	Incl	128.2	135.0	6.8	0.73	0.14	
HB-22-170	Incl	134.0	137.9	3.9	1.41	0.07	

1. Intervals are presented in core length; holes are generally planned to intersect mineralization as close to perpendicular to strike as possible; true widths are estimated to be 75% of downhole length when hole and mineralized horizons orientations are considered.
2. Assays results presented are not capped. Intercepts occur within geological confines of major zones but have not been correlated to individual structures/horizons within these zones at this time. NSV – No Significant Values.

October 13, 2022

Hole number		From (m)	To (m)	Length[(1)] (m)	Au g/t[(2)]	Cu %	Lithology
HB-22-171B					NSV		
HB-22-172		53.9	63.0	9.1	0.59	-	Vuggy silicified, Argillic (Qtz Ser Py Po)
HB-22-173		63.3	66.2	2.9	0.61	-	Silicified zone
		81.0	86.9	5.9	0.55	-	Argillic (Qtz Pyrophyllite), mafic dyke units
HB-22-174B		181.8	203.5	21.7	0.41	0.09	Vuggy silicified and mafic dyke units
	incl.	189.2	196.3	7.1	0.50	0.23	
HB-22-175		196.1	214.5	18.4	0.63	-	Vuggy silicified, Argillic (Qtz Pyrophyllite), mafic dyke units
	incl.	207.3	211.2	3.9	1.66	-	
HB-22-176		201.5	234.7	33.2	0.54	-	Vuggy silicified, Argillic (Qtz Pyrophyllite), mafic dyke units
	incl.	222.1	229.8	8.7	0.77	-	
HB-22-177		242.0	256.5	14.6	0.46	0.06	Vuggy silicified, Argillic (Qtz Pyrophyllite), mafic and intermediate dyke units
	incl.	250.7	254.1	3.5	0.59	0.13	
HB-22-178		226.2	237.8	11.7	0.95	0.08	Vuggy silicified and intermediate dyke units
		277.8	278.8	1.0	8.86	-	light grey to cream brecciated pyrite cap unit
HB-22-179		247.2	279.7	32.6	0.95	-	Argillic, Vuggy silicified, intermediate dyke zones
	incl.	251.5	260.3	8.7	2.83	0.12	Vuggy silicified zone, py
HB-22-180B					NSV		
HB-22-181		546.0	562.0	16.0	0.21	-	Vuggy silicified and Argillic (Qtz, Sericite, Pyrophyllite)
HB-22-182		237.2	268.5	31.3	0.86	-	Alternating intervals of Vuggy silicified and Argillic (Qtz Pyrophyllite)
	incl.	242.2	243.2	1.0	5.38	-	
	incl.	255.2	267.0	11.8	1.28	-	

1. Intervals are presented in core length; holes are generally planned to intersect mineralization as close to perpendicular to strike as possible; true widths are estimated to be 75% of downhole length when hole and mineralized horizons orientations are considered.

2. Assays results presented are not capped. Intercepts occur within geological confines of major zones but have not been correlated to individual structures/horizons within these zones at this time. NSV – No Significant Values.

February 1, 2023

Hole Number		From	To	Interval	Au g/t	Cu %	Lithology
HB-22-184		568.5	576	7.5	0.76	-	Silicified quartz pyrophyllite sericite Zone
HB-22-184	incl	574	576	2	1.95	0.09	
HB-22-185		277.7	291	13.3	0.64		Vuggy silica, mafic dyke
HB-22-185	incl	284.7	286.3	1.6	2.37	0.06	
HB-22-188		313.5	324	10.5	0.80	-	Intercalated, strongly silicified tuff, mafic dyke
HB-22-188	incl	315	317	2	1.99	-	
HB-22-192		503	520	17	0.93	-	Grey vuggy Silica, intermediate dykes
HB-22-192	incl	511	520	9	1.25	-	
HB-22-192	incl	513	514	1	1.54	-	
HB-22-192	incl	516	517	1	4.63	-	
HB-22-193		393	394	1	17.50	-	silicified quartz pyrophyllite sericite Zone w/quartz veining
HB-22-193		482	500	18	0.45	-	Grey vuggy Silica, intermediate dykes
HB-22-193	incl	484	491	7	0.76	-	
HB-22-194		557	613	56	0.56	-	intercalated strongly silicified tuff, intermediate dykes, vuggy silica and quartz pyrophyllite sericite Zone
HB-22-194	incl	557	563	6	2.27	0.29	
HB-22-198		465	552	87	0.47	-	Multiple units of quartz pyrophyllite sericite zone, grey vuggy silica zone, Intermediate dykes and schist
HB-22-198	incl	465	467	2	4.40	0.14	
HB-22-198	incl	472	474	2	1.10	-	
HB-22-198	incl	445	552	7	2.50	0.09	

1. Intervals are presented in core length; holes are generally planned to intersect mineralization as close to perpendicular to strike as possible; true widths are estimated to be 75% of downhole length when hole and mineralized horizons orientations are considered.

2. Assays results presented are not capped. Intercepts occur within geological confines of major zones but have not been correlated to individual structures/horizons within these zones at this time. NSV – No Significant Values.

11 SAMPLE PREPARATION, ANALYSES, AND SECURITY

Since acquiring the Property in 2021, Big Ridge has maintained a consistent system for the sample preparation, analysis and security of all surface samples and drill core samples, including the implementation of a QA/QC protocol. The current MRE consists of drilling data collected by Big Ridge since the acquisition of the Property in addition to drilling data collected by previous operators (Table 11-1**Error! Reference source not found.**). The following describes sample preparation, analyses and security protocols implemented by Big Ridge and previous operators with analytical labs and analysis methods summarised in Table 11-2.

QA/QC programs are typically set in place to ensure the reliability and trustworthiness of the exploration data. They include written field procedures and independent verifications of drilling, surveying, sampling, assaying, data management, and database integrity. Appropriate documentation of quality-control measures and regular analysis of quality-control data are essential for the project data and form the basis for the quality-assurance program implemented during exploration.

Analytical control measures typically involve internal and external laboratory control measures implemented to monitor the precision and accuracy of the sampling, preparation, and assaying. They are also essential to prevent sample mix-up and monitor the voluntary or inadvertent contamination of samples. Assaying protocols typically involve regular duplicate and replicate assays and insertion of quality-control samples. Routine monitoring of quality control samples (blanks and standards of certified reference material) is undertaken to ensure that the analytical process remains in control and confirms the accuracy of laboratory analyses. Sample batches with suspected cross sample contamination or certified reference materials returning assay values outside of the mean ± 3SD control limits are considered as analytical failures and affected batches should generally be re-analyzed in a timely fashion to ensure data accuracy. Check assaying is typically performed as an additional reliability test of assaying results. These checks involve re-assaying a set number of rejects and pulps at a second umpire laboratory.

Since post-production exploration drilling resumed, initially by Coastal Gold in 2010 and subsequently by Big Ridge in 2021, all samples were shipped to ALS Limited ("ALS") in Sudbury, Ontario, Canada and Moncton, New Brunswick, Canada for sample preparation and in North Vancouver, British Columbia, Canada for analysis. The ALS Sudbury, Moncton and North Vancouver facilities are ISO 9001 and ISO/IEC 17025 certified. Gold was analysed by 50-gram fire assay with atomic absorption ("AA") spectroscopy finish with trace level and ore-grade detection limits (ALS Method Codes Au-AA24 and Au-AA26). Copper and pathfinder elements are analyzed using a four-acid digestion with an inductively coupled plasma (ICP) finish (ALS Method Code ME-ICP61). Control samples comprising certified reference samples, blank samples, and duplicates were systematically inserted into the sample stream and analyzed as part of Big Ridge and Coastal Gold's QA/QC protocols. The Authors are independent of ALS and all previous analytical laboratories used by previous operators.

Table 11-1 Summary of Drilling Samples Included in the 2023 MRE by Year

Year	Company	Location	Core Size	Prefix	Drillhole Count	Total Assays
1983-1991	BP	Surface	BQ/NQ	CW	269	19,497
1987-1997	BP/Royal Oak	Surface	NQ	CE	54	4,002
1987-1991	BP	Underground	NQ	4960, 5015, 5060	138	7,664
1992-1997	Royal Oak	Underground	NQ	4870, 4900, 4930	120	8,302
2010-2013	Coastal Gold	Surface	NQ	HB10, HB11, HB12, HB13	139	18,281
2011	Coastal Gold	Surface	NQ	HB11-CW (Resampled CW)	13	798
2021-2022	Big Ridge Gold	Surface	NQ	HB-21, HB-22	61	9,798
Total*	**Note: Drill hole count excludes resampling programs*				**787**	**68,342**

Table 11-2 Summary of Analytical Labs and Analysis Methods 1983 – 2022

Year	Company	Hole Prefix	Lab	Location	Fire Assay Method	Fire Assay Code	Multi-element Method	Multi-element Code
1983-1991	BP	CW-1 to CW-6	Bondar Clegg	Ottawa, ON	Fire Assay AAS	FA+AA	-	-
1983-1991	BP	CW-7 to W-281	Chemex Labs	Vancouver, BC	Fire Assay AAS	FA+AA	ICP	-
1987-1997	BP/Royal Oak	CE-129 to CE-267, CE-286 to CE-291	Chemex Labs	Vancouver, BC	Fire Assay AAS	FA+AA	ICP	-
1987-1997	BP/Royal Oak	CE-282 to CE-285	On Site	Hope Brook Mine, NF	Fire Assay AAS	-	-	-
1987-1991	BP	4960, 5015,5060	On Site	Hope Brook Mine, NF	Fire Assay AAS	-	-	-
1992-1997	Royal Oak	4870, 4900, 4930	On Site	Hope Brook Mine, NF	Fire Assay AAS	-	-	-
2010-2013	Coastal Gold	HB10, HB11, HB12, HB13	ALS	Sudbury, ON / Vancouver, BC	Fire Assay AAS	Au-AA24	Four-acid ICP-AES	ME-ICP61
2011	Coastal Gold	HB11-CW (Resampled CW)	ALS	Sudbury, ON / Vancouver, BC	Fire Assay AAS	Au-AA24	Four-acid ICP-AES	ME-ICP61
2021-2022	Big Ridge Gold	HB-21, HB-22	ALS	Moncton, NB / Vancouver, BC	Fire Assay AAS	Au-AA26	Four-acid ICP-AES	ME-ICP61

11.1 1983 – 1997 Historical Drilling Programs (BP and Royal Oak)

The following summary of the historical BP Resources Canada Ltd – Selco Division ("BP") and Royal Oak Mines Ltd. ("Royal Oak") drilling programs conducted from 1983 – 1997 was extracted from Desautels et al, 2012a and 2012b.

11.1.1 Core Sampling

BP surface drilling programs prior to the CE series of 1987 recovered BQ size (36.4 mm diameter) drill core and subsequent programs recovered NQ size core (47.6 mm diameter). Royal Oak surface drilling programs also recovered NQ size core and underground drilling programs by both operators are believed to have recovered NQ core.

Archived assessment reports filed with NLDNR were reviewed to determine sample preparation and security procedures employed by BP and Royal Oak. In both cases, basic approaches were identified from this review, and these are summarized below. Staff or contract geologists and technicians were responsible for arranging transport of core boxes from the drilling sites to on-site core storage and logging facilities maintained by the companies. These varied in location during the 1983 to 1997 period covered by these operators, first being sited at the BP exploration camps and then at the mine site. By description, core was typically examined by core technicians or geologists as drilling proceeded and then checked before logging. Drill core logging was carried out buy geologists and hole identification, collar coordinate, orientation, lithologic and sample record information was recorded on hard copy logging forms that were later used as information sources for digital data entry and database creation purposes.

Geologists marked sampling intervals and technicians split or cut core to create corresponding half core samples. One half of each half-core sample was placed in a pre-labelled plastic bag along with a sample record tag and then checked prior to sealing for transport to the analytical facility. A corresponding sample record tag was placed in the archived core box for future reference.

It is assumed that assumed that logging and sampling procedures for underground and surface drilling programs were comparable for BP and Royal Oak core samples.

11.1.2 Sample Preparation and Analyses

Samples were either shipped to independent commercial laboratories or delivered to the on-site Hope Brook laboratory for analysis. In the case of BP, Bondar Clegg Ltd. of Ottawa ON was used for the initial 6 holes (CW1 to CW-6) and Chemex Labs Ltd., now ALS Limited (“ALS”), of Vancouver, BC was used for subsequent exploration programs.

Samples for the first 6 holes sent to Bondar Clegg Ltd. were pulverized to -150 mesh and gold was analyzed by 30-gram fire assay with atomic absorption (AA) spectroscopy finish (Method Code FA-AA). Check samples were analyzed at Swatiska Labs located in Timmins ON.

Samples sent to Chemex Labs used standard rock preparation and pulverization methods and gold was analyzed by 30-gram fire assay with atomic absorption (AA) spectroscopy finish (Method Code FA-AA). Various multi-element inductively coupled plasma (ICP) analytical packages were specified from time to time to assess metal signatures associated with gold mineralization.

Bondar Clegg, Swatiska Labs, and Chemex Labs were all commercial independent laboratories.

Following construction of the Hope Brook Mine facilities core from surface and underground drilling was analysed at the Hope Brook site laboratory. This included four surface exploration holes (CE-282 to CE-285) and all underground drilling completed between 1987 and 1997. Gold was analyzed fire assay with atomic absorption (AA) spectroscopy finish.

11.1.3 Quality Assurance/Quality Control

Descriptions of Quality Control and Quality Assurance procedures pertinent to the BP and Royal Oak program are not explicitly defined in archived reports. However, BP reporting shows that a second-lab check sampling program had been established for the first drilling campaign carried out on the property (CW-1 to CW-6) and references to systematic duplicate core sample split programs by BP appear in some associated documentation. Compiled file documents from NLDNR also show that BP’s on-site Hope Brook laboratory carried out on-going independent check sampling programs utilizing independent, third party laboratories to assess that facility’s performance. Records show that ALS and Eastern Analytical Laboratories (based in Springdale, NL) participated in these programs. Similar documentation for the Royal Oak period was not noted and QA/QC specific reporting is not typically included in any of the historic drilling reports reviewed with respect to the BP or Royal Oak periods. All programs noted above were in addition to reported QA/QC procedures and results carried out internally by the commercial laboratories involved and it is assumed that both BP and Royal Oak monitored these on an on-going basis.

Desautels considered that the procedures followed by BP and Royal Oak were consistent with industry standards at the time.

11.2 2010 – 2013 Drilling Programs (Coastal Gold)

Coastal Gold Corp. (“Coastal Gold”) completed exploration drilling and resampling of historical drill core on the Project during the period from 2010 until 2013. During this period Coastal Gold implemented a comprehensive system for the sample preparation, analysis and security of all drill core samples, including the implementation of a QA/QC program. The following describes sample preparation, analyses and security protocols implemented by Coastal Gold as summarized in Cullen, 2015a and 2015b, and Cullen et al., 2021.

11.2.1 Core Sampling

Coastal Gold staff members were responsible for arranging transport of core boxes from the drilling sites to the company’s secure core storage and logging facility located at the Hope Brook camp. The core was initially examined by core technicians and all measurements are confirmed. Core was then aligned and repositioned in the core box where possible and individual depth marks are recorded to facilitate logging. Core technicians photographed all core, measured core recovery between core meterage blocks, carried out water immersion specific gravity measurements as required and recorded information on hard copy data record sheets that were then entered into the project drilling database.

All paper copy and digital information for each hole, including quick logs, sample record sheets and assay certificates were maintained in a secure filing system at the site to provide a complete archival record for each drill hole. Digital information was stored on a local server as well as on the company's secure off-site server that was accessible by satellite link from the camp facility. Subsequent to logging and processing, down hole lithocoded intervals, sample intervals and drill hole collar and survey information that were entered into the digital database were checked for completeness before being uploaded to the project database upon which drilling section generation and three-dimensional deposit modeling were based.

Coastal Gold's QA/QC program comprised the systematic insertion of standards or certified reference materials (CRMs), blanks, coarse reject duplicates, and pulp duplicates. QC samples were inserted into the sample sequence at a frequency of approximately 1 sample per 40 samples for each QC sample type (CRM, blank, coarse reject duplicate, and pulp duplicate). Approximately 9% of samples assayed were QC samples. In total, 485 CRMs, 490 blanks, 303 coarse reject duplicate pairs, and 562 pulp duplicate pairs have been submitted for drilling completed by Coastal Gold (Table 11-3). All QC samples were analysed by the primary analytical lab and coarse rejects and pulp duplicate samples were analysed at a third-party laboratory.

Table 11-3 QC Sample Statistics for Coastal Gold Core Sampling 2010 - 2013

Standards	Blanks	Coarse Reject Duplicates	Pulp Duplicates
485	490	303 duplicate pairs	562 duplicate pairs

11.2.2 Sample Preparation and Security

The secured plastic sample bags were grouped in batches 40 to which QA/QC program samples were added prior to final packing for shipment to the ALS preparation laboratory in Sudbury, ON. Samples were transported from the site by aircraft or chartered boat and then delivered to a commercial transport service for final delivery to the laboratory. Sample shipment change of custody forms were used to list all samples in each shipment and laboratory personnel crosschecked samples received against this list and reported any irregularities by fax or email to Coastal Gold. Cullen et al (2021) notes that no significant issues or concerns were encountered with respect to sample processing, delivery, security, or chain of custody for Hope Brook drilling program samples.

Sample preparation was carried out by ALS Limited ("ALS") in Sudbury, Ontario, Canada and samples were shipped to ALS North Vancouver, British Columbia, Canada for analysis. The ALS Sudbury and North Vancouver facilities are ISO 9001 and ISO/IEC 17025 certified. The Authors were independent of ALS laboratories used by Coastal Gold.

Samples are dried, weighed, crushed to at least 70% passing 2 mm, and subsequently riffle split to obtain a representative 1000 g sub-sample. The sub-sample is pulverized to at least 85% passing 75 µm (ALS Method Code PREP-31B).

11.2.3 Sample Analyses

Gold was analysed by 50-gram fire assay with atomic absorption ("AA") spectroscopy finish with trace level detection limits (ALS Method Codes Au-AA24). Copper and pathfinder elements were analyzed using a four-acid digestion with an inductively coupled plasma – atomic emission spectroscopy (ICP-AES) finish (ALS Method Code ME-ICP61).

11.2.4 Density Data

Coastal Gold collected specific gravity measurements from drill core samples across the HB deposit. Measurements were taken from drill core in and adjacent to mineralized zones, attempting to produce measurements for a variety of rock types and grades of mineralization and alteration.

Samples are weighed using a high precision electronic scale, in air and suspended in a bucket of water. Each pair of measurements produces a specific gravity (SG) using the following equation:

$$SG = \frac{(Sample\ Weight\ in\ Air)}{(Sample\ Weight\ in\ Air - Sample\ Weight\ in\ Water)}$$

A total of 2,463 drill core SG measurements were collected by Coastal Gold between 2010 and 2012.

11.2.5 Data Management

It is assumed that geological data collected was done so in a professional manner and that data was verified and double-checked by senior geologists on site for data entry verification, error analysis, and adherence to the analytical quality-control protocols in place at the time. Results of both the in-house and laboratory quality control and assurance analyses were monitored by Coastal Gold on an on-going basis during the course of the project.

11.2.6 Certified Reference Material

Coastal Gold's analytical control measures involved internal and external laboratory control measures implemented to monitor the precision and accuracy of the sampling, preparation, and assaying. They are also essential to prevent sample mix-up and monitor the voluntary or inadvertent contamination of samples. Assaying protocols involved regular insertion of quality-control samples. Routine monitoring of quality control samples (standards of certified reference material and blanks) was undertaken to ensure accuracy of laboratory analyses.

A selection of 7 CRMs (Table 11-4 to Table 11-11) were used by Coastal Gold in the course of the Hope Brook drill programs: multi-element standards from Ore Research & Exploration in Bayswater North, Australia (OREAS-50C, OREAS-61D, OREAS-66A, OREAS-67A, OREAS-68A, OREAS-153A, and OREAS-H3). The means, standard deviations (SD), warning, and control limits for standards are utilized as per the QA/QC program described below.

CRM performance and analytical accuracy is evaluated using the assay concentration values relative to the certified mean concentration to define the Z-score relative to sample sequence with warning and failure limits. Warning limits are indicated by a Z-score of between ±2 SD and ±3 SD, and control limits/failures are indicated by a Z-score of greater than ±3 SD from the certified mean. Sample batches with certified reference materials returning assay values outside of the mean ± 3SD control limits, or with suspected cross sample contamination indicated by blank sample analysis, are considered as analytical failures and selected affected batches are re-analyzed to ensure data accuracy.

CRM analytical results for the Coastal Gold drilling programs are summarized in Table 11-4 to Table 11-11 for gold and copper to evaluate analytical accuracy (bias) and precision (average coefficient of variation "CV_{AVR}%"). Shewhart CRM control charts for the Coastal Gold drilling programs are presented in Cullen, 2015a and 2015b, and Cullen et al., 2021.

ALS has its own internal QA/QC program, which is reported in the assay certificates, and Coastal Gold monitored this on an on-going basis during the course of the project (Cullen et al., 2021).

For geochemical exploration analysis methods, ALS expects to achieve a precision and accuracy of plus or minus 10% (of the concentration) ±1 Detection Limit (DL) for duplicate analyses, in-house standards and client submitted standards, when conducting routine geochemical analyses for gold and base metals. These limits apply at, or greater than, 20 times the limit of detection. For samples containing coarse gold, native silver or copper, precision limits on duplicate analyses can exceed plus or minus 10% (of the concentration).

For ore grade analysis methods, ALS expects to achieve a precision and accuracy of plus or minus 5% (of the concentration) ± 1 DL for duplicate analyses, in-house standards and client submitted standards. These limits apply at 20 times the limit of detection. As in the case of routine geochemical analyses, samples containing coarse gold, native silver or copper are less likely to meet the expected precision levels for ore grade analysis.

Coastal Gold's QA/QC program from 2010 – 2013 included the insertion of 485 CRM samples. The combined CRM failure rates during this period were 3.1% for gold and 2.3% for copper.

CRM analytical results from 2010 -2013 confirm acceptable analytical accuracy (bias generally less than 5%) for gold and copper results and acceptable analytical precision (CV_{AVR}% generally within ±5%) for gold.

Review of Coastal Gold's QA/QC program indicates that there are no significant issues with the drill core assay data. The data verification programs undertaken on the data collected from the Project support the geological interpretations, and the analytical and database quality, and therefore data can support resource estimation of Indicated and Inferred mineral resources.

Table 11-4 CRM Sample Gold Performance for the 2010 Drill Program

CRM - Au	Certified Value Au (ppm)		2010							
	Mean	SD	Count	Mean Au ppm	Bias %	CV_{AVR} %	Warning # >2SD	Warning % >2SD	Failure # >3SD	Failure % >3SD
OREAS-61D	4.76	0.14	11	4.817	1.2	1.1	0	0.0%	0	0.0%
OREAS-68A	3.89	0.15	1	3.860	-0.8	0.5	0	0.0%	0	0.0%
OREAS-153A	0.311	0.012	11	0.309	-0.7	3.3	1	9.1%	0	0.0%
OREAS-H3	2	0.08	9	1.914	-4.3	6.9	0	0.0%	3	33.3%

Table 11-5 CRM Sample Copper Performance for the 2010 Drill Program

CRM - Cu	Certified Value Cu (Wt%)		2010							
	Mean	SD	Count	Mean Cu Wt%	Bias %	CV_{AVR} %	Warning # >2SD	Warning % >2SD	Failure # >3SD	Failure % >3SD
OREAS-61D	N/A	N/A	11	0.011	N/A	-	N/A	N/A	N/A	N/A
OREAS-68A	0.0392	0.0015	2	0.037	-4.6	-	0	0.0%	0	0.0%
OREAS-153A	0.712	0.025	11	0.724	1.6	-	0	0.0%	0	0.0%
OREAS-H3	0.0443	0.0022	10	0.045	1.5	-	1	10.0%	0	0.0%

Table 11-6 CRM Sample Gold Performance for the 2011 Drill Program

CRM - Au	Certified Value Au (ppm)		2011							
	Mean	SD	Count	Mean Au ppm	Bias %	CV_{AVR} %	Warning # >2SD	Warning % >2SD	Failure # >3SD	Failure % >3SD
OREAS-50C	0.836	0.028	2	0.875	4.6	3.3	0	0.0%	0	0.0%
OREAS-61D	4.76	0.14	38	4.762	0.0	2.7	0	0.0%	2	5.3%
OREAS-67A	2.24	0.096	25	2.229	-0.5	3.0	0	0.0%	1	4.0%
OREAS-68A	3.89	0.15	66	3.824	-1.7	3.3	6	9.1%	1	1.5%
OREAS-153A	0.311	0.012	108	0.309	-0.6	3.6	2	1.9%	5	4.6%
OREAS-H3	2	0.08	83	2.001	0.0	3.4	3	3.6%	2	2.4%

Table 11-7 CRM Sample Copper Performance for the 2011 Drill Program

CRM - Cu	Certified Value Cu (Wt%)		2011							
	Mean	SD	Count	Mean Cu Wt%	Bias %	CV_{AVR} %	Warning # >2SD	Warning % >2SD	Failure # >3SD	Failure % >3SD
OREAS-50C	0.742	0.016	2	0.758	2.2	-	0	0.0%	0	0.0%
OREAS-61D	N/A	N/A	38	0.011	N/A	-	N/A	N/A	N/A	N/A
OREAS-67A	0.0325	0.001	25	0.032	-1.2	-	1	4.0%	1	4.0%
OREAS-68A	0.0392	0.0015	70	0.037	-4.6	-	10	14.3%	2	2.9%
OREAS-153A	0.712	0.025	111	0.697	-2.1	-	10	9.0%	2	1.8%
OREAS-H3	0.0443	0.0022	85	0.043	-2.2	-	0	0.0%	2	2.4%

Table 11-8 CRM Sample Gold Performance for the 2012 Drill Program

CRM - Au	Certified Value Au (ppm)		2012							
	Mean	SD	Count	Mean Au ppm	Bias %	CV_{AVR} %	Warning # >2SD	Warning % >2SD	Failure # >3SD	Failure % >3SD
OREAS-50C	0.836	0.028	1	0.840	0.5	0.3	0	0.0%	0	0.0%
OREAS-67A	2.24	0.096	23	2.110	-5.8	3.1	1	4.3%	1	4.3%
OREAS-68A	3.89	0.15	25	3.808	-2.1	2.7	1	4.0%	0	0.0%
OREAS-153A	0.311	0.012	22	0.304	-2.2	3.1	3	13.6%	0	0.0%
OREAS-H3	2	0.08	1	2.060	3.0	2.1	0	0.0%	0	0.0%

Table 11-9 CRM Sample Copper Performance for the 2012 Drill Program

CRM - Cu	Certified Value Cu (Wt%)		2012							
	Mean	SD	Count	Mean Cu Wt%	Bias %	CV_{AVR} %	Warning # >2SD	Warning % >2SD	Failure # >3SD	Failure % >3SD
OREAS-50C	0.742	0.016	1	0.738	-0.5	-	0	0.0%	0	0.0%
OREAS-67A	0.0325	0.001	23	0.032	-2.0	-	5	21.7%	1	4.3%
OREAS-68A	0.0392	0.0015	25	0.038	-3.7	-	1	4.0%	0	0.0%
OREAS-153A	0.712	0.025	22	0.705	-1.1	-	0	0.0%	0	0.0%
OREAS-H3	0.0443	0.0022	1	0.032	-28.7	-	0	0.0%	1	100.0%

Table 11-10 CRM Sample Gold Performance for the 2013 Drill Program

CRM - Au	Certified Value Au (ppm)		2013							
	Mean	SD	Count	Mean Au ppm	Bias %	CV_{AVR} %	Warning # >2SD	Warning % >2SD	Failure # >3SD	Failure % >3SD
OREAS-50C	0.836	0.028	16	0.837	0.2	2.0	0	0.0%	0	0.0%
OREAS-66A	1.24	0.054	7	1.239	-0.1	2.2	0	0.0%	0	0.0%
OREAS-67A	2.24	0.096	10	2.235	-0.2	1.9	0	0.0%	0	0.0%
OREAS-68A	3.89	0.15	7	3.823	-1.7	2.0	0	0.0%	0	0.0%
OREAS-153A	0.311	0.012	7	0.315	1.3	2.4	0	0.0%	0	0.0%
OREAS-H3	2	0.08	1	2.100	5.0	3.4	0	0.0%	0	0.0%

Table 11-11 CRM Sample Copper Performance for the 2013 Drill Program

CRM - Cu	Certified Value Cu (Wt%)		2013							
	Mean	SD	Count	Mean Cu Wt%	Bias %	CV_{AVR} %	Warning # >2SD	Warning % >2SD	Failure # >3SD	Failure % >3SD
OREAS-50C	0.742	0.016	16	0.749	0.9	-	0	0.0%	1	6.3%
OREAS-66A	0.0121	0.0007	7	0.011	-5.4	-	0	0.0%	0	0.0%
OREAS-67A	0.0325	0.001	10	0.032	-2.9	-	3	30.0%	0	0.0%
OREAS-68A	0.0392	0.0015	7	0.038	-2.9	-	0	0.0%	0	0.0%
OREAS-153A	0.712	0.025	7	0.697	-2.1	-	0	0.0%	0	0.0%
OREAS-H3	0.0443	0.0022	1	0.030	-31.4	-	0	0.0%	1	100.0%

11.2.7 Blank Material

Coastal Gold utilized blank QC samples consisting of samples of fresh and “unaltered” core material of a non-mineralized granite, Chetwynd Granite, sourced from the Hope Brook site. Blank samples were inserted into the sample stream in the field to determine the degree of sample contamination after sample collection, particularly during the sample preparation process. This material does not have certified values established by a third party through round robin lab testing. The QA/QC program from 2010 - 2013 included the insertion of 490 blank QC samples.

For blank sample values, failure is more subjective, and a hard failure ceiling value has not been set for the Project. Evaluation of blank samples using a failure ceiling for gold of 0.015 ppm (3x detection limit) indicates that the combined blank failure rate from 2010 – 2013 was 2.7% for gold. The highest blank assay value was 0.753 ppm gold and only two blank samples returned assays >0.1 ppm gold. Based on the low risk of cross sample contamination and the low amounts of gold that may have contaminated blank material, it is considered unlikely that there is a contamination problem with the Project drilling data.

11.2.8 Duplicate Material / Umpire Laboratory

Coastal Gold’s QAQC program included coarse reject and pulp duplicate samples inserted at a frequency of approximately 1 coarse reject and 1 pulp duplicate sample in every 40 samples, for a total of 303 coarse reject duplicate and 562 pulp duplicate samples (Table 11-3).

Duplicate samples were sent to SGS Canada Inc. in Lakefield, Ontario for comparative analysis by an equivalent trace level Fire Assay method as an additional means to confirm the accuracy of ALS assays.

Figure 11-1 and Figure 11-2 illustrate the comparative assay results of ALS original and SGS duplicate analyses. The results for check samples at grades above 0.1 ppm Au (20x DL) excluding limited outliers, which are common in coarse gold deposits, plot close to the 1:1 correlation trend line indicating limited analytical bias and confirm the acceptable accuracy of the ALS assays.

To obtain a relatively accurate estimate of the sampling precision, or average relative error, a large number of duplicate sample pairs are required. In the case of the HB deposit, reliably determining the base metal data precision, which typically exhibits relatively small average relative errors (such as 5%), would require 500 – 1000 duplicate data pairs. Reliable determination of the gold data precision, which typically exhibits relatively large average relative errors (such as 25%), likely requires a data set of greater than 2500 duplicate pairs (Stanley and Lawie, 2007). Based on the limited duplicate data set size, analysis of the precision should be considered approximate in nature only and should not be considered as reliable.

The average Coefficient of Variation (CV_{AVR}%) for gold duplicate samples is shown in Table 11-12 calculated using the root mean square coefficient of variation calculated from the individual coefficients of variation (Stanley and Lawie, 2007). The estimates of precisions errors (CV_{AVR}%) for Hope Brook sampling precision are acceptable by industry standards for coarse reject duplicates, while pulp duplicates precision errors are relatively high for coarse grained and nuggety gold mineralization (Abzalov, 2008); however, more data is required to produce reliable estimates of sampling precision.

Table 11-12 Average Relative Error of Duplicate Samples for Au (2010-2013)

Duplicate Type	Count	Au CV_{AVR}%
Coarse Reject Duplicates	303 duplicate pairs	33.2%
Pulp Duplicates	562 duplicate pairs	31.5%

Figure 11-1 Log X-Y Plot of Coarse Reject Duplicate Samples for Gold (2010 – 2013)

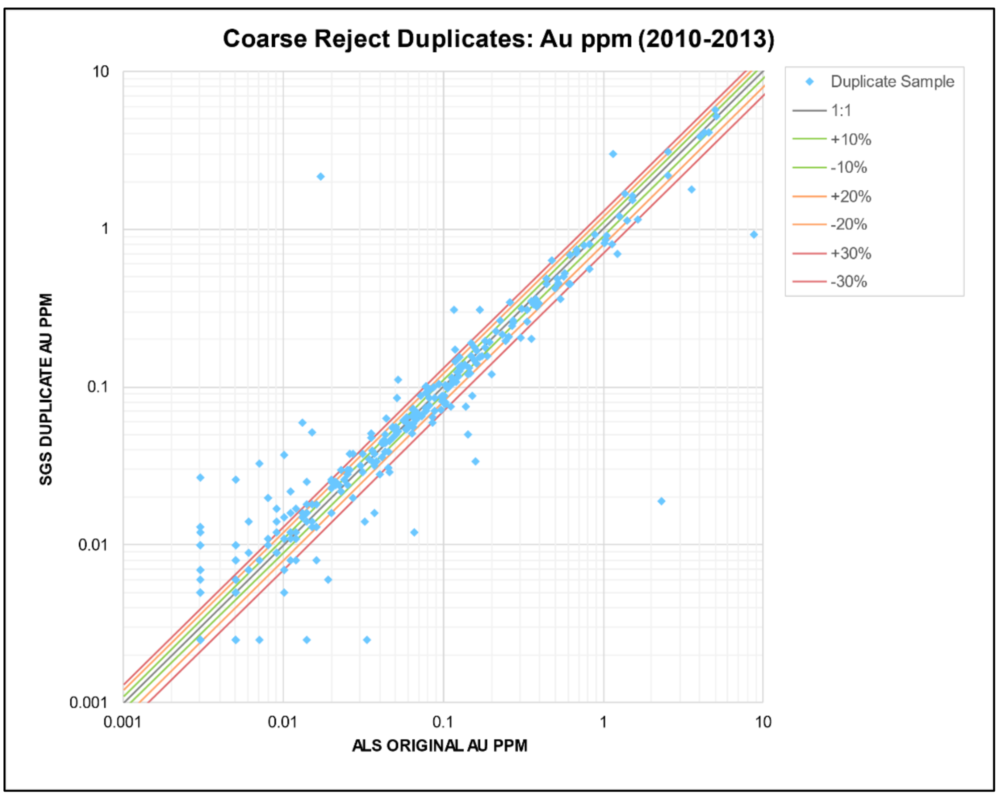
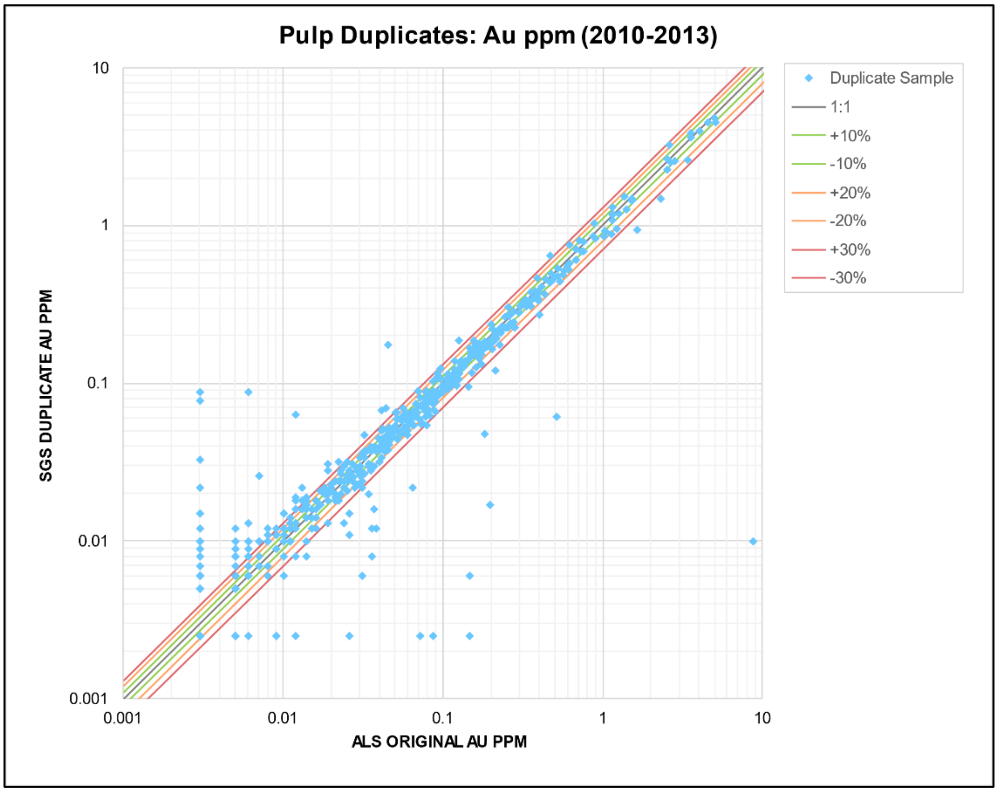


Figure 11-2 Log X-Y Plot of Pulp Duplicate Samples for Gold (2010 – 2013)



11.2.9 Sample Storage

Drill core from Coastal Gold and previous programs on the Property is stored on roofed, skid-mounted platforms in the main camp area at the Hope Brook site. Both core and the wood core boxes are variably weathered due to exposure to the elements. In some cases, conditions of the core boxes are poor, preventing easy access for sampling and logging. This deterioration could be mitigated by relocation of core to a more protected area, such as within a building designed for that purpose, or by enclosing the current structures (Cullen et al., 2021).

11.3 2021 – 2022 Drilling Programs (Big Ridge Gold)

Since acquiring an interest in the Hope Brook Project in 2021, Big Ridge Gold has maintained a consistent system for the sample preparation, analysis and security of all surface samples and drill core samples, including the implementation of a QA/QC program. The following describes sample preparation, analyses and security protocols implemented by Big Ridge Gold.

11.3.1 Core Sampling

The design of the Big Ridge's 2021-2022 drilling program, Quality Assurance/Quality Control and compilation of results was designed by Mercator Geological Services Limited and employs a strict QA/QC program consistent with NI 43-101 and industry best practices overseen by Qualified Persons. The Hope Brook project is supervised, and results reviewed, by William McGuinty P. Geo., Vice President Exploration for Big Ridge Gold.

Drill core from the program, is received at the core shack and checked for block and box numbering errors. The core geology is logged and input into MX Deposit drill database management system. Basic core recovery, specific gravity and Rock Quality Data are also recorded during the logging procedure.

Sample intervals are assigned and tagged using sequential barcoded sample tags. Core is then sawn with one half of core samples returned with sample tags to their original core box position and the other packaged with a second tag portion in a plastic sample bag marked with the sample number and sealed. Approximately 11% of samples assayed have been QC samples. In total, 274 CRMs, 274 blanks, 268 coarse reject duplicate, and 273 pulp duplicate pairs have been submitted for drilling completed by Big Ridge Gold (Table 11-13Table 11-13). All QC samples are analyzed by the primary analytical lab.

Table 11-13 QC Sample Statistics for Big Ridge Gold Core Sampling 2021 - 2022

Standards	Blanks	Coarse Reject Duplicates	Pulp Duplicates
274	274	268 duplicate pairs	273 duplicate pairs

11.3.2 Sample Preparation and Security

Samples are secured in plastic bags with tags stapled in the folds of the bag and are then stored (4 or 5) in rice bags for shipping and delivered to ALS Global's geochemistry laboratory in Moncton, New Brunswick via air from camp and registered truck carrier from Stephenville.

At the lab, samples are dried and subsequently crushed to 70% passing a 2 mm mesh screen. A 250-gram split subsample is pulverized to a nominal 85% passing a 75-micron mesh screen. At this point a 50-gram sample is split for gold assay and a 5 gram sub sample is split for multi-element analysis. The remaining crushed sample (coarse reject) and pulverized sample (pulp reject) not used in assaying are retained for further analysis and quality control.

Samples are dried, weighed, crushed to at least 70% passing 2 mm, and subsequently riffle split to obtain a representative 250 g sub-sample. The sub-sample is pulverized to at least 85% passing 75 µm (ALS Method Code PREP-31).

Sample preparation was carried out by ALS Limited ("ALS") in Moncton, New Brunswick, Canada and samples were shipped to ALS North Vancouver, British Columbia, Canada for analysis. The ALS Moncton and North Vancouver facilities are ISO 9001 and ISO/IEC 17025 certified. The Authors are independent of ALS laboratories used by Big Ridge Gold.

11.3.3 Sample Analyses

All samples are analyzed for gold by Fire Assay with an Atomic Absorption (AA) finish using a 50 g aliquot of pulverized material. Early in the program samples were also analyzed using ICP AES muti-element analysis (33 elements). Multielement analysis was reduced to copper-only (Cu) analysis using the same ICP AES with four-acid digestion method. Analytical procedures selected for this project are summarized below:

- Au-AA26 Au by fire assay and AAS using a 50g nominal sample weight with a sample analytical range for gold of 0.01-100 g/t.
- ME-ICP61 Four Acid / ICP-AES digestion for 33 elements (Cu 1-10,000 ppm)

When samples are assayed that return overlimit results for these methods the laboratory selects additional materials and proceeds as required with the following methods.

- Au-GRA22 for Au > 100 ppm from Au-AA26Au by fire assay and gravimetric finish. 50g nominal sample weight and analytical range of 0.05-1,000 g/t
- ME-OG62 for Cu > 10,000 ppm from ME-ICP61

11.3.4 Density Data

Big Ridge Gold collected specific gravity measurements from drill core samples across the HB deposit in 2021 and 2022 following the procedure laid out by Coastal Gold. Measurements were taken from drill core in and adjacent to mineralized zones, attempting to produce measurements for a variety of rock types and grades of mineralization and alteration. A Newton A&D EJ-6100 Portable Weighing Balance, (6100g x 0.1g) with an underhook attachment was used to collect SG measurements.

Samples are weighed using a high precision electronic scale, in air and suspended in a bucket of water. Each pair of measurements produces a specific gravity (SG) using the following equation:

$$SG = \frac{(Sample\ Weight\ in\ Air)}{(Sample\ Weight\ in\ Air - Sample\ Weight\ in\ Water)}$$

The scale is tared/zeroed before every measurement, and measurement will not proceed until the scale has stabilized at each reading.

A total of 3,635 drill core SG measurements were collected by Big Ridge Gold between 2021 and 2022.

11.3.5 Data Management

Data are verified and double-checked by senior geologists on site for data entry verification, error analysis, and adherence to analytical quality-control protocols. All geological data is captured using the MX Deposit cloud-hosted database software with additional data entry validation functionality enabled.

Additional review of geological interpretation by senior geologists was conducted to ascertain and normalize geological assessments by newly arrived and rotating geologists at the HBGP during and after the Phase 1 drill campaign. Big Ridge adopted the historic logging codes from the property which were evolved from the project's mining era and refined by Coastal Gold.

Irregularities in analytical results for CRM or Blank insertions were investigated for misplaced or wrongly inserted samples QA/QC samples and a log of these irregularities was created.

11.3.6 Certified Reference Material

Big Ridge Gold's analytical control measures involved internal and external laboratory control measures implemented to monitor the precision and accuracy of the sampling, preparation, and assaying. They are also essential to prevent sample mix-up and monitor the voluntary or inadvertent contamination of samples. Assaying protocols involved regular insertion of quality-control samples. Routine monitoring of quality control samples (standards of certified reference material and blanks) was undertaken to ensure accuracy of laboratory analyses.

A selection of 7 CRMs (Table 11-15) were used by Big Ridge Gold in the course of the Hope Brook drill programs: multi-element standards from Ore Research & Exploration in Bayswater North, Australia (OREAS-50C, OREAS-66A, OREAS-68A, OREAS-234, OREAS-237, OREAS-239, and OREAS-608).

Table 11-14 CRMs used by Big Ridge Gold from 2021 - 2022

Standard	Source	Au Value ppm	Ag Value ppm	Cu value
OREAS 050C	Porphyry copper-gold deposit volcanics	0.836	None	0.742%
OREAS 239	Orogenic meta sed Frog's Leg	3.55	0.24	26.8 ppm
OREAS 608	High Sulph. Epithermal Au-Cu-Ag Ore	1.21	14.70	0.101%
OREAS 066A	Epithermal HS gold silver in tertiary volc./sed host blend olivine bslt Matarbe	1.24	18.90	121 ppm
OREAS 068A	Epithermal HS gold silver in tertiary volc./sed host blend olivine bslt Matarbe	3.89	49.90	392 ppm
OREAS 234	Gold Ore (Frogs Leg)	1.2	0.34	174 ppm
OREAS 237	Fosterville Gold Mine	2.21	0.17	25 ppm

The means, standard deviations (SD), warning, and control limits for standards are utilized as per the QA/QC program described below.

CRM performance and analytical accuracy is evaluated using the assay concentration values relative to the certified mean concentration to define the Z-score relative to sample sequence with warning and failure limits. Warning limits are indicated by a Z-score of between ±2 SD and ±3 SD, and control limits/failures are indicated by a Z-score of greater than ±3 SD from the certified mean. Sample batches with certified reference materials returning assay values outside of the mean ± 3SD control limits, or with suspected cross sample contamination indicated by blank sample analysis, are considered as analytical failures and selected affected batches are re-analyzed to ensure data accuracy.

CRM analytical results for the Big Ridge Gold drilling programs are summarized in Table 11-15 to Table 11-18 for gold and copper to evaluate analytical accuracy (bias) and precision (average coefficient of variation "CV_{AVR}%"). Shewhart CRM control charts for the Big Ridge Gold drilling programs are presented in Figure 11-3 to Figure 11-6.

ALS has its own internal QA/QC program, which is reported in the assay certificates, but no account is taken of this in determination of batch acceptance or failure.

For geochemical exploration analysis methods, ALS expects to achieve a precision and accuracy of plus or minus 10% (of the concentration) ±1 Detection Limit (DL) for duplicate analyses, in-house standards and client submitted standards, when conducting routine geochemical analyses for gold and base metals. These limits apply at, or greater than, 20 times the limit of detection. For samples containing coarse gold, native silver or copper, precision limits on duplicate analyses can exceed plus or minus 10% (of the concentration).

For ore grade analysis methods, ALS expects to achieve a precision and accuracy of plus or minus 5% (of the concentration) ± 1 DL for duplicate analyses, in-house standards and client submitted standards. These limits apply at 20 times the limit of detection. As in the case of routine geochemical analyses, samples containing coarse gold, native silver or copper are less likely to meet the expected precision levels for ore grade analysis.

Big Ridge Gold's QA/QC program from 2021 – 2022 included the insertion of 274 CRM samples. The combined CRM failure rates during this period were 1.5% for gold and 4.0% for copper.

CRM analytical results from 2021 – 2022 confirm acceptable analytical accuracy (bias generally less than 5%) for gold and copper results and acceptable analytical precision (CV_{AVR}% generally within ±5%) for gold.

Review of Big Ridge Gold's QA/QC program indicates that there are no significant issues with the drill core assay data. The data verification programs undertaken on the data collected from the Project support the geological interpretations, and the analytical and database quality, and therefore data can support resource estimation of Indicated and Inferred mineral resources.

Table 11-15 CRM Sample Gold Performance for the 2021 Drill Program

CRM - Au	Certified Value Au (ppm)		2021							
	Mean	SD	Count	Mean Au ppm	Bias %	CV_{AVR} %	Warning # >2SD	Warning % >2SD	Failure # >3SD	Failure % >3SD
OREAS-50C	0.836	0.028	32	0.844	1.0	2.6	3	9.4%	0	0.0%
OREAS-66A	1.24	0.054	35	1.227	-1.1	2.1	0	0.0%	0	0.0%
OREAS-68A	3.89	0.15	34	3.848	-1.1	2.5	1	2.9%	0	0.0%
OREAS-239	3.55	0.086	5	3.244	-8.6	16.0	0	0.0%	2	40.0%

Table 11-16 CRM Sample Copper Performance for the 2021 Drill Program

CRM - Cu	Certified Value Cu (Wt%)		2021							
	Mean	SD	Count	Mean Cu Wt%	Bias %	CV_{AVR} %	Warning # >2SD	Warning % >2SD	Failure # >3SD	Failure % >3SD
OREAS-50C	0.742	0.016	32	0.724	-2.4	-	3	9.4%	4	12.5%
OREAS-66A	0.0121	0.0007	34	0.012	-1.0	-	0	0.0%	0	0.0%
OREAS-68A	0.0392	0.0015	34	0.038	-2.9	-	0	0.0%	1	2.9%
OREAS-239	N/A	N/A	5	0.612	N/A	-	N/A	N/A	N/A	N/A

Table 11-17 CRM Sample Gold Performance for the 2022 Drill Program

CRM - Au	Certified Value Au (ppm)		2022							
	Mean	SD	Count	Mean Au ppm	Bias %	CV_{AVR} %	Warning # >2SD	Warning % >2SD	Failure # >3SD	Failure % >3SD
OREAS-50C	0.836	0.028	52	0.846	1.2	2.7	2	3.8%	2	3.8%
OREAS-66A	1.24	0.054	12	1.126	-9.2	2.7	0	0.0%	1	8.3%
OREAS-68A	3.89	0.15	12	3.912	0.6	2.7	1	8.3%	0	0.0%
OREAS-234	1.2	0.03	45	1.185	-1.2	1.8	3	6.7%	0	0.0%
OREAS-237	2.21	0.054	38	2.211	0.0	1.7	2	5.3%	0	0.0%
OREAS-239	3.55	0.086	7	3.599	1.4	1.7	0	0.0%	0	0.0%
OREAS-608	1.21	0.039	2	1.210	0.0	0.0	0	0.0%	0	0.0%

Table 11-18 CRM Sample Copper Performance for the 2022 Drill Program

CRM - Cu	Certified Value Cu (Wt%)		2022							
	Mean	SD	Count	Mean Cu Wt%	Bias %	CV_{AVR} %	Warning # >2SD	Warning % >2SD	Failure # >3SD	Failure % >3SD
OREAS-50C	0.742	0.016	52	0.745	0.3	-	3	5.8%	1	1.9%
OREAS-66A	0.0121	0.0007	12	0.012	-0.7	-	1	8.3%	0	0.0%
OREAS-68A	0.0392	0.0015	12	0.038	-2.4	-	1	8.3%	0	0.0%
OREAS-234	0.0175	0.0006	45	0.018	3.3	-	6	13.3%	1	2.2%
OREAS-237	N/A	N/A	38	0.003	N/A	-	N/A	N/A	N/A	N/A
OREAS-239	N/A	N/A	7	0.263	N/A	-	N/A	N/A	N/A	N/A
OREAS-608	0.101	0.002	2	0.101	0.0	-	0	0.0%	0	0.0%

Figure 11-3 CRM Control Chart for Gold (2021)

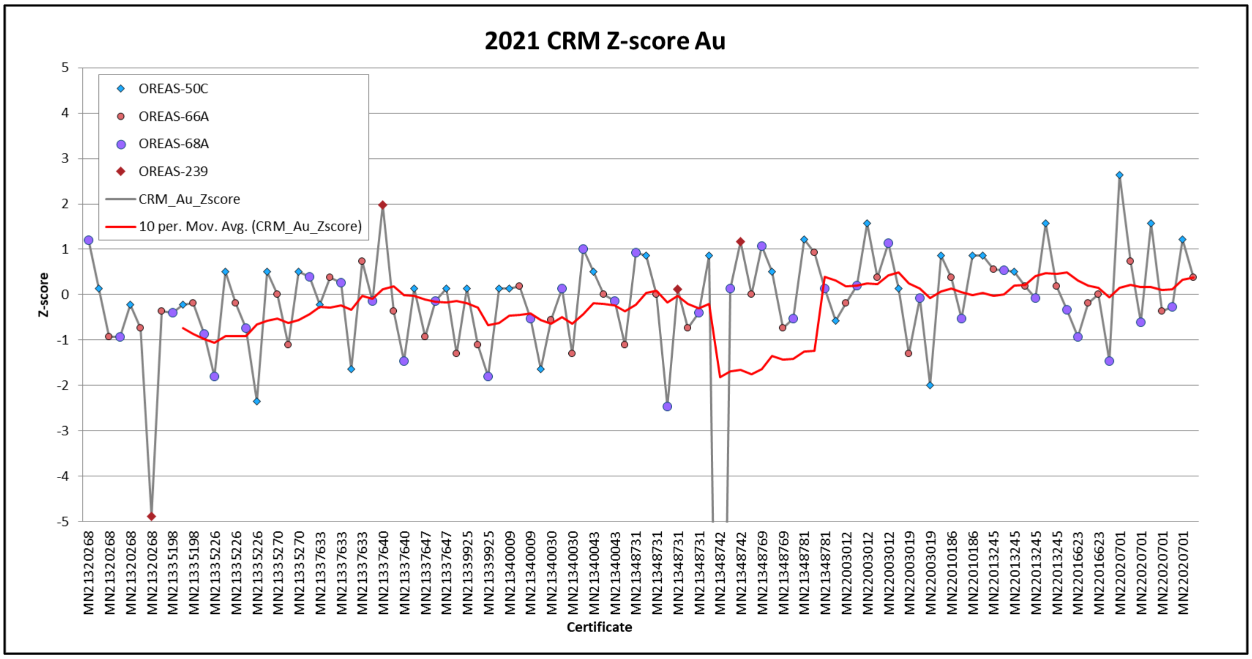


Figure 11-4 CRM Control Chart for Copper (2021)

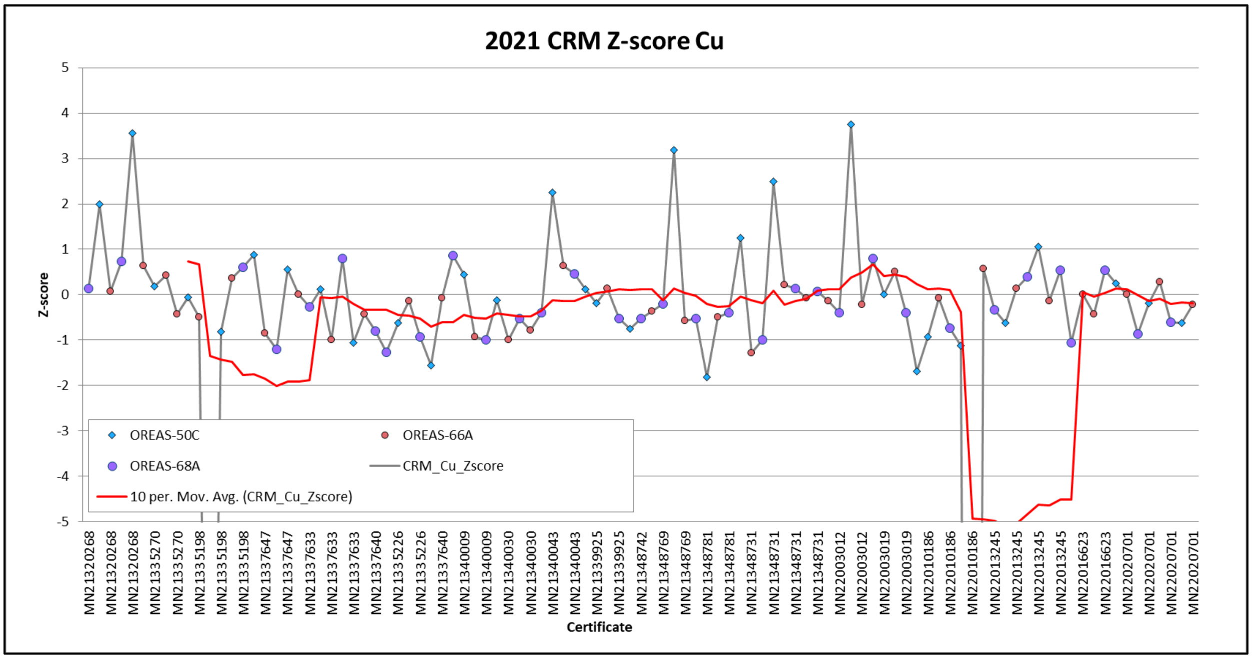


Figure 11-5 CRM Control Chart for Gold (2022)

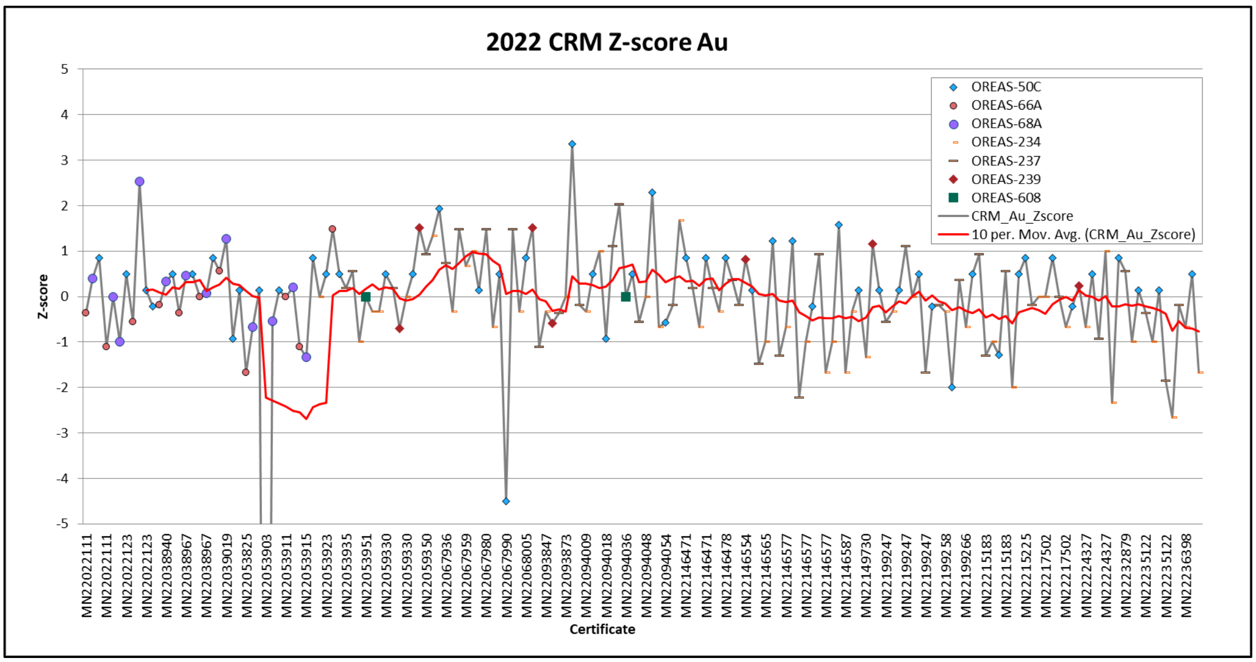
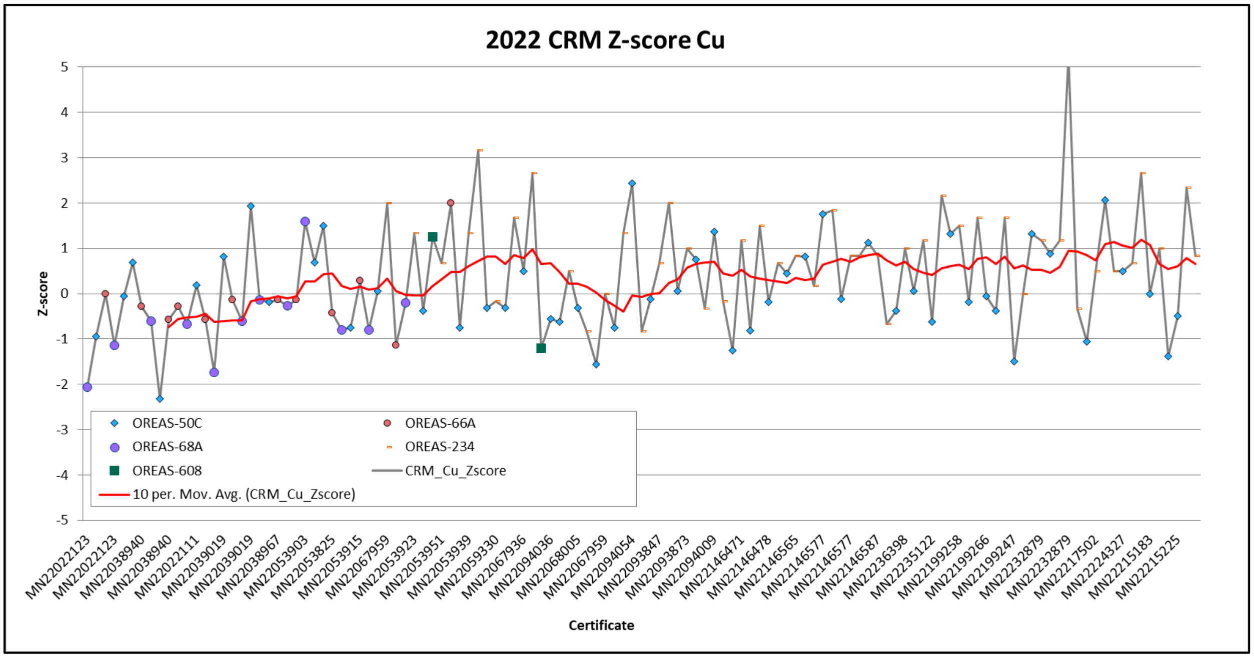


Figure 11-6 CRM Control Chart for Copper (2022)



11.3.7 Blank Material

Big Ridge Gold utilized blank QC samples consisting of samples of fresh and “unaltered” core material of a non-mineralized granite, Chetwynd Granite, sourced from the Hope Brook site. Blank samples were inserted into the sample stream in the field to determine the degree of sample contamination after sample collection, particularly during the sample preparation process. This material does not have certified values established by a third party through round robin lab testing. The QA/QC program from 2021 - 2022 included the insertion of 274 blank QC samples.

For blank sample values, failure is more subjective, and a hard failure ceiling value has not been set for the Project. Evaluation of blank samples using a failure ceiling for gold of 0.03 ppm (3x detection limit) indicates that the combined blank failure rate from 2021 – 2022 was 1.8% for gold. The highest blank assay value was 0.65 ppm gold and all other blank samples returned assays <0.05 ppm gold (Figure 11-7 and Figure 11-8). Based on the low risk of cross sample contamination and the low amounts of gold that may have contaminated blank material, it is considered unlikely that there is a contamination problem with the Project drilling data.

Figure 11-7 Blank Control Chart for Gold (2021)

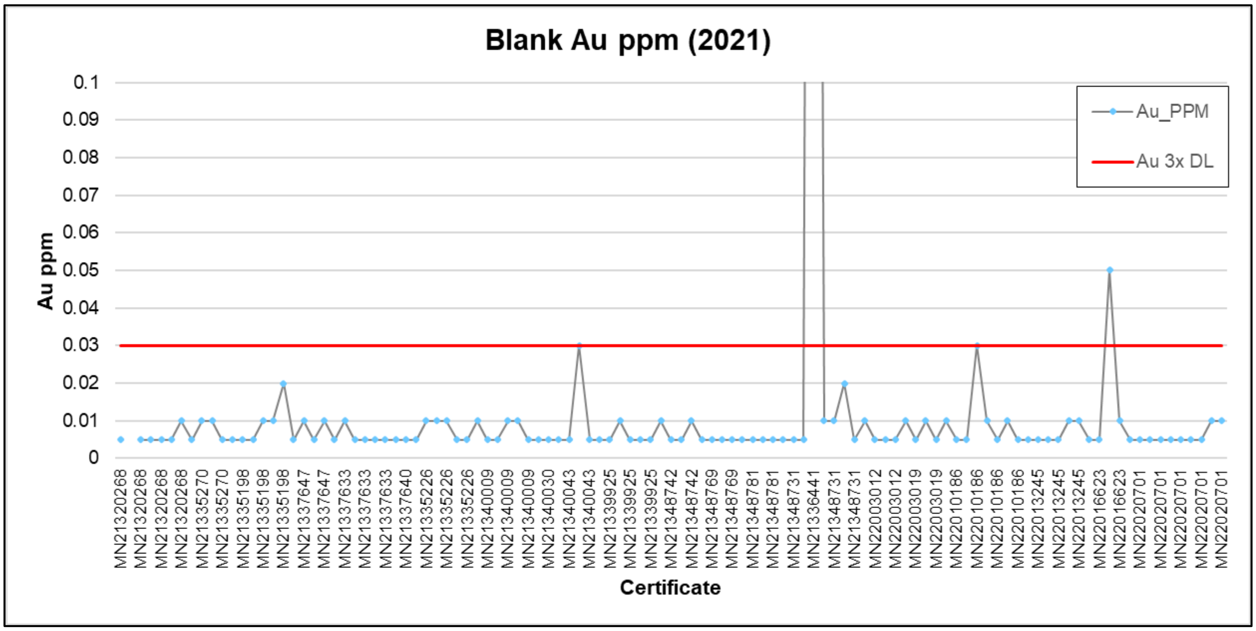
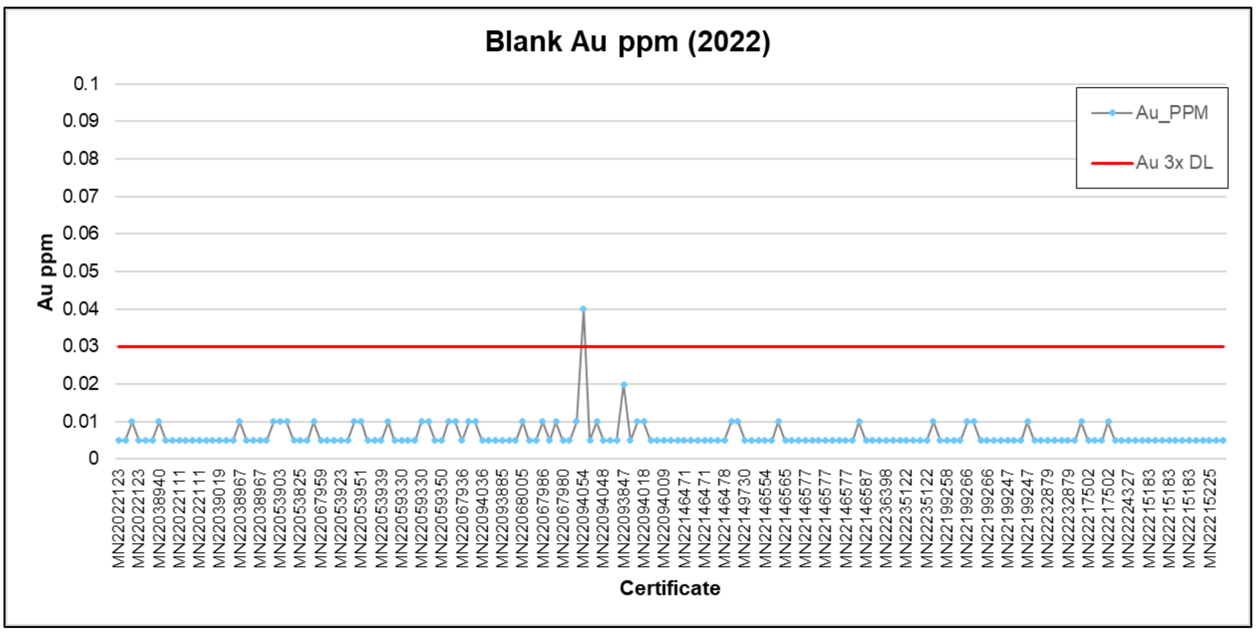


Figure 11-8 Blank Control Chart for Gold (2022)



11.3.8 Duplicate Material

Big Ridge Gold's QAQC program included coarse reject and pulp duplicate samples inserted at a frequency of approximately 1 coarse reject and 1 pulp duplicate sample in every 40 samples, for a total of 268 coarse reject duplicate and 273 pulp duplicate samples (Table 11-13). Due to long delays created by demand at all third party laboratories in 2021 and 2022, Big Ridge elected to have its coarse and pulp duplicate samples analysed at its primary assay lab, ALS Global, to evaluate analytical precision and sampling error.

Figure 11-1 and Figure 11-2 illustrate the comparative assay results and precision of duplicate sample analyses.

To obtain a relatively accurate estimate of the sampling precision, or average relative error, a large number of duplicate sample pairs are required. In the case of the HB deposit, reliably determining the base metal data precision, which typically exhibits relatively small average relative errors (such as 5%), would require 500 – 1000 duplicate data pairs. Reliable determination of the gold data precision, which typically exhibits relatively large average relative errors (such as 25%), likely requires a data set of greater than 2500 duplicate pairs (Stanley and Lawie, 2007). Based on the current limited duplicate data set size, analysis of the precision should be considered approximate in nature only and should not be considered as reliable.

The average Coefficient of Variation (CV_{AVR}%) for gold duplicate samples is shown in Table 11-12 calculated using the root mean square coefficient of variation calculated from the individual coefficients of variation (Stanley and Lawie, 2007). The estimates of precisions errors (CV_{AVR}%) for Hope Brook sampling precision are acceptable by industry standards for coarse reject and pulp duplicates for coarse grained and nuggety gold mineralization (Abzalov, 2008); however, more data is required to produce reliable estimates of sampling precision.

The precision of coarse reject and pulp duplicates should continue to be monitored as the drill program progresses and the size of the duplicate data set becomes more representative.

Table 11-19 Average Relative Error of Duplicate Samples for Au (2021-2022)

Duplicate Type	Count	Au CV_{AVR}%
Coarse Reject Duplicates	268 duplicate pairs	25.5%
Pulp Duplicates	273 duplicate pairs	23.9%

Figure 11-9 Log X-Y Plot of Coarse Reject Duplicate Samples for Gold (2021 – 2022)

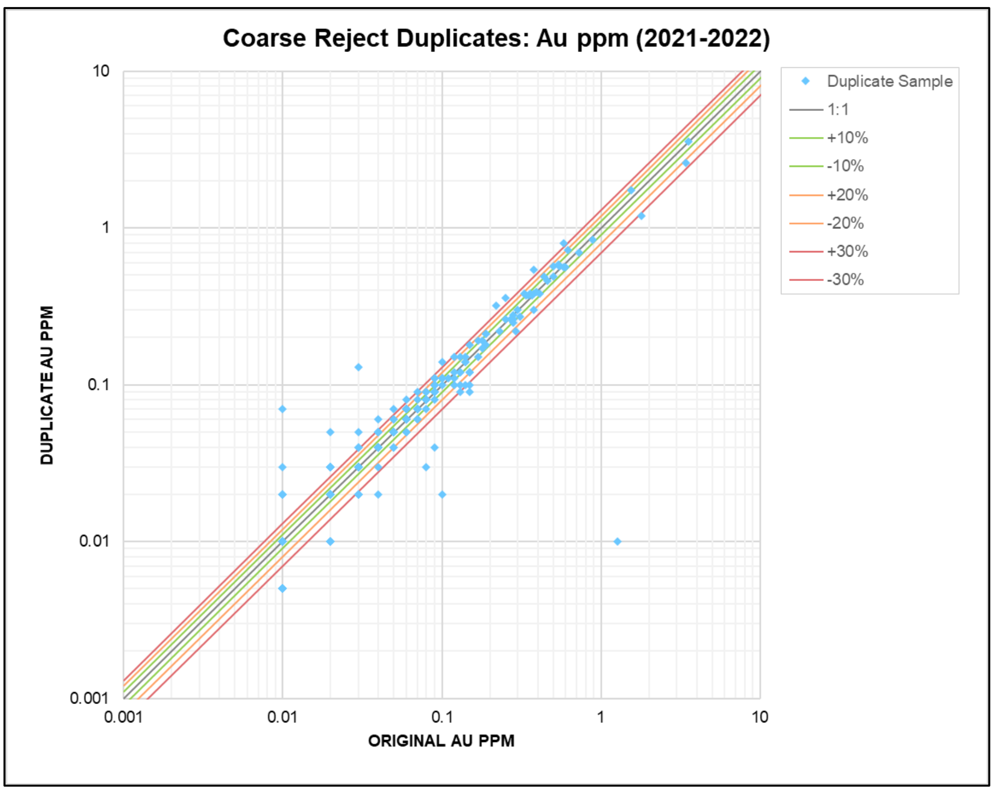
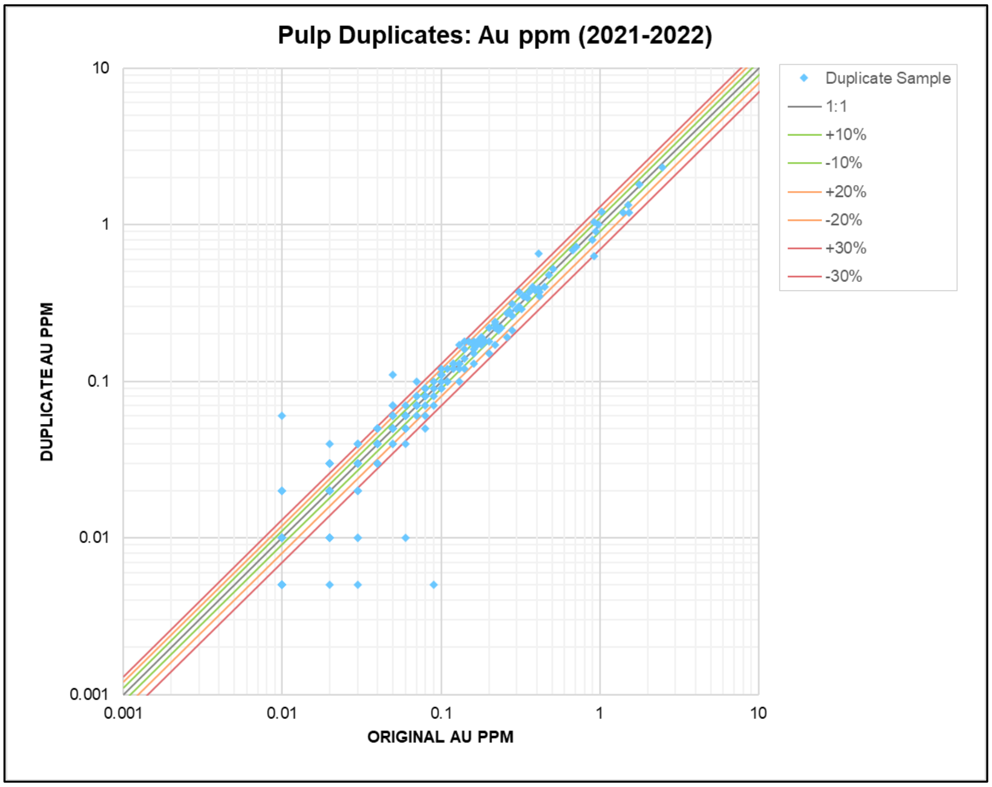


Figure 11-10 Log X-Y Plot of Pulp Duplicate Samples for Gold (2021 – 2022)



11.3.9 Umpire Laboratory

Check assaying of samples at a third-party umpire laboratory has not yet been undertaken as an additional QA/QC measure by Big Ridge Gold for the Project.

11.4 Sample Storage

Archived drill core from the Property, including all Coastal Gold and Big Ridge drill holes from HB10-001 to HB22-198, is secured at the Company's core logging and long-term storage facility at the Hope Brook site on pallets or in steel racks.

11.4.1 QP's Comments

It is the Author's opinion, based on a review of all possible information, that the sample preparation, analyses and security used on the Project by the Company meet acceptable industry standards (past and current) and the drill data can and has been used for geological and resource modeling, and resource estimation of Indicated and Inferred mineral resources.

12 DATA VERIFICATION

The following section summarises the data verification procedures that were carried out and completed and documented by the Authors for this technical report, including verification of all drill data collected by Big Ridge during their 2021 to 2022 drill programs and data obtained by previous operators, as of the effective date of this report.

12.1 Drill Sample Database

Eggers conducted an independent verification of the assay data in the drill sample database used for the current MRE. Digital assay records were randomly selected and checked against the available laboratory assay certificate reports. Assay certificates were available for all diamond drilling completed by Big Ridge and Coastal Gold, and for a portion of the historical (1983 – 1997 BP and Royal Oak) drilling. Eggers reviewed the assay database for errors, including overlaps and gaps in intervals and typographical errors in assay values. In general, the database was in good shape and no adjustments were required to be made to the assay values contained in the assay database.

Verifications were also carried out on drill hole locations, down hole surveys, lithology, SG and topography information. Minor errors were noted and corrected during the validation. The database is considered of sufficient quality to be used for the current MRE.

Eggers has reviewed the sample preparation, analyses and security (see section 11) completed by the Company and previous operators for the Property. Based on a review of all possible information, the sample preparation, analyses and security used on the Project by the Company and previous operators, including QA/QC procedures, are consistent with standard industry practices and the drill data can be used for geological and resource modeling, and resource estimation of Indicated and Inferred mineral resources.

12.2 Site Visit

Armitage completed a site visit to the Property from August 24 to 26, 2022, accompanied by Bill McGuinty P. Geo., Vice President Exploration and QP for the purposes of National Instrument 43-101 for Big Ridge. Access to the Property was by small fixed-wing aircraft from Deer Lake, Newfoundland to a well-established gravel airstrip located on the Property.

At the time of the site visit, the drill had just been shut down for the season. However, final completed holes were in the process of being logged, sampled and samples shipped.

During the site visit, the Author had the opportunity to examine a number of selected mineralized core intervals from historical and recent diamond drill holes (HB-22-182, -185, -196 and -198). The Author examined accompanying drill logs and assay certificates and assays were examined against the drill core mineralized zones. All core boxes were accessible, well labelled (metal tags) and properly stored outside either in core racks (recent holes) or in palletized cross stacked piles (historical holes), by hole. Sample tags were still present in the boxes and it was possible to validate sample numbers and confirm the presence of mineralization in witness half-core samples from the mineralized zones.

The Author had the opportunity to inspect the offices, core logging and sampling facilities and core storage areas, and had discussions with the on-site geologists regarding the core sampling and QA/QC procedures, core shipping and security procedures, and analytical procedures.

The Author participated in a field tour of the Property to become familiar with current conditions on the Property, to observe and gain an understanding of the geology and various styles mineralization, and to verify the work done including surface drilling and past mining. Armitage visited a number of outcrops to look at the mineralization in the field, as well as outcrops to become familiar with the geology in the hanging wall and footwall to the mineralization. Armitage inspected a number of historical and recent drill sites, the open pits, the tailings pond and tailing dams, the airstrip and docking facilities.

As a result of the site visit, the Author was able to become familiar with conditions on the Property, was able to observe and gain an understanding of the geology and various styles mineralization, was able to verify the work done and, on that basis, is able to review and recommend to Big Ridge an appropriate exploration program.

Armitage considers the site visit current, per Section 6.2 of NI 43-101CP. To the Authors knowledge there is no new material scientific or technical information about the Property since that personal inspection. The technical report contains all material information about the Property.

12.3 Conclusion

All geological data has been reviewed and verified by the Authors as being accurate to the extent possible and to the extent possible all geologic information was reviewed and confirmed. There were no significant or material errors or issues identified with the database. Based on a review of all possible information, the Author is of the opinion that the database is of sufficient quality to be used for the current Indicated and Inferred MRE.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

Big Ridge has yet to complete mineral processing and metallurgical testing on samples from the HBGP. In 2012, Coastal Gold carried out a scoping level metallurgical program on samples from the Hope Brook Project (Desautels et al., 2012b). This was followed by additional testwork targeting specific areas of the flowsheet by Coastal Gold in 2013.

13.1 Historical Results

Government and industry records show that the Hope Brook mine produced 752,163 ounces of gold during its 1987-1997 production period from processing by both heap leach and conventional milling methods (Desautels et al., 2012b).

The history of mining and milling of ore from the HB deposit has conclusively shown that gold and copper recovery through commercially available and reliable methods of mineral processing and beneficiation is possible. More specifically, processing during the BP era included both heap leach and conventional milling approaches. BP's heap leach operations ran from August, 1987 through mid-1990 and the conventional mill entered production in September, 1988.

Government records indicate that approximately 930,000 tonnes of ore were processed by heap leaching in 150,000 tonne, 4.6 m lifts that were typically subjected to active cyanide solution spraying for a 60 day period. A small (~9000 tonne) demonstration heap leach had been successfully completed prior to initiation of commercial production at the mine. Pregnant solution recovered during the production phase was pumped through carbon columns where gold was adsorbed and subsequently recovered by batch stripping, electrowinning and on-site refining to dore bars.

The conventional milling circuit installed by BP incorporated semi-autogenous grinding to produce a slurry product of 80 percent passing 75 microns. This was thickened and agitated during cyanide exposure in tanks for 48 hours. The slurry was then filtered, gold was adsorbed from the pregnant solution in a series of carbon columns, and then recovered using electro-wining onto steel wool for subsequent refining to dore bars. BP did not recover copper from its milling operations. A Degussa hydrogen peroxide system was used for cyanide destruction and proved problematic, with this contributing to unacceptable cyanide and metal levels in effluent ponds. Government records indicate that gold recoveries from BP milling ranged between a low of 78.8% in 1987 and a high of 85.9% in 1989 (NLDNR Mineral Occurrence Report: 0110/09/Au 003).

After acquiring the operation in late 1991 Royal Oak modified the milling flow sheet to incorporate an SO_2 based cyanide destruction process that eliminated occurrence of high cyanide levels in effluent ponds. The company also installed a copper flotation circuit that produced a concentrate at approximately 22% Cu and 34.28 g/t Au (NLDNR Mineral Occurrence Report: 0110/09/Au 003, Royal Oak Annual Report, 1992). Government and Royal Oak Annual Report records indicate that Au recoveries from Royal Oak milling ranged between a low of 82.1% in 1994 and a high of 89.83% in 1996 (NLDNR Mineral Occurrence Report: 0110/09/Au 003). Recovery data were not available for 1997.

13.2 2012 Metallurgical Testwork Program

Scoping level metallurgical testwork on samples by Coastal Gold for the HBGP was carried out by G&T Metallurgical Services Ltd. in Kamloops, BC from May to August, 2012. The objectives of the program were to evaluate potential processing routes for maximizing gold recovery and to identify operating parameters for the preliminary circuit design.

Three composites were generated for metallurgical testwork from split core samples. These consisted of a High-Grade Composite and a Low-Grade Composite from the Main Zone, as well as an overall Master Composite consisting of a 3:1 ratio of the Low-Grade and High- Grade composites. In addition, a Tailings Composite was prepared from samples collected from the site tailings pond. Table 13-1 presents a summary of the head assays for the composites.

Table 13-1 Head Analysis of the Hope Brook Metallurgical Composites from the 2012 Test Program (from Desautels et al., 2012b)

Composite	Au g/t	Cu %	Fe %	S %	C %
Low Grade	0.97	0.06	5.05	3.58	0.14
High Grade	4.14	0.11	4.54	4.15	0.22
Master Composite	1.77	0.077	4.75	3.58	0.14
Calculated Head Grade					
(From low grade and high grade)	1.76				
Testwork Average	1.79	-	-	-	-
Tailings Composite	1.07	0.086	6.45	4.2	0.29
Testwork Average	1.06	-	-	-	-

A single Bond Ball Work Index test was carried out on a -6 mesh sample of the Master Composite at a closing size of 100 mesh. The results indicated a moderate work index of 12.5 kWh/tonne. One Abrasion Index test was conducted on the Master Composite that resulted in an AI of 0.178. This value indicates that grinding media consumption would be low to moderate, as compared to other operations.

Whole ore cyanidation testwork was carried out on the composite samples under standard conditions of 48 hours leaching at 1 g/L sodium cyanide concentration. Results indicated gold extractions for the Master Composite averaging 81% gold extraction at a grind size P80 of 72 µm. Finer grinding of the master composite prior to cyanidation did not improve gold extraction. For example, at a P80 of 55 µ m the gold extraction was comparable to the coarser grind at approximately82%.

Flotation testwork was successful at generating a concentrate grading 28% Cu from flotation of cyanidation residue from the High-Grade Composite, in a process similar to the historical flowsheet at Hope Brook.

Gravity concentration tests were carried out on the Master Composite which indicated that between 16 and 41% of the contained gold was recoverable to concentrate by this method. Combined gold recoveries of ~86% were achieved with both the High-Grade and Low-Grade composites using a flowsheet consisting of gravity concentration followed by cyanidation of the gravity tailings.

Direct cyanidation of the Tailings composite resulted in up to 49% extraction of gold. Bulk flotation of sulfides, followed by fine grinding of concentrate and cyanidation did not improve overall extraction.

13.3 2013 Metallurgical Testwork Program

Additional metallurgical testing was carried out in the fall of 2013 to further advance the understanding of the metallurgy of the HB deposit. This work included batch flotation testwork focused on the opportunity to recover a saleable grade copper concentrate after the grinding and gravity recovery step.

Batch rougher tests conducted at G&T in Kamloops on the Master Composite from the 2012 program revealed that good selectivity of chalcopyrite over pyrite could be achieved with short flotation times and low doses of collector 3418A. Up to 85% of the copper was recovered to a rougher concentrate grading 7.30% Cu and representing less than 1% of the mass.

Cleaner flotation testwork followed a conventional flowsheet of regrinding to a P80 of less than 25 microns and two stages of cleaning at a pH of 11.0 and 11.5, respectively. Consistent final concentrate grades were achieved reaching a maximum open circuit copper recovery of 78.4% at a concentrate grade of 27.7% Cu. Gold recovery to the final concentrate ranged from 23% to 48%, depending on whether a gravity step was included before flotation. Overall gold recovery was not improved by including the flotation step before the leach, but it is expected that this change will improve the water balance and reduce cyanide consumption.

Scoping level testwork was also carried out at Tomra Sorting Solutions in Surrey, BC to evaluate the potential of rejecting dilution material before the grinding area using sensorbased sorting. Core samples of mineralized rock, as well as mafic dyke, hanging wall, and footwall dilution, were submitted for qualitative evaluation using four industrially applied sensors: optical, x-ray, near infrared (NIR), and magnetic.

The results indicated that the mafic dyke dilution was readily distinguished from the mineralized rock using all four detectors, indicating that this material is highly amenable to rejection by sorting. The hanging wall and footwall samples, however, were found to be only distinguishable from mineralized rock by the NIR sensor.

Additional intersections from the 2013 vibracore sampling of the tailings ponds were also submitted for flotation and cyanidation testwork. A single flotation test using the optimized conditions from the Master Composite indicated a copper recovery of 61% to an open-circuit second cleaner concentrate grading 21.4% Cu. Gold recovery to the same concentrate was low, at 15%, probably due to the lack of recoverable fine free gold in the leached tailings.

Leaching tests on high-grade (1.2 g/t Au) and low-grade (0.8 g/t Au) tailings composites resulted in cyanide leach gold extractions of 63.6% and 45.6%, respectively. The results were found to be consistent with the leach tests conducted on the earlier sample and indicate a reasonably linear relationship between grade and leach extraction.

Based on the results of the summarized testwork, a preliminary process flowsheet has been developed that includes primary jaw crushing, waste rejection by pre-sorting, SAG milling, closed-circuit ball milling with gravity recovery on the cyclone underflow, froth flotation, CIP cyanidation of the flotation tailings, carbon stripping and electrowinning, and detoxification.

Recommendations for future testwork include optimization of the gravity recovery circuit and locked-cycle testing on the copper flotation circuit and additional testing of ore sorting enhancement of mill feed.

14 MINERAL RESOURCE ESTIMATES

14.1 Introduction

Completion of the current MRE for the HB deposit involved the assessment of a drill hole database, which included all data for surface and underground drilling completed through 2022. The database also included:

- Three-dimensional (3D) mineral resource models (resource domains) for the Main Zone and 240 Zone
- 3D geological models,
- a 3D topographic surface model identifying mined out pit at the Main Zone,
- 3D void solid model of historical mined out areas representing stopes, drifts, crosscuts and raises,
- available written reports.

Inverse Distance Squared ("ID^2") calculation method restricted to mineralized domains was used to interpolate grades for gold into a block models.

Indicated and Inferred mineral resources are reported in the summary tables in Section 1.7. The current MRE takes into consideration that the HB deposit may be mined by open pit and underground mining methods.

14.2 Drill Hole Database

In order to complete the MRE for the HB deposit, a database comprising a series of comma delimited spreadsheets containing surface and underground diamond drill hole information. The database included hole location information, down-hole survey data, assay data and density data. The data in the assay table included assays for Au (g/t) and Cu (ppm). After review of the database, the data was then imported into GEOVIA GEMS version 6.8.3 software ("GEMS") for statistical analysis, block modeling and resource estimation.

The updated MRE for the HB deposit is based on data for 763 surface and underground drill holes representing 164,865 m of drilling, including data for 61 surface drill holes for 19,090 m completed by Big Ridge in 2021 and 2022, since acquiring the Property (Figure 14-1 and Figure 14-2).

The database was checked for typographical errors in drill hole locations, down hole surveys, assay values and supporting information on source of assay values. Overlaps and gapping in survey and assay values in intervals were checked. All assays had analytical values for Au (g/t), however Cu (ppm) was only available for surface drill holes completed by Coastal Gold and Big Ridge.

Figure 14-1 Plan View: Distribution of Surface and Underground Drill Holes at the HB Deposit

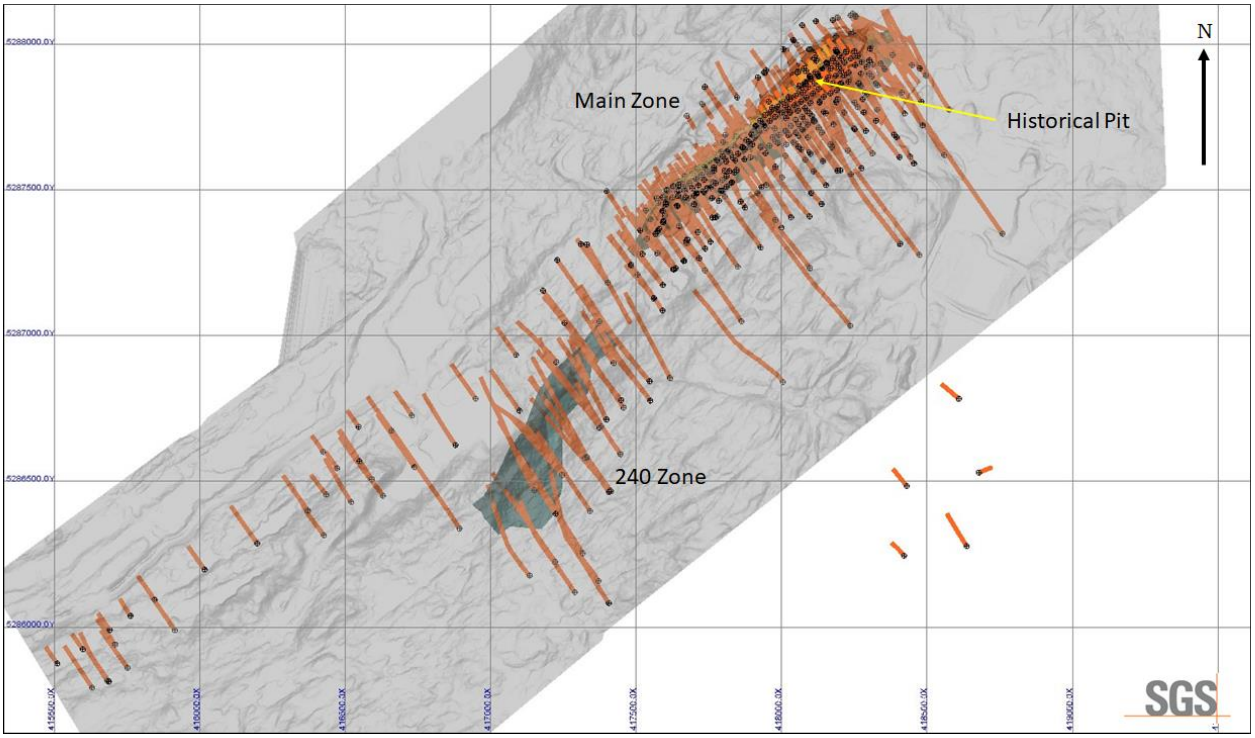
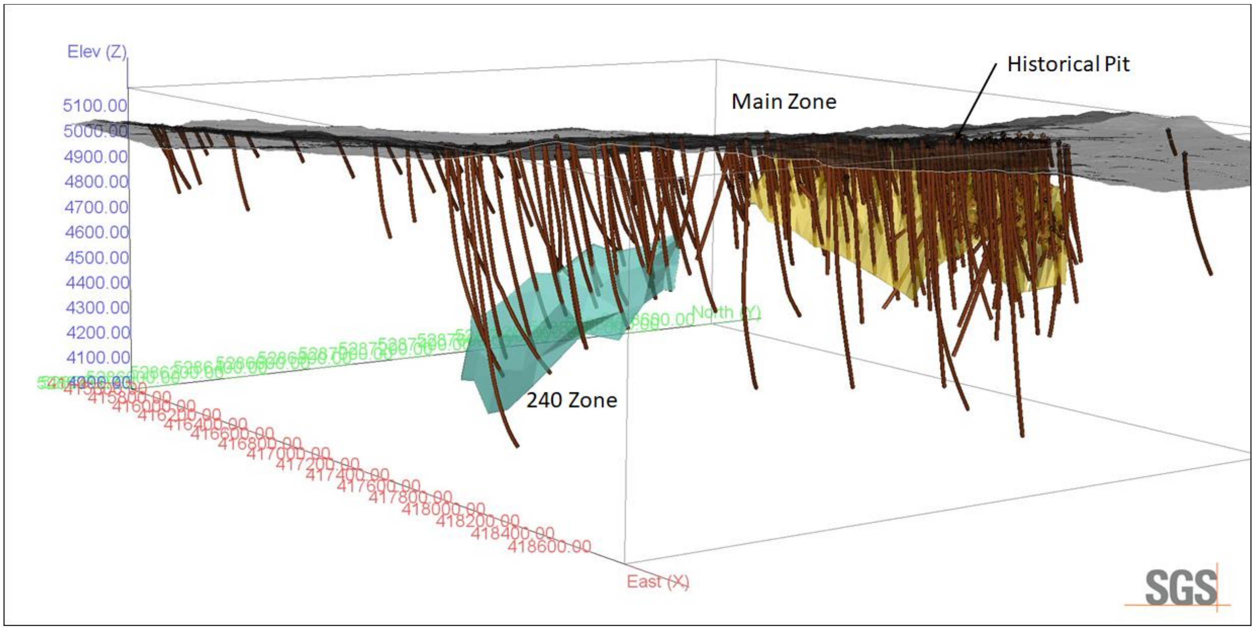


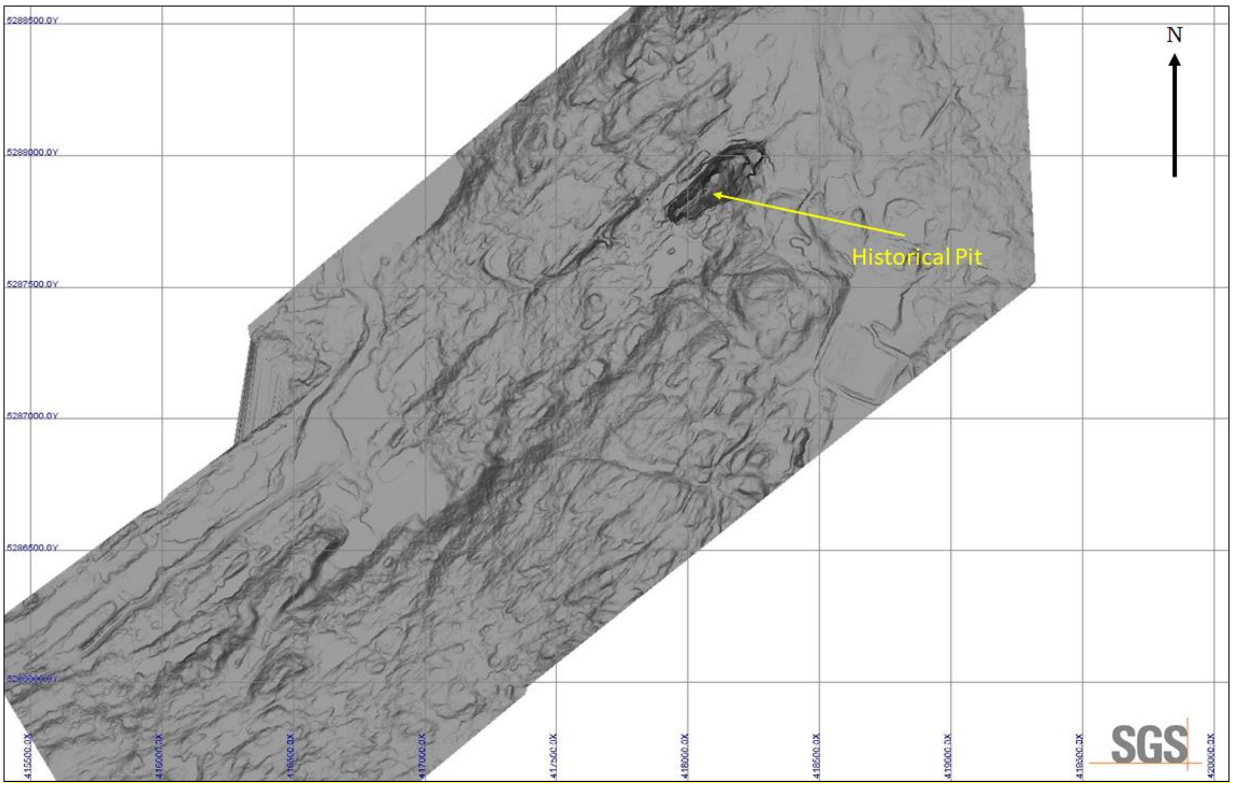
Figure 14-2 Isometric View Looking Northwest: Distribution of Surface and Underground Drill Holes at the HB Deposit



14.3 Topography

A topographic surface, LIDAR digital topography model ("DTM"), in 3D DXF format was provided by Big Ridge. This DTM was constructed using 1 m resolution data obtained from PhotoSat Information Ltd., a firm specializing in accurate stereo satellite elevation mapping (Cullen et al., 2021). The DTM was digitally modified to reflect the HB deposit open pit surface defined by data generated from historical mine survey points. The overburden thickness in the HB deposit area is considered to be negligible and no surface was constructed for the overburden.

Figure 14-3 Plan View of HB Deposit Area Topographic Surface



14.4 Mineral Resource Modelling and Wireframing

The Author was provided with two 3D resource models (mineral domains), representing the Main Zone and 240 Zone, to be used for the current MRE (Table 14-1) (Figure 14-4 and Figure 14-5). The models were constructed by Big Ridge.

The 3D resource models were built by visually interpreting mineralized intercepts from cross-sections using gold values. Polylines of mineral intersections (snapped to drill holes) were made on each cross-section and these were wireframed together to create a continuous mineral resource model in GEOVIA Surpac™ version 6.1 software.

The polylines of the mineral intersections were constructed on 25 m spaced sections (looking 230°) with a +/- 12.5 m sectional influence. The cross-sections were created perpendicular to the general strike of the mineralization. The deposit was subdivided into two zones: the Main Zone and the 240 Zone. For the Main Zone, the grade control model was drawn using an approximate 0.5 g/t Au cut-off grade based on assay samples. For the 240 Zone, the grade control model was drawn using an approximate 1.0 g/t cut-off grade based on assay samples. The mineral interpretation considered a minimum mineral intersection and mining width of 2.0 m. The model was extended 12.5 to 25 metres beyond the last known intersection along strike and 25 - 50 metres down dip.

The models supplied by Big Ridge were imported into GEMS. Armitage has reviewed and validated the resource models on section and in the Author's opinion the models provided are very well constructed and fairly and accurately represents the distribution of the gold mineralization. Minor edits were recommended by Armitage and completed by Big Ridge.

The Main Zone generally strikes 50°, dips steeply southeast (-75°) and extends for 1,200 m along strike. The 230 Zone generally strikes 35°, dips steeply southeast (-65° to -70°), plunges roughly 35° to the southwest, and extends for 850 m along strike/down plunge.

Armitage was also provided with a 3D dyke model, a narrow un-mineralized Chetwynd granite dike which crosscuts the Main Zone mineralization (Figure 14-6), and 3D models of the underground mined-out areas (Voids Solid Models, see below). The narrow Chetwynd granite dike strikes northeast and broadly conforms to steep host sequence lithologic unit dips within the deposit. The Chetwynd granite dyke is un-mineralized and appears to post-date gold mineralization. Coastal Gold staff developed the wireframed, three-dimensional solid models for the Chetwynd granite dyke and this was used in previous and current resource estimates. The dyke model is considered a waste model.

Table 14-1 HB Deposit – Domain Description

Domain	Rock Code	Density	Domain Volume	Domain Tonnage
Main Zone	10	2.70	12,129,424	32,749,445
240 Zone	30	2.80	1,584,354	4,436,191
			13,713,778	**37,185,636**

Figure 14-4 Isometric View Looking Northwest: HB Mineral Resource Models

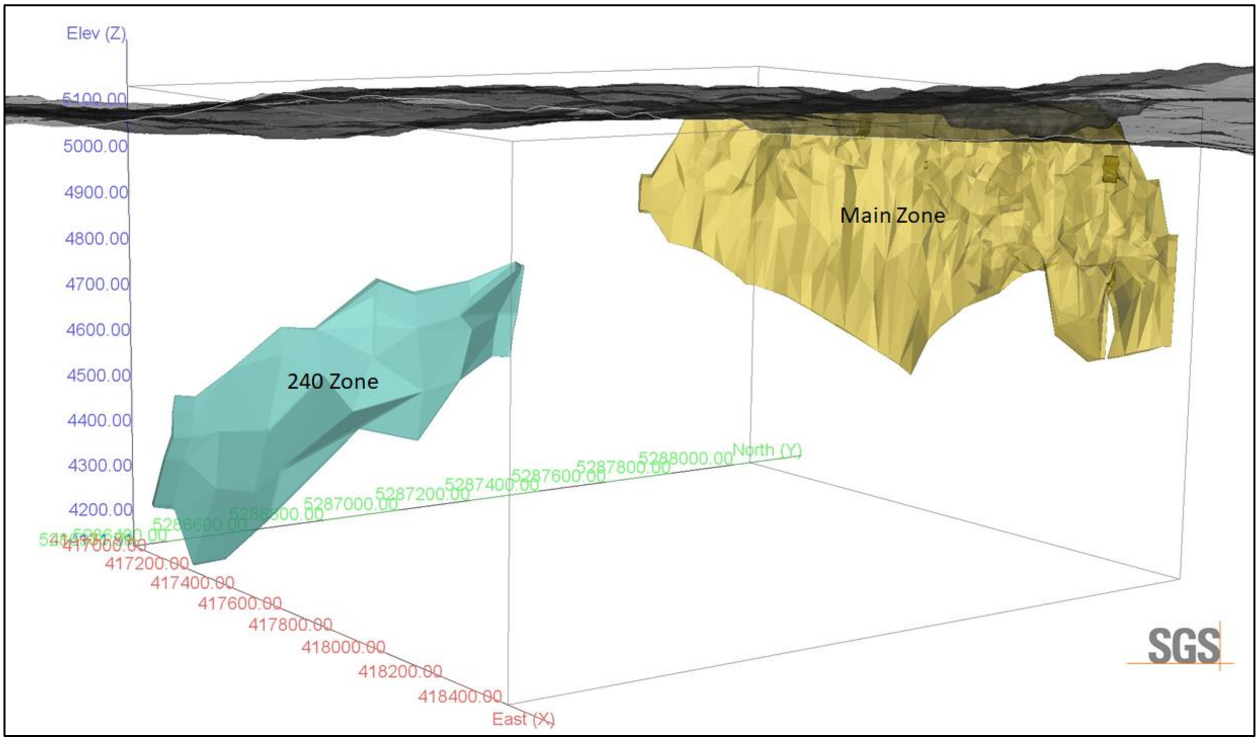


Figure 14-5 Isometric View Looking Northeast: HB Mineral Resource Models

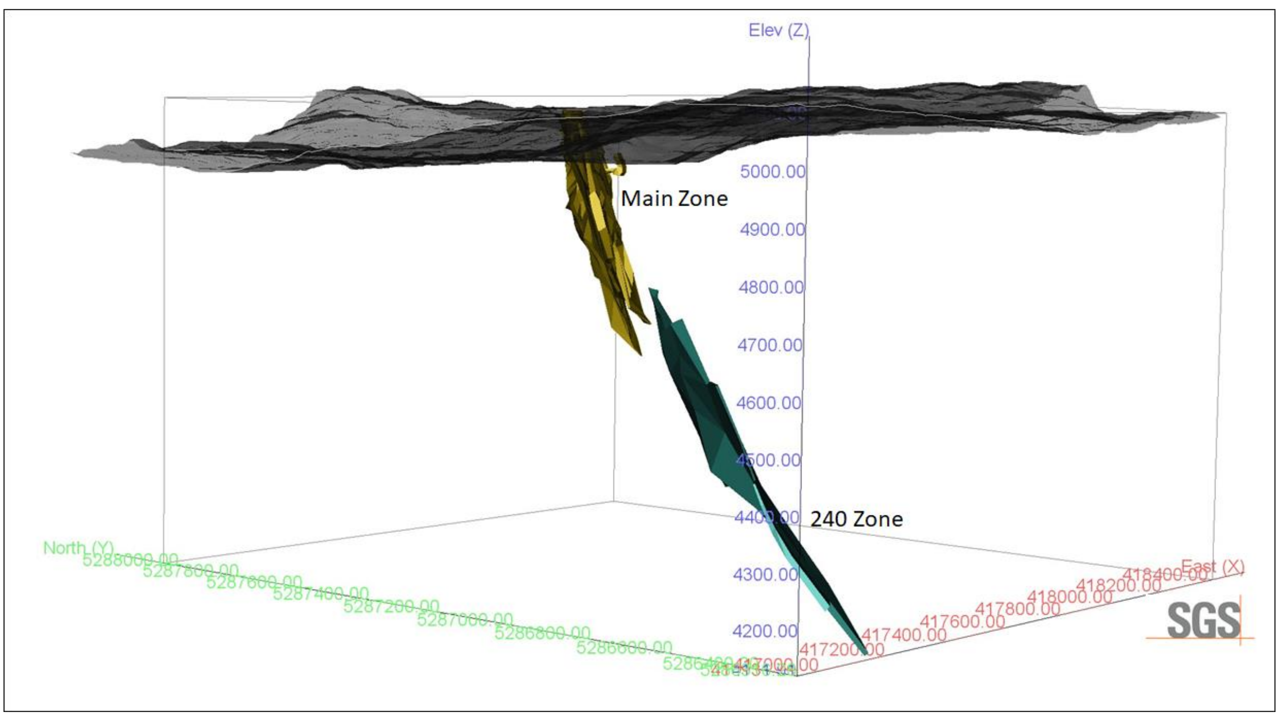
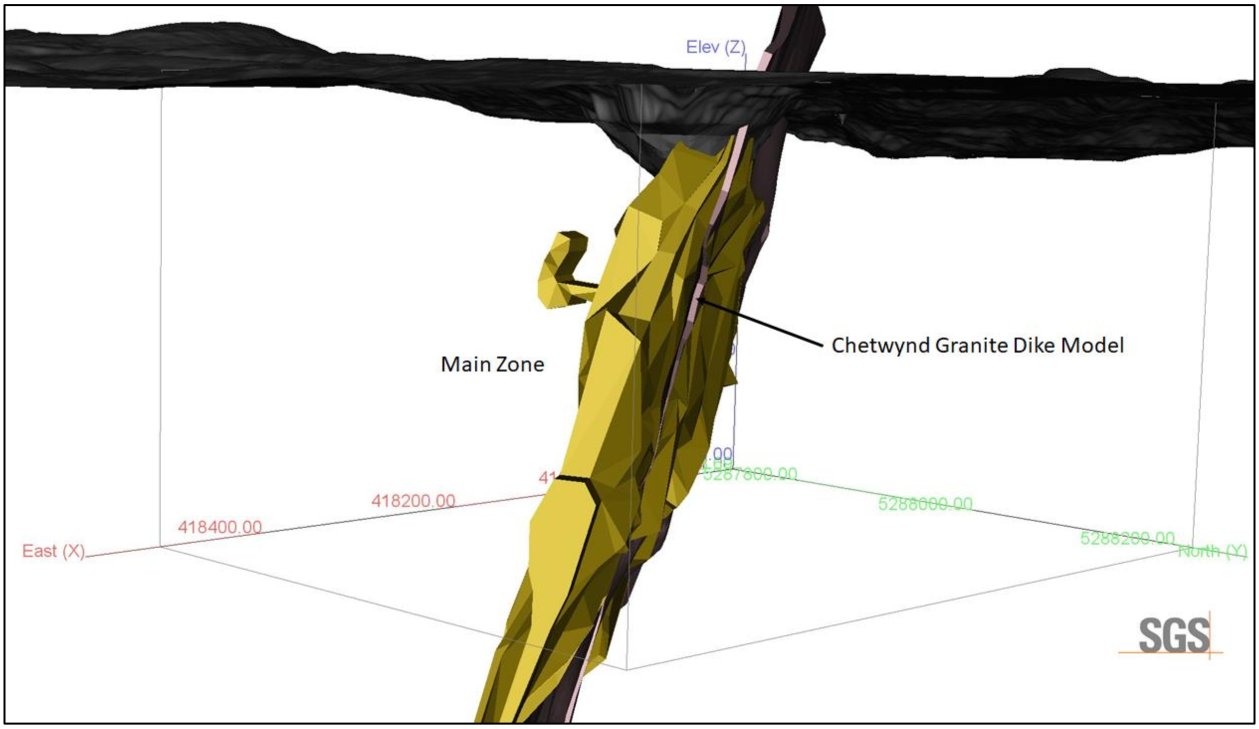


Figure 14-6 Isometric View Looking Southwest: Chetwynd Granite Dyke cutting the Main Zone Mineralization



14.4.1 Void Solid Models

A three-dimensional void solid model depicting historical stopes and mine workings was provided by Big Ridge (Figure 14-7 and Figure 14-8). The void solid models were originally developed by Mercator for Coastal Gold and progressively updated versions were used in the subsequent resource estimate models, including the current model (Cullen et al., 2021). The void solid model incorporates both digital stope solids and digital solids that define mine workings such as drifts, crosscuts and raises (Figure 14-6). The void solids were created by digitizing historical mine survey drawings created by either BP or Royal Oak and merging these with historical mine survey point data. The historical survey level plans and sections show outlines of stopes, cross cuts, drifts, ramps and declines. Stope solids were created by joining surveyed stope outlines on consecutive working levels, through extension along local dip trends. Other workings were modeled by combining digitized level plan layouts with historic back and/or sill mine survey coordinate points. Historical survey plans for the main decline were not found for an interval of the main access ramp between the 4870 m and 4850 m working levels and this gap in information is still present in the model. With the exception of this ramp interval, the historical mine survey plans, survey point data and surveyed sections were accepted for current resource purposes as being accurate and complete with respect to their three-dimensional coordination.

The void solid model originally created by Mercator was updated as necessary to reflect results of Coastal Gold's ongoing exploration of the deposit area (Cullen et al., 2021). As an example, historical information retrieved from government archives supported updating of spatial limits of individual stope solids in late 2012. In addition, stope intersections by Coastal Gold core drilling programs in 2012 were used to validate the digital stope and workings model and to confirm the accuracy of the model. Drill holes that intersected stoping solid outlines generally showed stope fill to be either broken mineralized zone material or waste rock fill. However, in-situ mineralized zone material was intersected in some instances, probably indicating that historical blasting had not broken ore to the planned stope limit in such areas. Where confirmed by Coastal Gold drilling results, the original stope solid was modified by Mercator to respect the new drilling data.

The Void solid modes have not been updated by Big Ridge. The void models were imported into GEMS. Minor triangulation errors were identified and repaired. The repairs resulted in a negligible change in the void solid volume. The Void Solid Models are used to exclude mined material from the current MRE.

Figure 14-7 Plan View: HB Deposit Void Solid Models

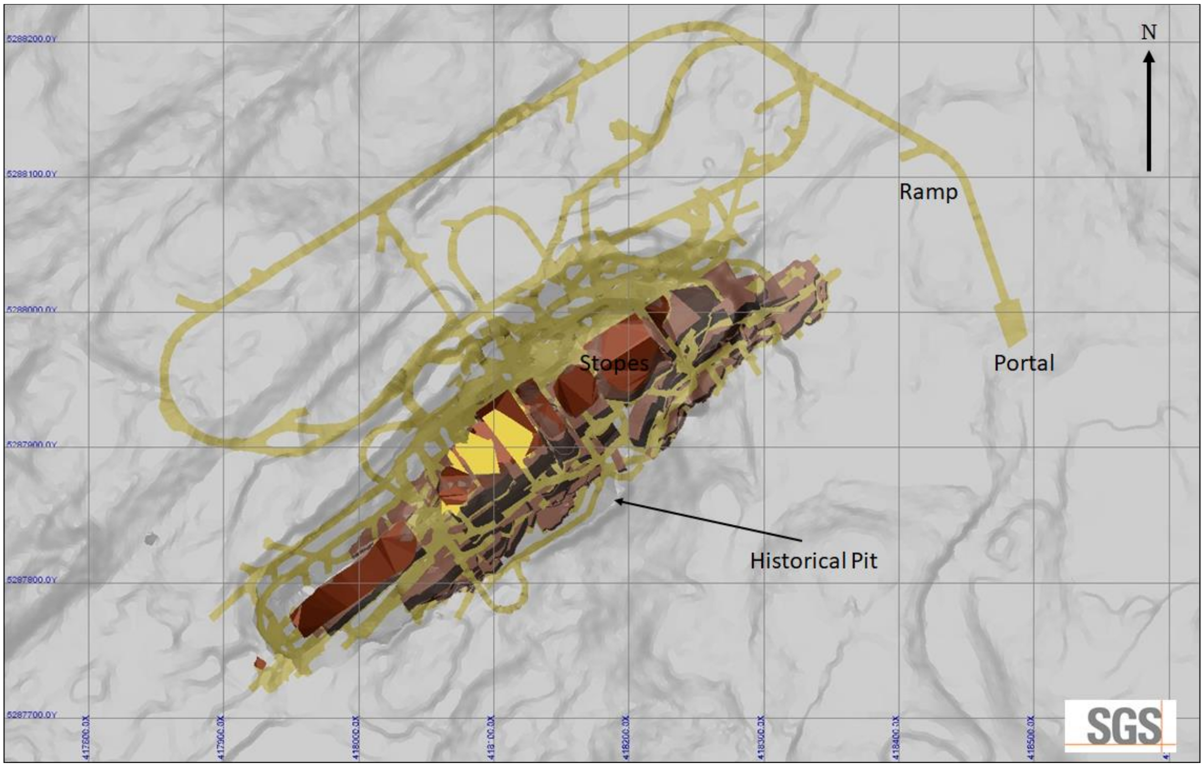
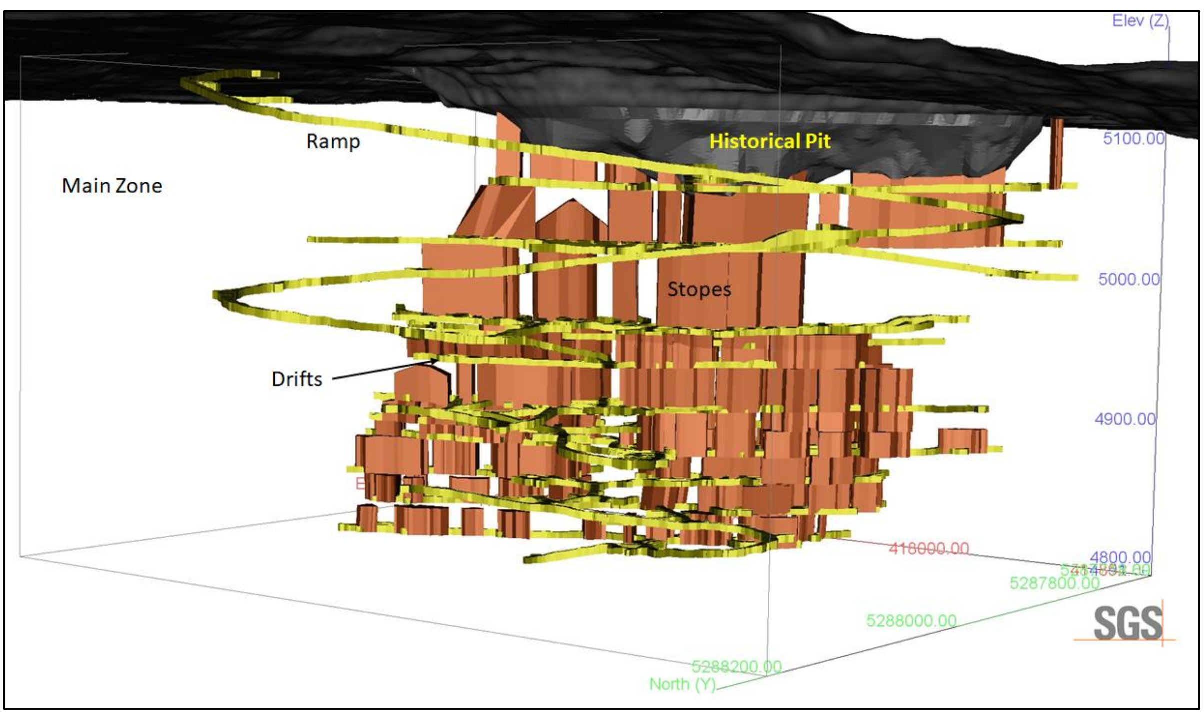


Figure 14-8 Isometric View: HB Deposit Void Solid Models



14.5 Bulk Density

SGS was provided with a database of Specific Gravity ("SG") measurements totaling 3,651 values from 61 drill holes completed in 2021 and 2022. Big Ridge staff systematically collected core density values using a standardized water immersion method protocol to determine specific gravity relative to water. Measurements were determined during the logging and core processing sequence. SG data used for previous MREs was not available for the current MRE. However, as recent data is limited, average SG values used for previous MREs (Cullen et al., 2021) was considered when evaluating SG values used for the current MREs for the Main and 240 Zones.

The 3,651 SG measurements ranged from 2.40 to 3.82 and averaged 2.72. SG data was then subdivided by mineralization domain. The SG data used for the current MREs is presented in Table 14-2. Based on the limited data, Armitage is of the opinion that the use of a fixed SG value for each domain is valid at this stage of the project. Armitage recommends that additional data be collected as drilling proceeds and SG values by domain should be re-evaluated. Big Ridge should consider collecting SG data from historical drill core that is currently stored at site.

As for previous MREs (Cullen et al., 2121) an SG assignment of 1.7 is used for filled stopes, as well as for drifts, ramps and other underground development space within the model.

Table 14-2 Specific Gravity Data Used for the HB Deposit MRE

Domain	Specific Gravity (SG)				
	# of Samples	Min	Max	Avg	***Used for Resource**
All	3,651	2.40	3.82	2.72	
Main Zone	119	2.48	3.68	2.69	**2.70**
240 Zone	45	2.61	3.39	2.83	**2.80**
Waste	2,659	2.40	3.82	2.74	**2.74**
Chetwynd Granite Dyke	39	2.41	2.96	2.71	**2.66**
Stopes/Voids					**1.70**

**Considers current data and previous studies*

14.6 Compositing

The assay sample database available for the revised resource modelling totalled 68,342 samples representing 78,100 m of drilling. Of this, a total of 22,984 assays occur within the HB deposit mineral domains. A statistical analysis of the assay data from within the mineralized domains is presented in Table 14-3. Average length of the gold assay sample intervals is 1.11 m for both the 240 Zone and Main Zone. Of the total assay population approximately 87% are 1.50 m or less. To minimize the dilution and over smoothing due to compositing, a composite length of 1.50 m was chosen as an appropriate composite length for the current MRE.

Table 14-3 Statistical Analysis of the Drill Assay Data from Within the HB Deposit Mineral Domains

Domain	Main Zone		240 Zone	
Variable	Au g/t	Cu ppm	Au g/t	Cu ppm
Total # Assay Samples	22,984	12,605	146	110
Average Sample Length (m)	1.11	1.00	1.11	1.11
Minimum Grade	0.00	0.11	0.10	0.00
Maximum Grade	204	79,800	18.7	10,000
Mean	2.84	901	3.11	930
Standard Deviation	4.71	2,351	2.72	1,595
Coefficient of variation	1.66	2.61	0.87	1.72
97.5 Percentile	13.8	7,355	9.99	5,605

Composites were generated starting from the collar of each hole. Un-assayed intervals were given a value of 0.0001 for Au and Cu. Composites were then constrained to the individual mineral domains. The constrained composites were extracted to point files for statistical analysis and capping studies. The constrained composites were grouped based on the mineral domain (rock code) of the constraining wireframe model.

A statistical analysis of the composite data from within the mineralized domains, by domain, is presented in (Table 14-4). These values were used to interpolate grade into resource blocks.

Table 14-4 Statistical Analysis of the 1.5 m composite Data from Within the HB Deposit Mineral Domains

Domain	Main Zone		240 Zone	
Variable	Au g/t	Cu ppm	Au g/t	Cu ppm
Total # Composite Samples	16,985	8,435	108	108
Minimum Grade	0.00	0.60	0.27	0.00
Maximum Grade	111	48,533	13.3	7,160
Mean	2.79	891	2.96	770
Standard Deviation	4.01	2,062	2.25	1,283
Coefficient of variation	1.44	2.31	0.76	1.66
97.5 Percentile	12.8	6,507	9.58	4,728

14.7 Grade Capping

A statistical analysis of the composite database within the HB deposit 3D wireframe models (the "resource" population) was conducted to investigate the presence of high grade outliers which can have a disproportionately large influence on the average grade of a mineral deposit. High grade outliers in the composite data were investigated using statistical data (Table 14-4), histogram plots, and cumulative probability plots of the 1.5 m composite data. The statistical analysis was conducted by domain and was completed using GEMS.

After review, it is the Author's opinion that minimal capping of high grade composites to limit their influence during the grade estimation is necessary for Au in the Main Zone and Cu in the 240 Zone. A summary of grade capping values within the mineralized domains, by domain, is presented in Table 14-5. The capped composites are used for grade interpolation into the HB deposit block models.

Table 14-5 Composite Capping Summary of the HB Deposit Mineral Domains

Domain	Total # of Composites	Attribute	Capping Value	# Capped	Mean of Raw Composites	Mean of Capped Composites	CoV of Raw Composites	CoV of Capped Composites
Main Zone	25,262	Au g/t	50	9	2.79	2.77	1.44	1.36
		Cu ppm	No cap	0	891	891	2.31	2.31
240 Zone	10,452	Au g/t	No cap	0	2.96	2.96	0.76	0.76
		Cu ppm	3,500	6	770	689	1.66	1.44

14.8 Block Model Parameters

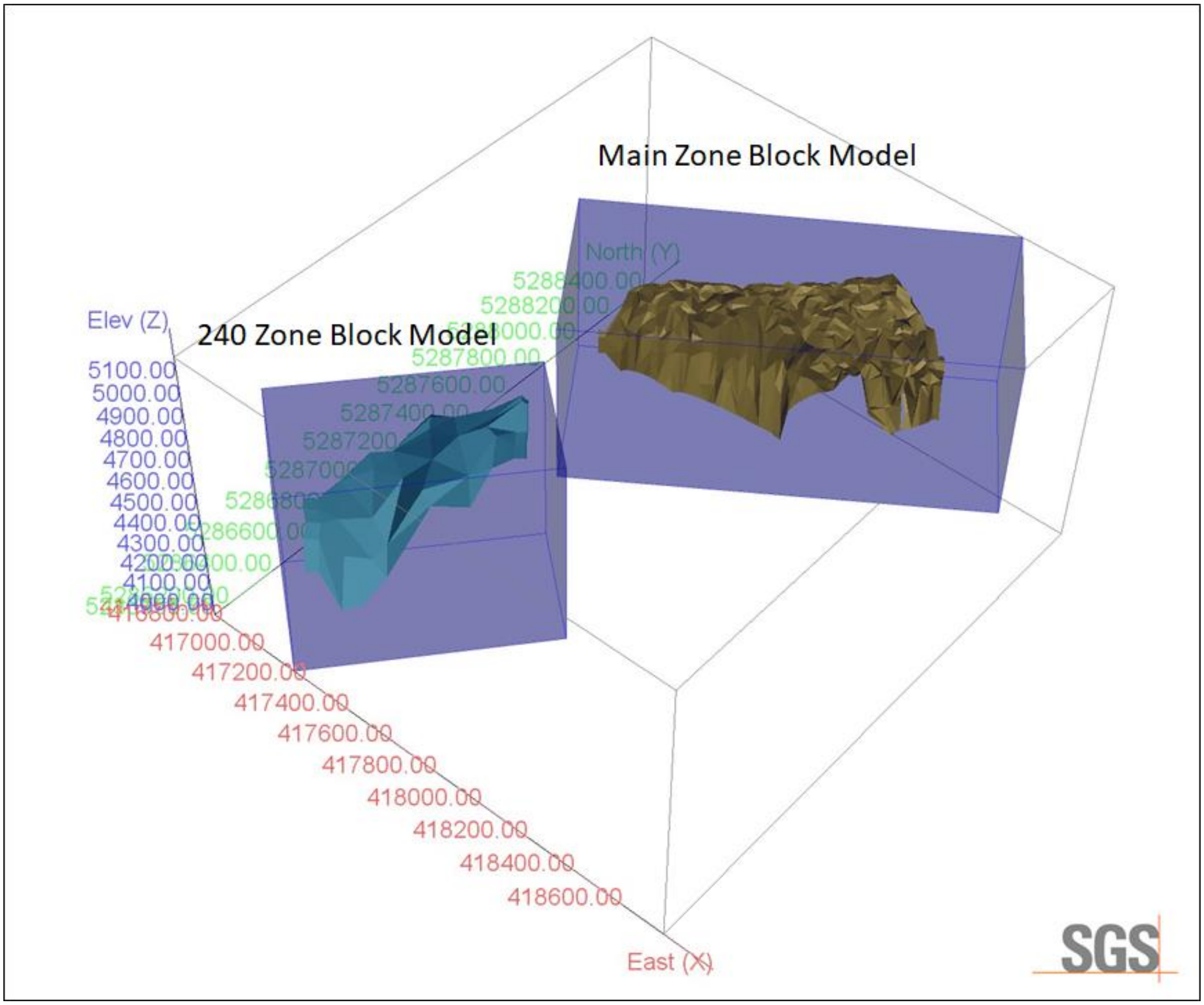
The HB deposit wireframe grade control models are used to constrain composite values chosen for interpolation, and the mineral blocks reported in the estimate of the mineral resource. Block models (Table 14-6; Figure 14-9) within NAD83 / UTM Zone 21 space were placed over the wireframe models with only that portion of each block inside the wireframe models recorded (as a percentage of the block) as part of the MREs (% Block Model). Block sizes were selected based on borehole spacing, composite assay length, the geometry of the mineralized structures, and the selected starting mining method (open pit and underground). At the scale of the Deposits this provides a reasonable block size for discerning grade distribution, while still being large enough not to mislead when looking at higher cut-off grade distribution within the models. The models were intersected with a LiDAR topographic surface model to exclude blocks, or portions of blocks, that extend above the bedrock surface.

Table 14-6 HB Deposit Block Model Geometry

Model Name	X (East; Columns)	Y (North; Rows)	Z (Level)
Main Zone			
*Origin (NAD83 UTM Zone 21)	417538.678	5287014.042	5190
Extent	300	130	135
Block Size	5	5	5
Rotation (counter-clockwise)	35°		
240 Zone			
*Origin (NAD83 UTM Zone 21)	417139.799	5286131.874	4825
Extent	185	100	170
Block Size	5	5	5
Rotation (counter-clockwise)	50°		

* Origin represents block model upper SW corner

Figure 14-9 Isometric View Looking Northwest: HB Deposit Mineral Resource Block Models and Mineralization Domains



14.9 Grade Interpolation

Gold and copper grades were estimated for each mineralization domain in the HB deposit. Blocks within each mineralized domain were interpolated using composites assigned to that domain. To generate grade within the blocks, the inverse distance squared (ID^2) interpolation method was used for all domains.

For all domains, the search ellipse used to interpolate grade into the resource blocks was interpreted based on orientation and size of the mineralized domains. The search ellipse axes are generally oriented to reflect the observed preferential long axis (geological trend) of the domain and the observed trend of the mineralization down dip/down plunge (Table 14-7) (Figure 14-10 and Figure 14-11).

Three passes were used to interpolate grade into all of the blocks in the grade shells (Table 14-7). For Pass 1 the search ellipse size for all mineralized domains was set at 35 x 35 x 7.5 in the X, Y, Z direction; for Pass 2 the search ellipse size for each domain was set at 65 x 65 x 15; for Pass 3 the search ellipse size was set at 120 x 120 x 40. Blocks were classified as Indicated if they were populated with grade during Pass 1 and during Pass 2 of the interpolation procedure. The Pass 3 search ellipse size was set to assure all remaining blocks within the wireframe (within the extents of the search ellipse) were assigned a grade. These blocks were classified as Inferred.

Grades for gold were interpolated into blocks using a minimum of 7 and maximum of 12 composites to generate block grades during Pass 1 (maximum of 3 sample composites per drill hole), 5 and 12 for Pass 2 (maximum of 3 sample composites per drill hole), and a minimum of 3 and maximum of 12 composites to generate block grades during pass 3 (Table 14-7).

Minor adjustments were made for the copper interpolating procedure. A maximum of 10 composites were used for all passes and there was no maximum number of samples (minimum drill holes) used for pass 3. Due to the limited data for copper, all blocks were classified as Inferred.

Table 14-7 Grade Interpolation Parameters by Domain for Gold

Parameter	Main Zone			240 Zone		
	Pass 1	Pass 2	Pass 3	Pass 1	Pass 2	Pass 3
	Indicated	Indicated	Inferred	Indicated	Indicated	Inferred
Calculation Method	Inverse Distance squared			Inverse Distance squared		
Search Type	Ellipsoid			Ellipsoid		
Principle Azimuth	140°			200°		
Principle Dip	-75°			-32°		
Intermediate Azimuth	50°			80°		
Anisotropy X range	35	65	120	35	65	120
Anisotropy Y range	35	65	120	35	65	120
Anisotropy Z range	7.5	15	40	7.5	15	40
Min. Samples	7	5	3	7	5	3
Max. Samples	12	12	12	12	12	12
Min. Drill Holes	3	2	2	3	2	2

Figure 14-10 Isometric View Looking Northwest (upper) and Northeast (lower): Main Zone Block Model and Search Ellipse

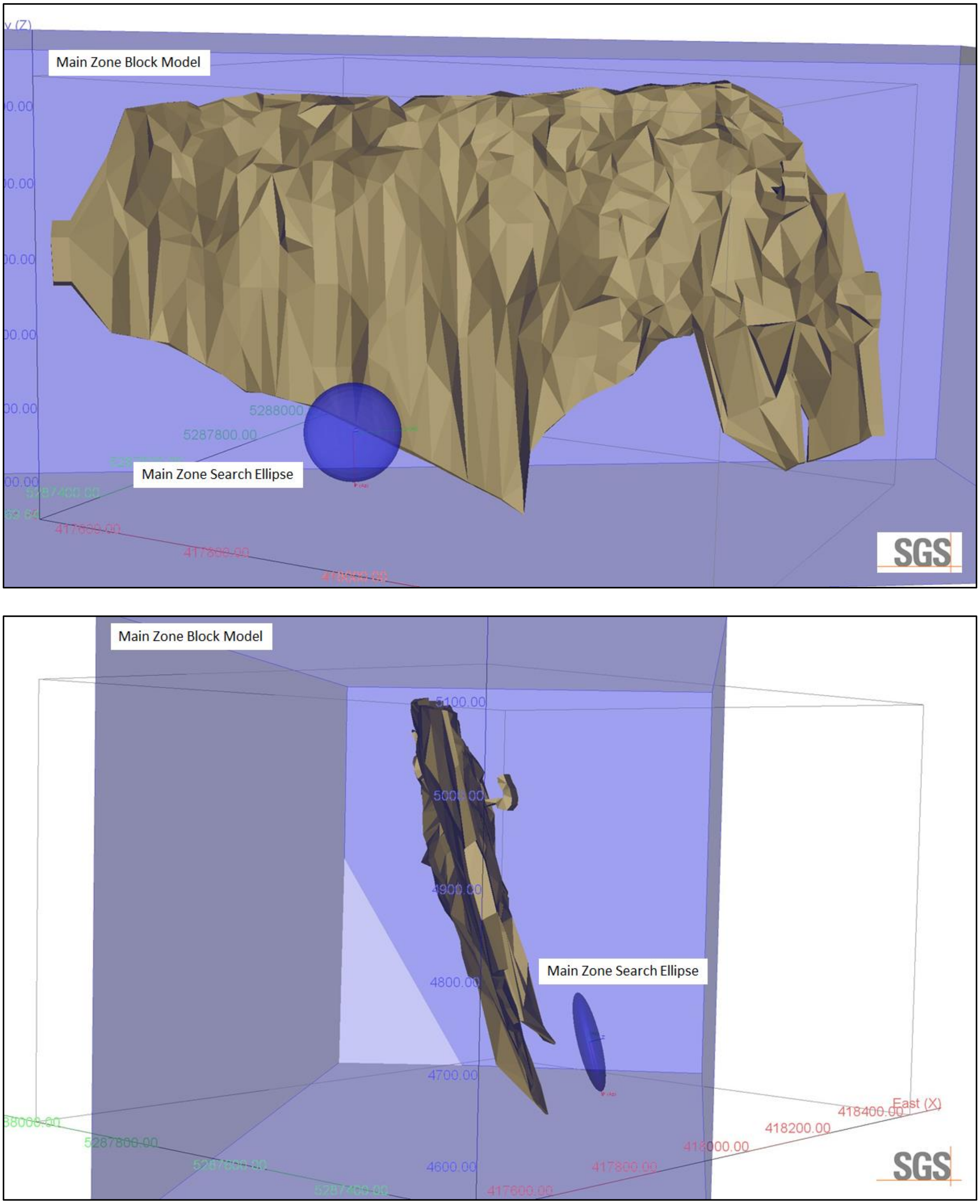
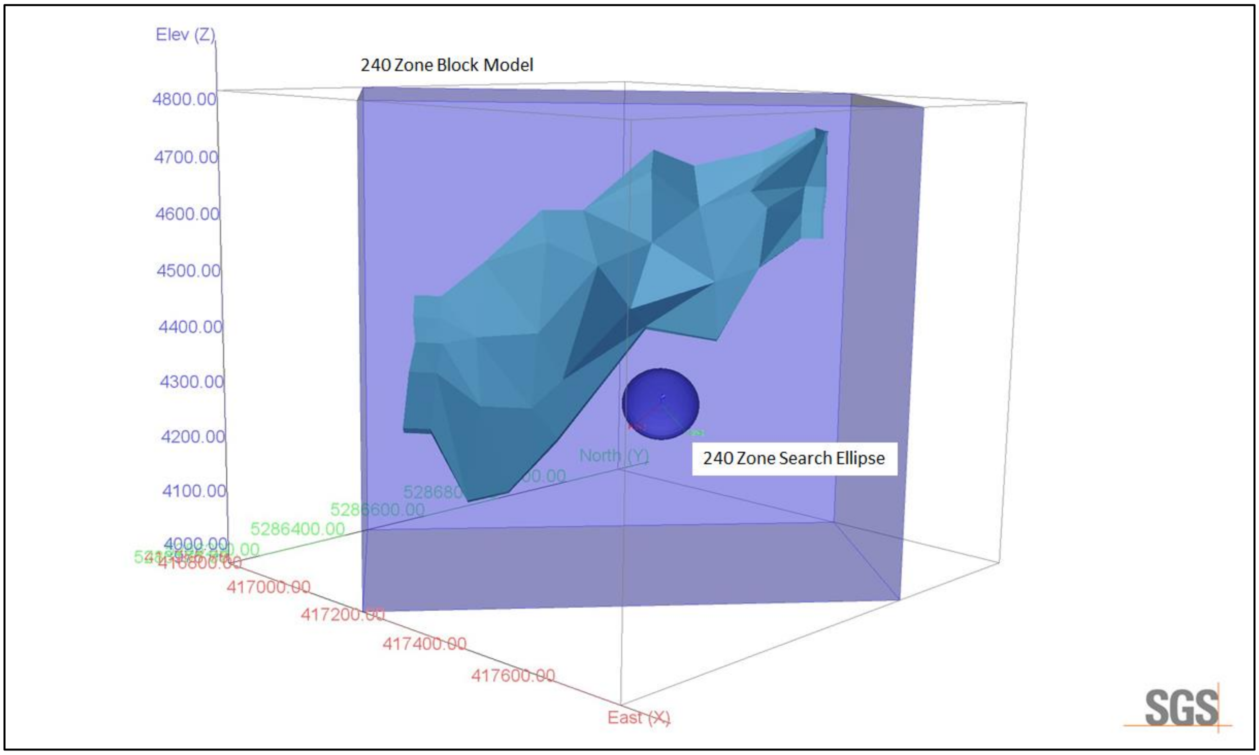
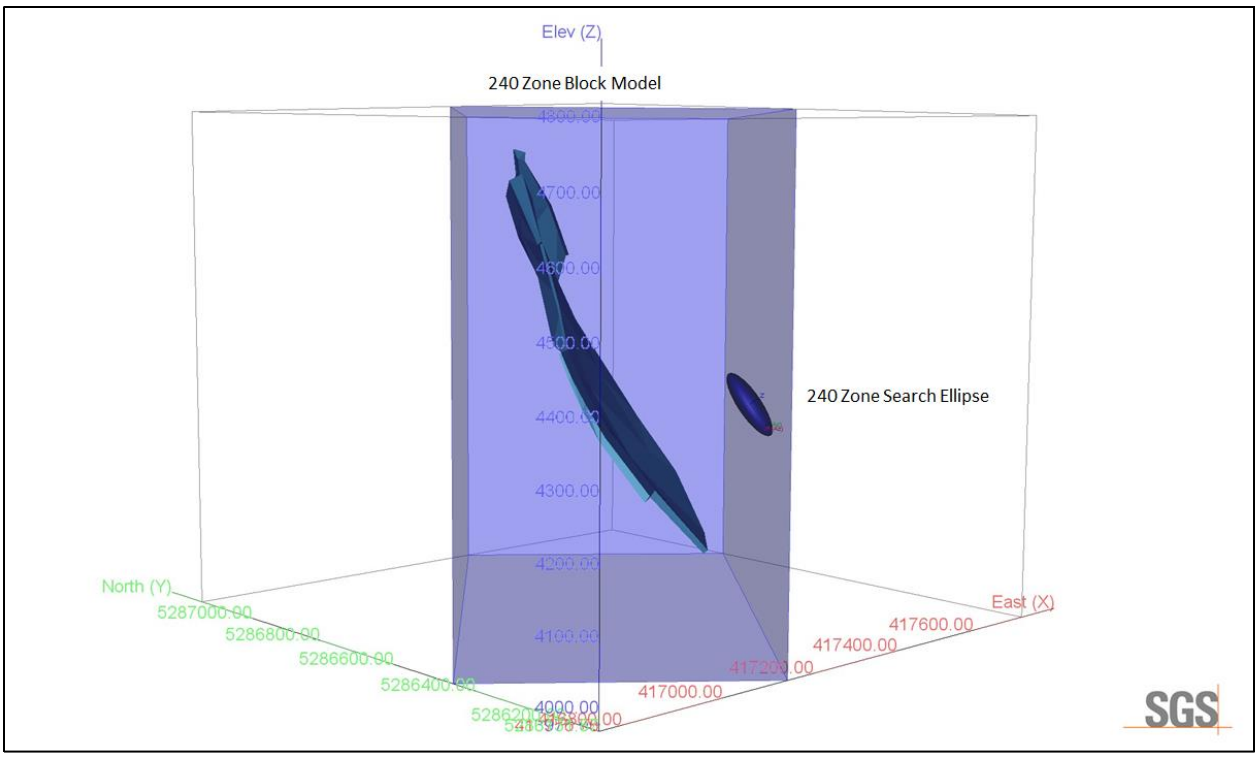


Figure 14-11 Isometric View Looking Northwest (upper) and Northeast (lower): 240 Zone Block Model and Search Ellipse





14.10 Mineral Resource Classification Parameters

The MREs presented in this technical report generally respect industry standard practices as recently established by the CIM in the Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (November 29, 2019). The MREs are disclosed in compliance with all current disclosure requirements for mineral resources set out in the NI 43-101 Standards of Disclosure for Mineral Projects (2016) and Form 43-101F1. The classification of the current Mineral Resource Estimate into Indicated and Inferred is consistent with current 2014 CIM Definition Standards - For Mineral Resources and Mineral Reserves, including the critical requirement that all mineral resources “have reasonable prospects for eventual economic extraction”.

The current gold Mineral Resource for the HB deposit is sub-divided, in order of increasing geological confidence, into Indicated and Inferred categories; copper is reported into the Inferred category only. An Inferred Mineral Resource has a lower level of confidence than that applied to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource. There are no Measured Mineral Resources reported.

A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth’s crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction.

Interpretation of the word ‘eventual’ in this context may vary depending on the commodity or mineral involved. For example, for some coal, iron, potash deposits and other bulk minerals or commodities, it may be reasonable to envisage ‘eventual economic extraction’ as covering time periods in excess of 50 years. However, for many gold or base metal deposits, application of the concept would normally be restricted to perhaps 10 to 15 years, and frequently to much shorter periods of time.

The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

Indicated Mineral Resource

An ‘Indicated Mineral Resource’ is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit.

Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation.

An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource Estimate is of sufficient quality to support a Preliminary Feasibility Study which can serve as the basis for major development decisions

Inferred Mineral Resource

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.

An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

An Inferred Mineral Resource is based on limited information and sampling gathered through appropriate sampling techniques from locations such as outcrops, trenches, pits, workings and drill holes. Inferred Mineral Resources must not be included in the economic analysis, production schedules, or estimated mine life in publicly disclosed Pre-Feasibility or Feasibility Studies, or in the Life of Mine plans and cash flow models of developed mines. Inferred Mineral Resources can only be used in economic studies as provided under NI 43-101.

There may be circumstances, where appropriate sampling, testing, and other measurements are sufficient to demonstrate data integrity, geological and grade/quality continuity of a Measured or Indicated Mineral Resource, however, quality assurance and quality control, or other information may not meet all industry norms for the disclosure of an Indicated or Measured Mineral Resource. Under these circumstances, it may be reasonable for the Qualified Person to report an Inferred Mineral Resource if the Qualified Person has taken steps to verify the information meets the requirements of an Inferred Mineral Resource.

14.11 Reasonable Prospects of Eventual Economic Extraction

The general requirement that all Mineral Resources have "reasonable prospects for economic extraction" implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade taking into account extraction scenarios and processing recoveries. In order to meet this requirement, Armitage considers that the HB deposit mineralization is amenable for open pit and underground extraction.

In order to determine the quantities of material offering "reasonable prospects for economic extraction" by an open pit, Whittle™ pit optimization software 4.7.1 and reasonable mining assumptions to evaluate the proportions of the block model (Indicated and Inferred blocks) that could be "reasonably expected" to be mined from an open pit were used. The pit optimization was completed by SGS. The pit optimization parameters used are summarized in Table 14-8. A Whittle pit shell at a revenue factor of 1.0 was selected as the ultimate pit shell for the purposes of this MRE.

The reader is cautioned that the results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade. A selected base case cut-off grade of 0.40 g/t Au is used to determine the in-pit MRE for the HB deposit.

In order to determine the quantities of material offering "reasonable prospects for economic extraction" by underground mining methods, reasonable mining assumptions to evaluate the proportions of the block model (Indicated and Inferred blocks) that could be "reasonably expected" to be mined from underground are used. The underground parameters used, are summarized in Table 14-8. Based on these parameters, underground Mineral Resources are reported at a base case cut-off grade of 2.0 g/t Au. For the Main Zone, underground Mineral Resources are estimated from the bottom of the pit considered in this MRE. The underground Mineral Resource grade blocks for the Main Zone and 240 Zone are quantified above the base case cut-off grade of 2.0 g/t Au, below the constraining pit shell (Main Zone) and within the 3D constraining mineralized wireframes (the constraining volumes).

14.12 Mineral Resource Statement

The current MRE for the HB deposit is presented in Table 14-9 and includes in-pit and underground (below-pit) Mineral Resources (Figure 14-12).

Mineral Resource Estimate Highlights:

- 1.21 million ounces grading 2.32 g/t Au in the Indicated category and 231,000 ounces grading 3.24 g/t Au in Inferred categories, including;
    - an open pit MRE of 1.0 million ounces grading 2.14 g/t Au in Indicated category.

Table 14-8 Whittle™ Pit Optimization Parameters and Parameters used for In-pit and Underground Cut-off Grade Calculation

Parameter	Value	Unit
Gold Price	$1750.00	US$ per pound
In-Pit Mining Cost	$2.65	US$ per tonne mined
Underground Mining Cost	$54.00	US$ per tonne mined
Processing Cost	$11.55	US$ per tonne milled
General and Administrative	$4.00	US$ tonne of feed
Pit Slope - Oxide	55	Degrees
Gold Revovery	86	Percent (%)
Mining loss / Dilution (open pit)	2/5	Percent (%) / Percent (%)
Mining loss/Dilution (underground)	10/10	Percent (%) / Percent (%)
In-pit cut-off grade	0.40	
Underground cut-off grade	2.00	

Table 14-9 HB Deposit In-Pit and Underground Gold Mineral Resource Estimate, January 17, 2023

IN PIT				
Hope Brook	**Cut-off Grade (g/t Au)**	**Tonnes**	**Grade (Au g/t)**	**Contained Gold Ounces**
INDICATED				
Main Zone	0.4	14,584,000	2.14	1,002,000
UNDERGROUND				
Hope Brook	**Cut-off Grade (g/t Au)**	**Tonnes**	**Grade (Au g/t)**	**Contained Gold Ounces**
INDICATED				
240 Zone	2.0	544,000	4.31	75,000
Main Zone	2.0	1,062,000	3.78	129,000
INFERRED				
240 Zone	2.0	1,994,000	3.28	210,000
Main Zone	2.0	221,000	2.96	21,000

IN PIT AND UNDERGROUND				
Hope Brook	**Cut-off Grade (g/t Au)**	**Tonnes**	**Grade (Au g/t)**	**Contained Gold Ounces**
INDICATED				
240 Zone	2.0	544,000	4.31	75,000
Main Zone	0.4 and 2.0	15,646,000	2.25	1,131,000
INFERRED				
240 Zone	2.0	1,994,000	3.28	210,000
Main Zone	2.0	221,000	2.96	21,000

Notes

(1) *The classification of the current Mineral Resource Estimate into Indicated and Inferred is consistent with current 2014 CIM Definition Standards - For Mineral Resources and Mineral Reserves*

(2) *All figures are rounded to reflect the relative accuracy of the estimate.*

(3) *All Resources are presented undiluted and in situ, constrained by continuous 3D wireframe models, and are considered to have reasonable prospects for eventual economic extraction.*

(4) *The MRE is exclusive of historically mined material.*

(5) *Mineral resources which are not mineral reserves do not have demonstrated economic viability. An Inferred Mineral Resource has a lower level of confidence than that applying to a Measured and Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.*

(6) *The update MRE is based on data for 763 surface and underground drill holes representing 164,865 m of drilling, including data for 61 surface drill holes for 19,090 m completed by Big Ridge in 2021 and 2022.*

(7) *The mineral resource estimate is based on 2 three-dimensional ("3D") resource models for the Main Zone and 240 Zones.*

(8) *Average rock density values were assigned per zone.*

(9) It is envisioned that parts of the Main Zone may be mined using open pit mining methods. Open pit mineral resources are reported at a base case cut-off grade of 0.4 g/t Au within a conceptual pit shell.

(10) It is envisioned that parts of the Main Zone as well as the 240 Zone may be mined using underground mining methods. A selected base case cut-off grade of 2.0 g/t Au is used to determine the underground mineral resource for the Main Zone and 240 Zone. The underground Mineral Resource grade blocks were quantified above the base case cut-off grade, below the constraining pit shell and within the constraining mineralized wireframes.

(11) Base case cut-off grades consider a metal price of US$1750.00/oz Au and considers a metal recovery of 86 % for Au.

(12) The pit optimization and in-pit base case cut-off grade of 0.4 g/t Au considers a mining cost of US$2.65/t rock and processing, treatment and refining, transportation and G&A cost of US$15.55/t mineralized material, and an overall pit slope of 55°. The underground base case cut-off grade of 2.0 g/t Au considers a mining cost of US$54.00/t rock and processing, treatment and refining, transportation and G&A cost of US$15.55/t mineralized material. The cut-off grades should be re-evaluated in light of future prevailing market conditions (metal prices, exchange rates, mining costs etc.).

(13) The results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade.

(14) The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. There is no certainty that all or any part of the Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. There is no other relevant data or information available that is necessary to make the technical report understandable and not misleading.

(15) The Author is not aware of any known mining, processing, metallurgical, environmental, infrastructure, economic, permitting, legal, title, taxation, socio-political, or marketing issues, or any other relevant factors not reported in this technical report, that could materially affect the updated MRE.

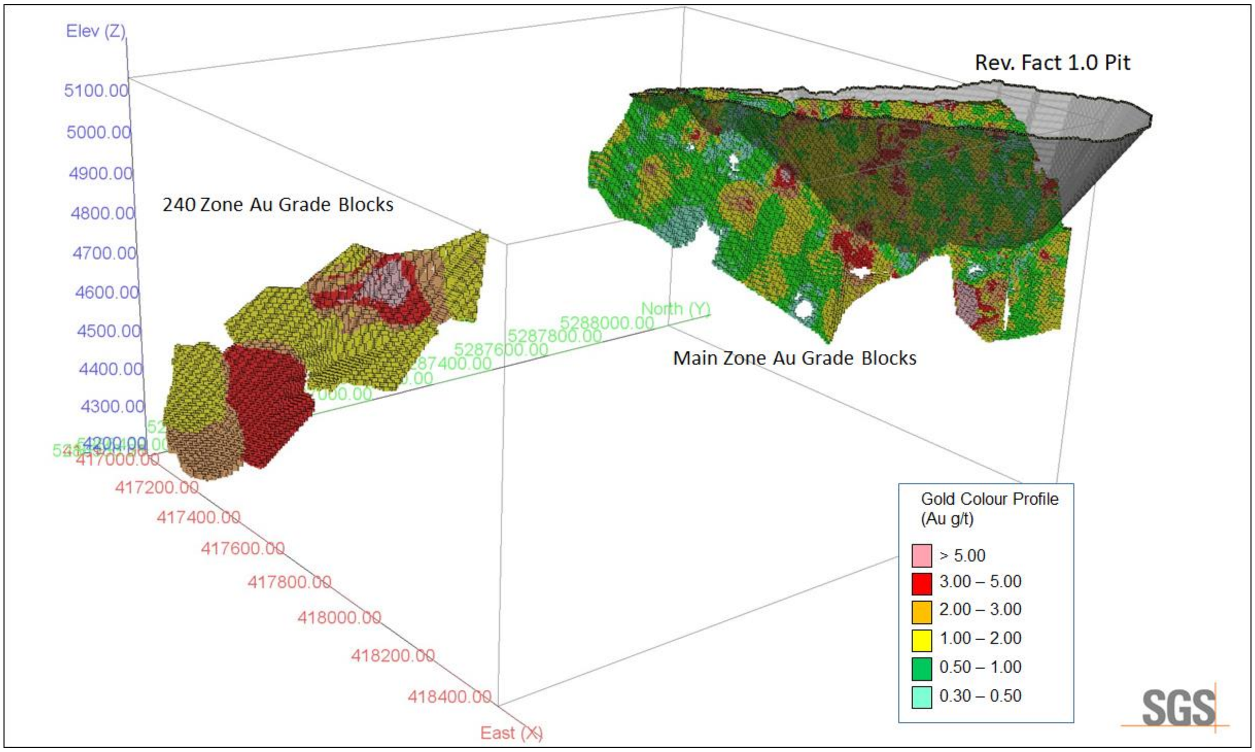
14.12.1 **Copper MRE**

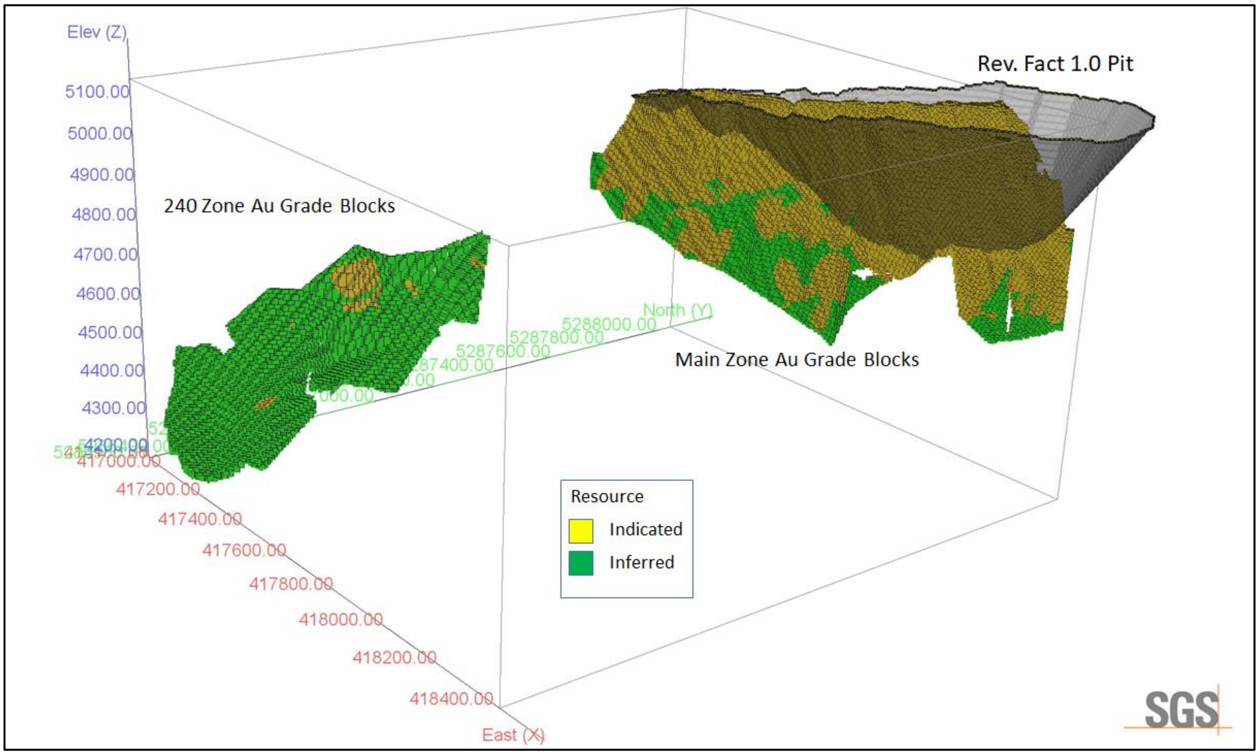
As copper values were only available for surface drill holes and not the underground drill holes, the copper resource in this resource estimate is categorized as Inferred Resources (Table 14-10). Copper estimation is restricted to the copper mineralization contained in gold resource blocks and does not represent a separately modelled mineral domain.

Table 14-10 HB Deposit In-Pit and Underground Copper Mineral Resource Estimate, January 17, 2023

Category	**In-pit @ 0.40 g/t Au cut-off**		
	Tonnes	Cu (%)	Cu (lbs)
Inferred			
Main Zone	14,584,000	**0.12**	**39,328,000**
Category	**Below-pit @ 2.0 g/t Au cut-off**		
	Tonnes	Cu (%)	Cu (lbs)
Inferred			
240 Zone	2,538,000	**0.08**	**4,479,000**
Main Zone	1,283,000	**0.12**	**3,195,000**
Category	**Total**		
	Tonnes	Cu (%)	Cu (lbs)
Inferred			
240 Zone	2,538,000	**0.08**	**4,479,000**
Main Zone	15,886,000	**0.12**	**42,523,000**

Figure 14-12 Isometric View Looking Northwest: HB Deposit Mineral Resource Blocks and Whittle Pit: Blocks by Gold Grade (upper) and by Class (lower)





14.13 Model Validation and Sensitivity Analysis

The total volume of the HB deposit resource blocks in the Mineral Resource model (including uncategorized material), at a 0.0% Au g/t cut-off grade value compared well to the total volume of the 3D models (Table 14-11).

Visual checks of block grades of gold and copper against the composite data on vertical section showed good correlation between block grades and drill intersections.

A comparison of the average composite grades with the average grades of all the blocks in the block model at a 0.0% Au g/t cut-off grade was completed and is presented in Table 14-12. The block model average grades shows some variability with the average composite grades.

For comparison purposes, additional gold grade models were generated using a varied inverse distance weighting (ID^3) and a nearest neighbour (NN) interpolation method. The results of these models are compared to the chosen models at various cut-off grades in a series of grade/tonnage graphs shown in Figure 14-13. In general, the ID^2 and ID^3 models show similar results and both are more conservative and smoother than the NN model. For models well-constrained by wireframes and well-sampled (close spacing of data), ID^2 should yield very similar results to other interpolation methods such as ID^3 or Ordinary Kriging.

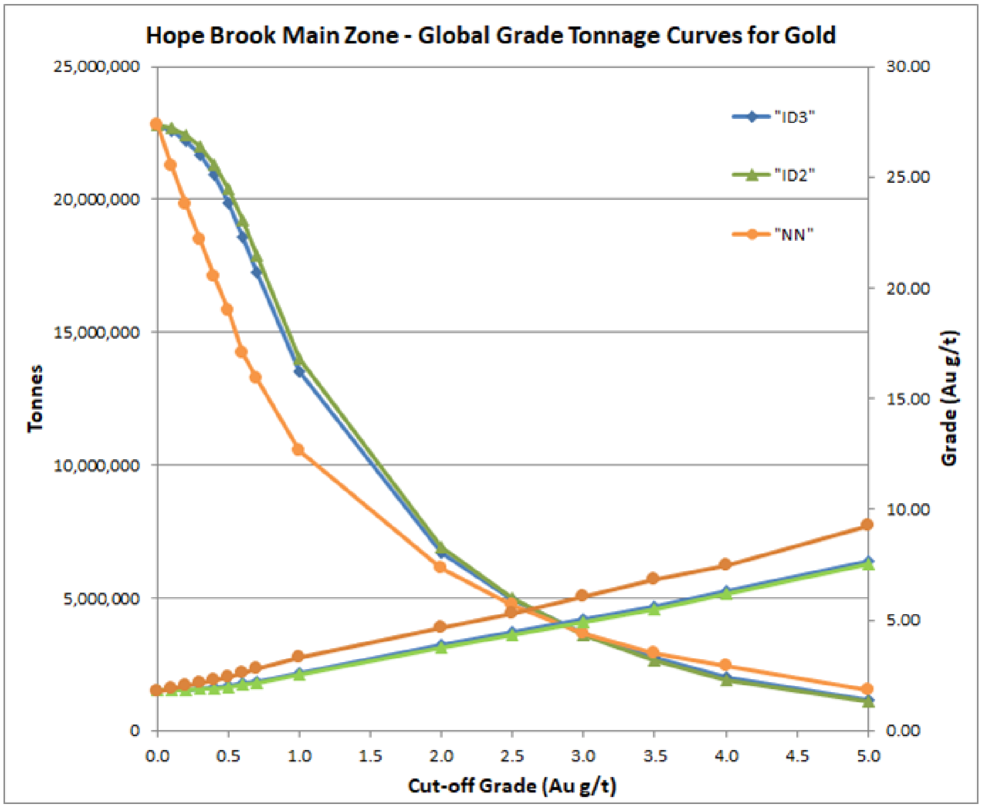
Table 14-11 Comparison of Block Model Volume with the Total Volume of the Deposit 3D Models (before removing mined out material)

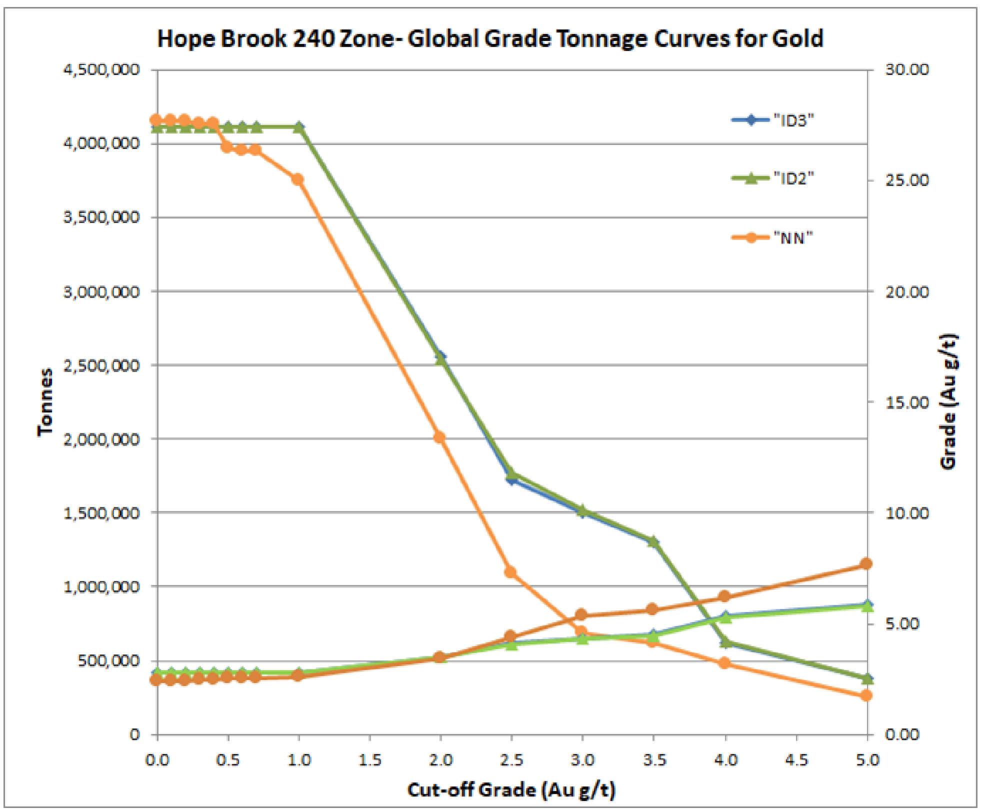
Deposit	Total Domain Volume	Block Model Volume	Difference %
Main Zone	12,129,424 m^3	12,129,158 m^3	0.00 %
240 Zone	1,584,354 m^3	1,584,570 m^3	0.01 %

Table 14-12 Comparison of Average Composite Grades (based on assayed data) with Block Model Grades

Domain	Variable	Au g/t	Cu ppm
Main Zone	Composites Capped	2.77	891
	Blocks	2.11	1,022
240 Zone	Composites Capped	2.96	689
	Blocks	2.79	857

Figure 14-13 Comparison of ID³, ID² & NN Models for the HB Deposit In-pit and Underground Mineral Resource





14.13.1 Sensitivity to Cut-off Grade

The HB deposit Mineral Resource has been estimated at a range of cut-off grades presented in Table 14-13 to demonstrate the sensitivity of the resource to cut-off grades. The current Mineral Resources are reported at a base-case cut-off grade of 0.40 g/t Au within a conceptual pit shell, and below-pit Mineral Resources are reported at a base case cut-off grade of 2.00 g/t Au.

Table 14-13 HB Deposit Open Pit and Underground Mineral Resource Estimate at Various Au Cut-off Grades, January 17, 2023

IN PIT				
Hope Brook	**Cut-off Grade (g/t Au)**	**Tonnes**	**Grade (Au g/t)**	**Contained Gold Ounces**
INDICATED				
Main Zone	0.2	15,046,000	2.08	1,007,000
	0.3	14,870,000	2.10	1,006,000
	0.4	14,584,000	2.14	1,002,000
	0.5	14,137,000	2.19	996,000
	0.6	13,542,000	2.26	985,000
	0.7	12,846,000	2.35	971,000

UNDERGROUND				
Hope Brook	**Cut-off Grade (g/t Au)**	**Tonnes**	**Grade (Au g/t)**	**Contained Gold Ounces**
INDICATED				
240 and Main Zone	1.0	3,432,000	2.59	286,000
	2.0	1,606,000	3.95	204,000
	2.5	1,201,000	4.53	175,000
	3.0	925,000	5.11	152,000
	3.5	744,000	5.52	132,000
INFERRED				
240 and Main Zone	1.0	4,052,000	2.49	324,000
	2.0	2,215,000	3.24	231,000
	2.5	1,433,000	3.84	177,000
	3.0	1,202,000	4.04	156,000
	3.5	1,002,000	4.19	135,000

(1) Values in these tables reported above and below the base-case cut-off grades of 0.4 g/t Au within a conceptual pit shell and 2.0 g/t Au for underground (below-pit) Mineral Resources should not be misconstrued with a Mineral Resource Statement. The values are only presented to show the sensitivity of the block model estimates to the selection of the base case cut-off grade.

(2) All values are rounded to reflect the relative accuracy of the estimate and numbers may not add due to rounding.

14.14 Comparison of Current MRE to the 2012 Historical MRE

The current gold MRE is compared to the 2021 MRE (Cullen et al., 2021) in Table 14-3. The main difference in the resource estimates is the result of the following:

- For the 2021 MRE, it was considered that the mineralization in the HB deposit was amenable to economic development using underground mining methods, whereas for the current MRE, it is considered that that the HB deposit mineralization is amenable to open pit and underground extraction.
- Underground resources for the 2021 MRE were reported at a base case cut-off 3.0 g/t Au using a gold price of $1,200.00 per ounce, whereas the current underground MRE is reported at a base case cut-off grade of 2.0 g/t Au using a gold price of $1,750.00 per ounce.
- Copper was not included in the 2021 MRE.

Table 14-14 Comparison of (A) the Current gold MRE and (B) the 2021 gold MRE (Cullen et al., 2021)

(A)

Gold Grade Cut-off (g/t)	Resource Category	Tonnes	Gold Grade (g/t)	Au Ounces
0.4 g/t and 2.0 g/t	Indicated	16,190,000	2.32	1,206,000
	Inferred	2,215,000	3.24	231,000

(B)

Gold Grade Cut-off (g/t)	Resource Category	Tonnes	Gold Grade (g/t)	Au Ounces
3.0 g/t	Indicated	5,500,000	4.77	844,000
	Inferred	836,000	4.11	110,000

14.15 Disclosure

All relevant data and information regarding the Project are included in other sections of this Technical Report. There is no other relevant data or information available that is necessary to make the technical report understandable and not misleading.

The Author is not aware of any known mining, processing, metallurgical, environmental, infrastructure, economic, permitting, legal, title, taxation, socio-political, or marketing issues, or any other relevant factors not reported in this technical report, that could materially affect the current Mineral Resource Estimate.

15 MINERAL RESERVE ESTIMATE

There are no Mineral Reserve Estimates for the Property.

16 MINING METHODS

This section does not apply to the Technical Report.

17 RECOVERY METHODS

This section does not apply to the Technical Report.

18 PROJECT INFRASTRUCTURE

This section does not apply to the Technical Report.

19 MARKET STUDIES AND CONTRACTS

This section does not apply to the Technical Report.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

This section does not apply to the Technical Report.

21 CAPITAL AND OPERATING COSTS

This section does not apply to the Technical Report.

22 ECONOMIC ANALYSIS

This section does not apply to the Technical Report.

23 ADJACENT PROPERTIES

There is no information on properties adjacent to the Property necessary to make the Technical Report understandable and not misleading

24 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data or information available that is necessary to make the Technical Report understandable and not misleading. To the Authors' knowledge, there are no significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information or MRE.

25 INTERPRETATION AND CONCLUSIONS

SGS Geological Services Inc. was contracted by Big Ridge Gold Corp., to complete a Mineral Resource Estimate update for the Hope Brook Gold Project including the HB deposit, and to prepare a National Instrument 43-101 Technical Report written in support of the MRE. The Property is an advanced stage exploration project located on the southwest coast of the island of Newfoundland, in the Province of Newfoundland and Labrador, Canada.

On April 6, 2021, Big Ridge entered into an earn-in agreement with First Mining Gold Corp. ("First Mining"), pursuant to which the Company may earn an interest of up to 80% in the HBGP, which includes the past producing HB deposit. This transaction closed on June 8, 2021. As of the effective date of this report, the Company has earned a 51% interest in the HBGP.

Big Ridge is focused on the acquisition, exploration and development of precious-metals properties located in Canada. The Company was incorporated under the provisions of the Business Corporations Act (British Columbia) on June 6, 1987. The Company is listed on the TSX Venture Exchange as a Tier 2 mining issuer under the trading symbol BRAU and is a reporting issuer in the provinces of British Columbia and Alberta. Big Ridge's head office is located at 18 King St. East, Suite 1400 Toronto, ON, Canada, M5C 1C4 and its registered and records office is located at Suite 1500, 1055 West Georgia Street, Vancouver, British Columbia V6E 4N7.

The current report is authored by Allan Armitage, Ph.D., P. Geo., and Ben Eggers, MAIG, P.Geo. of SGS. The MRE presented in this report was estimated by Armitage. Armitage and Eggers are independent Qualified Persons as defined by NI 43-101 and are responsible for all sections of this report.

The current Technical Report will be used by Big Ridge in fulfillment of their continuing disclosure requirements under Canadian securities laws, including National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101").

25.1 Diamond Drilling

A total of 316 BP surface drill holes and 138 underground drill holes were completed between 1983 and 1986. Royal Oak completed 9 surface holes and 120 underground holes between 1992 and 1997. A total of 152 open pit (OP) series short drill holes completed from the open pit floor by Royal Oak, for local grade assessment, were also completed between 1992 and 1997. The OP grade control holes have not been used for the current or previous resource estimates.

Since acquiring the property, Big Ridge has completed 61 surface drill holes for 19,090 m from October 2021 to August 2022.

2021 – 2022 Drilling Highlights:

- Drill hole HB-21-152 intersected 5.84 g/t Au over 14.8 m **including 19.9 g/t Au over 3.4 m**
- Drill hole HB-21-142 intersected 5.58 g/t Au over 6.1 m **including 25.2 g/t Au over 0.5 m**
- Drill hole HB-21-138 intersected 1.98 g/t Au over 23.1 m **including 5.30 g/t Au over 5.89 m.**
- Drill hole HB-21-148 intersected 1.09 g/t Au over 33.0 m **including 4.52 g/t Au over 4.1 m**
- Drill hole HB-22-158 intersected 1.64 g/t Au over 20.8 m **including 5.77 g/t Au over 4.7 m**
- Drill hole HB-22-159a intersected 1.41 g/t Au over 15.1 m **including 3.25 g/t Au over 4.2 m**.
- Drill hole HB-22-167 intersected 6.43 g/t Au over 3.2 m **including 12.9 g/t Au over 1.1 m**

- Drill hole HB-22-168 intersected **5.8 g/t Au over 1.7m**.
- Drill hole HB-22-178 intersected 0.95 g/t Au over 11.7 m **including 8.86 g/t Au over 1.0 m**
- Drill hole HB-22-179 intersected 0.95 g/t Au over 32.6 m **including 2.83 g/t Au over 8.7 m**
- Drill hole HB-22-182 intersected 0.86 g/t Au over 31.3 m including **5.38 g/t Au over 1.0 m and 1.28 g/t Au over 11.8 m**.
- Drill hole HB-22-185 intersected 0.64 g/t Au over 13.3 m **including 2.37 g/t Au over 1.6 m**
- Drill hole HB-22-192 intersected 0.93 g/t Au over 17.0 m **including 1.25 g/t Au over 9.0 m and 1.54 g/t Au over 1.0 m and 4.63 g/t Au over 1.0 m**
- **Drill hole HB-22-193 intersected 17.5 g/t Au over 1.0 m**
- Drill hole HB-22-198 intersected 0.47 g/t Au over 87.0 m **including 4.40 g/t Au over 2.0 m, 1.10 g/t Au over 2.0 m and 2.50 g/t Au over 7 m.**

25.2 HB Deposit Mineral Resource Estimate

The MREs presented in this technical report generally respect industry standard practices as recently established by the CIM in the Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (November 29, 2019). The MREs are disclosed in compliance with all current disclosure requirements for mineral resources set out in the NI 43-101 Standards of Disclosure for Mineral Projects (2016) and Form 43-101F1. The classification of the current Mineral Resource Estimate into Indicated and Inferred is consistent with current 2014 CIM Definition Standards - For Mineral Resources and Mineral Reserves, including the critical requirement that all mineral resources “have reasonable prospects for eventual economic extraction”. The current gold Mineral Resource for the HB deposit is sub-divided, in order of increasing geological confidence, into Indicated and Inferred categories; copper is reported into the Inferred category only.

The general requirement that all Mineral Resources have “reasonable prospects for economic extraction” implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade taking into account extraction scenarios and processing recoveries. In order to meet this requirement, Armitage considers that the HB deposit mineralization is amenable for open pit and underground extraction.

In order to determine the quantities of material offering “reasonable prospects for economic extraction” by an open pit, Whittle™ pit optimization software 4.7.1 and reasonable mining assumptions to evaluate the proportions of the block model (Indicated and Inferred blocks) that could be “reasonably expected” to be mined from an open pit were used. The pit optimization was completed by SGS. The pit optimization parameters used are summarized in Table 25-1. A Whittle pit shell at a revenue factor of 1.0 was selected as the ultimate pit shell for the purposes of this MRE. The optimized pit has been limited to the base of the transition mineralization.

The reader is cautioned that the results from the pit optimization are used solely for the purpose of testing the “reasonable prospects for economic extraction” by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade. A selected base case cut-off grade of 0.40 g/t Au is used to determine the in-pit MRE for the HB deposit.

In order to determine the quantities of material offering "reasonable prospects for economic extraction" by underground mining methods, reasonable mining assumptions to evaluate the proportions of the block model (Indicated and Inferred blocks) that could be "reasonably expected" to be mined from underground are used. The underground parameters used, are summarized in Table 25-1. Based on these parameters, underground Mineral Resources are reported at a base case cut-off grade of 2.0 g/t Au. For the Main Zone, underground Mineral Resources are estimated from the bottom of the pit. The underground Mineral Resource grade blocks for the Main Zone and 240 Zone are quantified above the base case cut-off grade of 2.0 g/t Au, below the constraining pit shell (Main Zone) and within the 3D constraining mineralized wireframes (the constraining volumes).

The current MRE for the HB deposit is presented in Table 25-2 and includes in-pit and underground (below-pit) Mineral Resources.

Mineral Resource Estimate Highlights:

- 1.21 million ounces grading 2.32 g/t Au in the Indicated category and 231,000 ounces grading 3.24 g/t Au in Inferred categories, including;
- an open pit MRE of 1.0 million ounces grading 2.14 g/t Au in Indicated category.

Table 25-1 Whittle™ Pit Optimization Parameters and Parameters used for In-pit and Underground Cut-off Grade Calculation

Parameter	Value	Unit
Gold Price	$1750.00	US$ per pound
In-Pit Mining Cost	$2.65	US$ per tonne mined
Underground Mining Cost	$54.00	US$ per tonne mined
Processing Cost	$11.55	US$ per tonne milled
General and Administrative	$4.00	US$ tonne of feed
Pit Slope - Oxide	55	Degrees
Gold Revovery	86	Percent (%)
Mining loss / Dilution (open pit)	2/5	Percent (%) / Percent (%)
Mining loss/Dilution (underground)	10/10	Percent (%) / Percent (%)
In-pit cut-off grade	0.40	
Underground cut-off grade	2.00	

Table 25-2 HB Deposit In-Pit and Underground (below-pit) Mineral Resource Estimate, January 17, 2023

IN PIT				
Hope Brook	**Cut-off Grade (g/t Au)**	**Tonnes**	**Grade (Au g/t)**	**Contained Gold Ounces**
INDICATED				
Main Zone	0.4	14,584,000	2.14	1,002,000
UNDERGROUND				
Hope Brook	**Cut-off Grade (g/t Au)**	**Tonnes**	**Grade (Au g/t)**	**Contained Gold Ounces**
INDICATED				
240 Zone	2.0	544,000	4.31	75,000
Main Zone	2.0	1,062,000	3.78	129,000
INFERRED				
240 Zone	2.0	1,994,000	3.28	210,000
Main Zone	2.0	221,000	2.96	21,000
IN PIT AND UNDERGROUND				
Hope Brook	**Cut-off Grade (g/t Au)**	**Tonnes**	**Grade (Au g/t)**	**Contained Gold Ounces**
INDICATED				
240 Zone	2.0	544,000	4.31	75,000
Main Zone	0.4 and 2.0	15,646,000	2.25	1,131,000
INFERRED				
240 Zone	2.0	1,994,000	3.28	210,000
Main Zone	2.0	221,000	2.96	21,000

Notes

(1) *The classification of the current Mineral Resource Estimate into Indicated and Inferred is consistent with current 2014 CIM Definition Standards - For Mineral Resources and Mineral Reserves*

(2) *All figures are rounded to reflect the relative accuracy of the estimate.*

(3) *All Resources are presented undiluted and in situ, constrained by continuous 3D wireframe models, and are considered to have reasonable prospects for eventual economic extraction.*

(4) *The MRE is exclusive of historically mined material.*

(5) *Mineral resources which are not mineral reserves do not have demonstrated economic viability. An Inferred Mineral Resource has a lower level of confidence than that applying to a Measured and Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.*

(6) *The update MRE is based on data for 763 surface and underground drill holes representing 164,865 m of drilling, including data for 61 surface drill holes for 19,090 m completed by Big Ridge in 2021 and 2022.*

(7) *The mineral resource estimate is based on 2 three-dimensional ("3D") resource models for the Main Zone and 240 Zones.*

(8) *Average rock density values were assigned per zone.*

(9) *It is envisioned that parts of the Main Zone may be mined using open pit mining methods. Open pit mineral resources are reported at a base case cut-off grade of 0.4 g/t Au within a conceptual pit shell.*

(10) *It is envisioned that parts of the Main Zone as well as the 240 Zone may be mined using underground mining methods. A selected base case cut-off grade of 2.0 g/t Au is used to determine the underground mineral resource for the Main Zone and 240 Zone. The underground Mineral Resource grade blocks were quantified above the base case cut-off grade, below the constraining pit shell and within the constraining mineralized wireframes.*

(11) *Base case cut-off grades consider a metal price of US$1750.00/oz Au and considers a metal recovery of 86 % for Au.*

(12) *The pit optimization and in-pit base case cut-off grade of 0.4 g/t Au considers a mining cost of US$2.65/t rock and processing, treatment and refining, transportation and G&A cost of US$15.55/t mineralized material, and an overall pit slope of 55°. The underground base case cut-off grade of 2.0 g/t Au considers a mining cost of US$54.00/t rock and processing, treatment and refining, transportation and G&A cost of US$15.55/t mineralized material. The cut-off grades should be re-evaluated in light of future prevailing market conditions (metal prices, exchange rates, mining costs etc.).*

(13) *The results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade.*

(14) *The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. There is no certainty that all or any part of the Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. There is no other relevant data or information available that is necessary to make the technical report understandable and not misleading.*

(15) *The Author is not aware of any known mining, processing, metallurgical, environmental, infrastructure, economic, permitting, legal, title, taxation, socio-political, or marketing issues, or any other relevant factors not reported in this technical report, that could materially affect the updated MRE.*

25.2.1 Copper MRE

As copper values were only available for surface drill holes and not the underground drill holes, the copper resource in this resource estimate is categorized as Inferred Resources (Table 25-3). Copper estimation is restricted to the copper mineralization contained in gold resource blocks and does not represent a separately modelled mineral domain.

Table 25-3 HB Deposit In-Pit and Underground Copper Mineral Resource Estimate, January 17, 2023

Category	In-pit @ 0.40 g/t Au cut-off		
	Tonnes	Cu (%)	Cu (lbs)
Inferred			
Main Zone	14,584,000	**0.12**	**39,328,000**
Category	**Below-pit @ 2.0 g/t Au cut-off**		
	Tonnes	Cu (%)	Cu (lbs)
Inferred			
240 Zone	2,538,000	**0.08**	**4,479,000**
Main Zone	1,283,000	**0.12**	**3,195,000**
Category	**Total**		
	Tonnes	Cu (%)	Cu (lbs)
Inferred			
240 Zone	2,538,000	**0.08**	**4,479,000**
Main Zone	15,886,000	**0.12**	**42,523,000**

25.3 Risk and Opportunities

The following risks and opportunities were identified that could potentially affect the future economic outcome of the HBGP. The following does not include external risks that apply to all exploration and development projects (e.g., changes in metal prices, exchange rates, availability of investment capital, change in government regulations, tenure obligations, etc.).

There is no other relevant data or information available that is necessary to make the technical report understandable and not misleading. The Author is not aware of any known mining, processing, metallurgical, environmental, infrastructure, economic, permitting, legal, title, taxation, socio-political, or marketing issues, or any other relevant factors not reported in this technical report, that could materially affect the MRE for the HBGP. To the Author's knowledge, there are no additional risks or uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information or MRE.

25.3.1 Risks

25.3.1.1 Mineral Resource Estimate

A portion of the contained metal of the Deposit, at the reported cut-off grades for the current MRE, is in the Inferred Mineral Resource classification (~16%). It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Minerals Resources with continued exploration.

The mineralized structures (mineralized domains) are relatively well understood. However, due to the limited drilling in some areas, the mineralization zones might be of slightly variable shapes from what have been modeled. A different interpretation from the current mineralization models may adversely affect the current MRE. Continued drilling may help define with more precision the shapes of the zones and confirm the geological and grade continuities of the mineralized zones.

25.3.2 Opportunities

25.3.2.1 Mineral Resource Estimate

There is an opportunity in areas of the HB deposit area to extend known mineralization at depth and elsewhere on the Property and to potentially convert Inferred Mineral Resources to Indicated or Measured Mineral Resources. Big Ridge's intentions are to continue exploration on the HBGP in 2023. Big Ridge is looking at expansion of the deposit in the 240 Zone area and plans to conduct field evaluation and detailed exploration of several priority targets including Old Man's Pond, Woodman's Droke, Phillips Brook and Cross Gulch, by surface mapping and sampling, induced polarization surveys and results-based follow-up drilling.

26 RECOMMENDATIONS

The HBGP contains within-pit and underground Indicated and Inferred Mineral Resources that are associated with well-defined mineralized trends and models. The deposit is open along strike and at depth.

Given the prospective nature of the HBGP, it is the Author's opinion that the Project merits further exploration and that a proposed plan for further work by Big Ridge is justified. A proposed work program by Big Ridge will help advance the HBGP and will provide key inputs required to evaluate the economic viability of the HBGP.

The Author is recommending Big Ridge conduct further exploration, subject to funding and any other matters which may cause the proposed exploration program to be altered in the normal course of its business activities or alterations which may affect the program as a result of exploration activities themselves.

The total cost of the recommended work program by Big Ridge is estimated at C$8.1 million. The following projects are being considered by Big Ridge for 2023:

- Continued drill testing for expansion of the deposit in the 240 Zone area.
- Using materials from the company's library of 198 drill holes and sample reject material at site for Metallurgical testing with a view to advancing and improving gold and copper recoveries and to complete ore separation testing with the objective of removing unmineralized lithologies from key mineralized material.
- Field evaluation and detailed exploration of several priority targets including Old Man's Pond, Woodman's Droke, Phillips Brook and Cross Gulch, by surface mapping and sampling, induced polarization surveys and results-based follow-up drilling.
- Preliminary exploration of the lithium potential along 30 km of the Bay d'Est fault structure along the northern boundary of the Hope Brook Property.

26.1 Recommended 2023 Work Program and Budget for the HBGP:

Hope Brook Deposit - 2023 work to improve and expand mineral resources

- Drill 240 Zone and extension 10,000 m 2 rigs – 3 months @ $500/m $5,000,000
  - (Includes sampling cost, assaying, logging, geotechnical, drill management, core storage, travel accommodation, logging facilities, consumables, and data reporting)
- Re-assess geological framework and test: $50,000
- Metallurgical Studies
  - (improved Au and Cu recovery and tailings / effluent chemistry) $75,000
- Ore separation testing of mafic dyke as principal waste in Main Zone mineralization $40,000

Hope Brook Gold Project – 2023 property-wide focused gold occurrence exploration

- Helicopter / boat supported exploration - 4 months $700,000
- 4 selected priority targets Old Mans Pond, Woodman's Droke, Phillips Brook, Cross Gulch
- 25 km grids each, line cutting and Induced Polarization + Magnetometer surveys 4 @ $75,000 $300,000
- Prospecting, mapping grab and channel sampling 4 x 20 days @ $2,000 $160,000
- Results based drill follow-up (1,000 m core) $500,000

Hope Brook Gold Project 2023 property wide exploration for gold and initial prospecting of lithium trend (Bay d'Est fault structure)

- Prospecting, reconnaissance mapping and sampling - 90 days @ $2,000 $180,000
- Base camp supplies and food service $350,000

Sub total	**$7,355,000**
Contingency 10%	$735,500
Total	**$8,090,500**

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28 DATE AND SIGNATURE PAGE

This report titled "Mineral Resource Estimate Update for the Hope Brook Gold Project, Newfoundland and Labrador, Canada" dated April 6, 2023 (the "Technical Report") for Big Ridge Gold Corp. was prepared and signed by the following author:

The effective date of the report is January 17, 2023
The date of the report is April 6, 2023.

Signed by:

Qualified Persons	Company
Allan Armitage, Ph.D., P. Geo.,	SGS Geological Services ("SGS")
Ben Eggers, MAIG, P.Geo.	SGS Geological Services ("SGS")

April 6, 2023

29 CERTIFICATES OF QUALIFIED PERSONS

QP CERTIFICATE – ALLAN ARMITAGE

To accompany the technical report titled “Mineral Resource Estimate Update for the Hope Brook Gold Project, Newfoundland and Labrador, Canada” dated April 6, 2023 (the “Technical Report”) for Big Ridge Gold Corp. (the “Company”).

I, Allan E. Armitage, Ph. D., P. Geol. of 62 River Front Way, Fredericton, New Brunswick, hereby certify that:

1. I am a Senior Resource Geologist with SGS Canada Inc., 10 de la Seigneurie E blvd., Unit 203 Blainville, QC, Canada, J7C 3V5.

2. I am a graduate of Acadia University having obtained the degree of Bachelor of Science - Honours in Geology in 1989, a graduate of Laurentian University having obtained the degree of Master of Science in Geology in 1992 and a graduate of the University of Western Ontario having obtained a Doctor of Philosophy in Geology in 1998.

3. I have been employed as a geologist for every field season (May - October) from 1987 to 1996. I have been continuously employed as a geologist since March of 1997.

4. I have been involved in mineral exploration and resource modeling at the grass roots to advanced exploration stage, including producing mines, since 1991, including mineral resource estimation and mineral resource and mineral reserve auditing since 2006 in Canada and internationally. I have extensive experience in Archean and Proterozoic load gold deposits, volcanic and sediment hosted base metal massive sulphide deposits, porphyry copper-gold-silver deposits, low and intermediate sulphidation epithermal gold and silver deposits, magmatic Ni-Cu-PGE deposits, and unconformity- and sandstone-hosted uranium deposits.

5. I am a member of the Association of Professional Engineers, Geologists and Geophysicists of Alberta and use the title of Professional Geologist (P.Geol.) (License No. 64456; 1999), I am a member of the Association of Professional Engineers and Geoscientists of British Columbia and use the designation (P.Geo.) (Licence No. 38144; 2012), and I am a member of Professional Geoscientists Ontario (PGO) and use the designation (P.Geo.) (Licence No. 2829; 2017), I am a member of the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG) and use the designation (P.Geo.) (Licence No. L4375, 2019).

6. I have read the definition of "Qualified Person" set out in National Instrument 43-101 – Standards of Disclosure for Mineral Projects – (“NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43 101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43 101.

7. I am an author of the Technical Report and responsible for sections 1 through 5, 8, 9, 12.2, 12.3, 13 to 27. I have reviewed all sections and accept professional responsibility for these sections of the Technical Report.

8. I conducted a site visit to the Property on August 24 to 26, 2022.

9. I have had no prior involvement with the Property.

10. I am independent of the Company as described in Section 1.5 of NI 43-101.

11. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

12. I have read NI 43-101 and Form 43-101F1 (the “Form”), and the Technical Report has been prepared in compliance with NI 43-101 and the Form.

Signed and dated April 6, 2023 at Fredericton, New Brunswick.

"Original Signed and Sealed"

Allan Armitage, Ph. D., P. Geo., SGS Canada Inc.

QP CERTIFICATE – BEN EGGERS

To accompany the technical report titled **"Mineral Resource Estimate Update for the Hope Brook Gold Project, Newfoundland and Labrador, Canada"** dated April 6, 2023 (the "Technical Report") prepared for Big Ridge Gold Corp. (the "Company").

I, Benjamin K. Eggers, B.Sc.(Hons)., MAIG, P.Geo. of PO Box 1012, Tofino, British Columbia, hereby certify that:

13. I am a Senior Geologist with SGS Canada Inc., 10 Boulevard de la Seigneurie E., Suite 203, Blainville, QC, J7C 3V5, Canada.

14. I am a graduate of the University of Otago, New Zealand having obtained the degree of Bachelor of Science (Honours) in Geology in 2004.

15. I have been continuously employed as a geologist since February of 2005.

16. I have been involved in mineral exploration and resource modeling at the greenfield to advanced exploration stage, including producing mines, in Canada and Australia since 2005, including mineral resource estimation since 2022 in Canada and internationally. I have experience in lode gold deposits, porphyry copper-gold-silver deposits, low and high sulphidation epithermal gold and silver deposits, volcanic and sediment hosted base metal massive sulphide deposits, and albitite-hosted uranium deposits.

17. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia and use the designation (P.Geo.) (Licence No. 40384; 2014), and I am a member of the Australian Institute of Geoscientists and use the designation (MAIG) (Licence No. 3824; 2013).

18. I have read the definition of "Qualified Person" set out in National Instrument 43-101 – Standards of Disclosure for Mineral Projects – ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.

19. I am an author of the Technical Report and responsible for sections 5, 6, 7, 10, 11 and 12.1. I have reviewed all sections and accept professional responsibility for these sections of the Technical Report.

20. I have not personally conducted a site visit.

21. I have had no prior involvement with the Hope Brook Property.

22. I am independent of the Company as described in Section 1.5 of NI 43-101.

23. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

24. I have read NI 43-101 and Form 43-101F1 (the "Form"), and the Technical Report has been prepared in compliance with NI 43-101 and the Form.

Signed and dated April 6, 2023 at Tofino, British Columbia.

"Original Signed and Sealed"

Ben Eggers, B.Sc.(Hons)., MAIG, P.Geo., SGS Canada Inc.