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BARRICK GOLD CORPORATION

TECHNICAL REPORT ON THE GOLDSTRIKE MINE, EUREKA AND ELKO COUNTIES, STATE OF NEVADA, USA

NI 43-101 Report

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FORWARD-LOOKING INFORMATION

This report contains forward-looking statements. All statements, other than statements of historical fact regarding Barrick Gold Corporation or the Goldstrike Mine, are forward-looking statements. The words "believe", "expect", "anticipate", "contemplate", "target", "plan", "intend", "project", "continue", "budget", "estimate", "potential", "may", "will", "can", "could" and similar expressions identify forward-looking statements. In particular, this report contains forward-looking statements with respect to cash flow forecasts, projected capital, operating and exploration expenditure, targeted cost reductions, mine life and production rates, potential mineralization and metal or mineral recoveries, the Barrick-Newmont Joint Venture and information pertaining to potential improvements to financial and operating performance and mine life at the Goldstrike Mine. All forward-looking statements in this report are necessarily based on opinions and estimates made as of the date such statements are made and are subject to important risk factors and uncertainties, many of which cannot be controlled or predicted. Material assumptions regarding forward-looking statements are discussed in this report, where applicable. In addition to such assumptions, the forward-looking statements are inherently subject to significant business, economic and competitive uncertainties and contingencies. Known and unknown factors could cause actual results to differ materially from those projected in the forward-looking statements. Such factors include, but are not limited to: fluctuations in the spot and forward price of commodities (including gold, copper, silver, diesel fuel, natural gas and electricity); the speculative nature of mineral exploration and development; changes in mineral production performance, exploitation and exploration successes; and additional engineering and other analysis required to fully assess their impact; diminishing quantities or grades of reserves; increased costs, delays, suspensions, and technical challenges associated with the construction of capital projects; operating or technical difficulties in connection with mining or development activities, including disruptions in the maintenance or provision of required infrastructure and information technology systems; damage to Barrick Gold Corporation's or the Goldstrike Mine's reputation due to the actual or perceived occurrence of any number of events, including negative publicity with respect to the handling of environmental matters or dealings with community groups, whether true or not; risk of loss due to acts of war, terrorism, sabotage and civil disturbances; uncertainty whether the Goldstrike Mine will meet Barrick Gold Corporation's capital allocation objectives; the impact of global liquidity and credit availability on the timing of cash flows and the values of assets and liabilities based on projected future cash flows; the impact of inflation; fluctuations in the currency markets; changes in interest rates; changes in national and local government legislation, taxation, controls or regulations and/or changes in the administration of laws, policies and practices, expropriation or nationalization of property and political or economic developments in the USA; failure to comply with environmental and health and safety laws and regulations; timing of receipt of, or failure to comply with, necessary permits and approvals; litigation; contests over title to properties or over access to water, power and other required infrastructure; increased costs and physical risks including extreme weather events and resource shortages, related to climate change; and availability and increased costs associated with mining inputs and labor. In addition, there are risks and hazards associated with the business of mineral exploration, development and mining, including environmental hazards, industrial accidents, unusual or unexpected formations, pressures, cave-ins, flooding and gold bullion, copper cathode or gold or copper concentrate losses (and the risk of inadequate insurance, or inability to obtain insurance, to cover these risks).

Many of these uncertainties and contingencies can affect Barrick Gold Corporation's actual results and could cause actual results to differ materially from those expressed or implied in any forward-looking statements made by, or on behalf of, Barrick Gold Corporation. All of the forward-looking statements made in this report are qualified by these cautionary statements. Barrick Gold Corporation and RPA and the Qualified Persons who authored this report undertake no obligation to update publicly or otherwise revise any forward-looking statements whether as a result of new information or future events or otherwise, except as may be required by law.

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1 SUMMARY

EXECUTIVE SUMMARY

Roscoe Postle Associates Inc. (RPA) was retained by Barrick Gold Corporation (Barrick) to prepare an independent Technical Report on the Goldstrike Mine (the Mine), in Eureka and Elko Counties, Nevada, USA. The purpose of this report is to support public disclosure of Mineral Resource and Mineral Reserve estimates at the Mine as of December 31, 2018. This Technical Report conforms to NI 43-101 Standards of Disclosure for Mineral Projects. The effective date of the Mineral Resource and Mineral Reserve estimates in this Technical Report is December 31, 2018, and information in this Technical Report is current as of that date unless otherwise specified. RPA visited the Mine on December 3 to 5, 2018.

Barrick is a publicly traded Canadian mining company with a large portfolio of operating mines and projects. The Goldstrike Mine property is located within the northern Carlin Trend on the western flank of the Tuscarora Mountains in Eureka and Elko Counties, north central Nevada, USA, approximately 38 mi northwest of Elko and 25 mi north of the town of Carlin.

On March 10, 2019, Barrick and Newmont Mining Corporation entered into an implementation agreement (Implementation Agreement) to create a joint venture combining their respective mining operations, assets, reserves and talent in Nevada (Barrick-Newmont Joint Venture). In connection with the completion of the transactions contemplated by the Implementation Agreement expected later this year, the Mine will be contributed to the Barrick-Newmont Joint Venture. This report documents estimates as of December 31, 2018, for Mineral Resources, Mineral Reserves, production schedules, and cost projections. These estimates do not take into account any changes or benefits that might arise from the commencement of Barrick-Newmont Joint Venture operations.

The Mine consists of both open pit and underground operations. The Betze-Post open pit is a large-scale operation utilizing a conventional truck and shovel fleet. Current Open Pit Mineral Reserves total 11.9 million tons of ore grading 0.114 oz/st Au. The ultimate pit will measure approximately two miles east to west, 1.5 mi north to south, and have an average depth of approximately 1,300 ft. Open pit mining will continue to 2023, and then go on hiatus until a final two-year pit phase is mined at the end of the underground mine life.

A large amount of stockpiled open pit ore, which has been accumulating since the late 1980s, is included in Mineral Reserves, totalling 53.1 million tons, grading 0.080 oz/st Au.

The underground mine consists of 11 separate zones stretching over a length of 12,000 ft and a vertical distance from approximately 600 ft to 2,000 ft below surface. Underground mine production is planned from the Rodeo, Meikle, North Post, JV Post, and Banshee mine areas. Underground Mineral Reserves totalling 9.82 million tons at 0.291 oz/st Au are projected to sustain the mine operations until 2027.

The open pit resource estimates are based on depleting the 2018 mid-year block models, which were built using data available up to May 31, 2018. The Underground Mineral Resource estimates are based on the EOY2018 block models, which were built using data up to November 28, 2018. RPA examined the end-of-year 2018 (EOY2018) Open Pit and Underground Mineral Resource estimates and is of the opinion that they meet or exceed industry standards and are acceptable to support estimation of Mineral Reserves.

Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM (2014) definitions) were used for the Mineral Resource and Mineral Reserve estimates.

Table 1-1 summarizes the total Mineral Resources, exclusive of Mineral Reserves, at the Goldstrike Mine as of December 31, 2018. Measured and Indicated Mineral Resources total 9.0 million tons grading 0.181 oz/st Au, containing 1.63 million ounces of gold. In addition, Inferred Mineral Resources total 2.0 million tons grading 0.237 oz/st Au, containing 474,000 ounces of gold.

In metric units (Table 1-2), the Measured and Indicated Mineral Resources total 8.164 million tonnes grading 6.21 g/t Au, containing 1.632 million ounces of gold. In addition, Inferred Mineral Resources total 1.817 million tonnes grading 8.11 g/t Au, containing 474,000 ounces of gold.

TABLE 1-1 MINERAL RESOURCES - DECEMBER 31, 2018
Barrick Gold Corporation - Goldstrike Mine

Measured	Tons ('000 st)	Grade (oz/st Au)	Contained Gold ('000 oz)
Open Pit	1,371	0.041	56
Underground	2,567	0.280	719
Total Measured	**3,938**	**0.197**	**775**
Indicated			
Open Pit	1,949	0.030	59
Underground	3,113	0.256	798
Total Indicated	**5,061**	**0.169**	**857**
Measured + Indicated			
Open Pit	3,319	0.035	115
Underground	5,680	0.267	1,517
Total Measured + Indicated	**8,999**	**0.181**	**1,632**
Inferred			
Open Pit	236	0.063	15
Underground	1,767	0.260	459
Total Inferred	**2,004**	**0.237**	**474**

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
2. Mineral Resources are estimated using a long-term gold price of US$1,500 per ounce.
3. Open Pit Mineral Resources are based on cut-off grades of 0.025 oz/st Au for roaster feed, 0.050 oz/st Au for acid autoclave feed, 0.060 oz/st Au for alkaline autoclave feed.
4. Underground Mineral Resources are reported at cut-off grades between 0.126 oz/st Au and 0.155 oz/st Au. Incremental material at a cut-off grade of 0.10 oz/st Au is included if it is part of the mine sequence.
5. A minimum underground mining width of 15 ft was used.
6. For open pit, an average tonnage factor for non-Carlin Formation ore and waste of approximately 13.5 ft^3/st was used. For Carlin Formation waste, a tonnage factor of 16.0 ft^3/st is used, and for waste dump material, a value of 18.2 ft^3/st was used
7. For underground, bulk density is set by mineralized domain from 12.0 st/ft^3 to 13.6 st/ft^3.
8. Mineral Resources are exclusive of Mineral Reserves.
9. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
10. Totals may not reconcile due to rounding.
11. North Post JV (Barrick 70% and Newmont 30%) reported at 70%.

TABLE 1-2 MINERAL RESOURCES - DECEMBER 31, 2018 (METRIC UNITS)
Barrick Gold Corporation - Goldstrike Mine

Measured	Tonnes ('000 t)	Grade (g/t Au)	Contained Gold ('000 oz)
Open Pit	1,243	1.40	56
Underground	2,329	9.60	719
Total Measured	**3,572**	**6.75**	**775**
Indicated			
Open Pit	1,768	1.04	59
Underground	2,824	8.79	798
Total Indicated	**4,592**	**5.80**	**857**
Measured + Indicated			
Open Pit	3,011	1.20	115
Underground	5,152	9.15	1,517
Total Measured + Indicated	**8,164**	**6.21**	**1,632**
Inferred			
Open Pit	214	2.18	15
Underground	1,603	8.91	459
Total Inferred	1,817	8.11	**474**

Notes:
1. CIM (2014) definitions were followed for Mineral Resources.
2. Mineral Resources are estimated using a long-term gold price of US$1,500 per ounce.
3. Open Pit Mineral Resources are based on cut-off grades of 0.86 g/t Au for roaster feed, 1.71 g/t Au for acid autoclave feed, and 2.06 g/t Au for alkaline autoclave feed.
4. Underground Mineral Resources are reported at cut-off grades between 4.32 g/t Au and 5.31 g/t Au. Incremental material at a cut-off grade of 3.43 g/t Au is included if it is part of the mine sequence.
5. A minimum underground mining width of 4.6 m was used.
6. For Open Pit, an average density for non-Carlin Formation ore and waste of approximately 2.37 t/m^3 was used. For Carlin Formation waste, a density of 2.0 t/m^3 was used, and for waste dump material, a density of 1.76 t/m^3 was used
7. For underground, bulk density is set by mineralized domain from 2.37 t/m^3 to 2.66 t/m^3.
8. Mineral Resources are exclusive of Mineral Reserves.
9. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
10. Totals may not reconcile due to rounding.
11. North Post JV (Barrick 70% and Newmont 30%) reported at 70%.

The Mineral Reserves for the Goldstrike Mine as of December 31, 2018 are shown in Table 1-3. These Mineral Reserves are a combination of the open pit and underground reserves, stockpiles, and inventory. Proven and Probable Mineral Reserves total 74.840 million tons grading 0.114 oz/st Au and contain 8.525 million ounces of gold.

In metric units (Table 1-4), the Proven and Probable Reserves for the Goldstrike Mine total 67.895 million tonnes grading 3.91 g/t Au and contain 8.525 million ounces of gold.

TABLE 1-3 MINERAL RESERVES - DECEMBER 31, 2018
Barrick Gold Corporation - Goldstrike Mine

	Proven Reserves			Probable Reserves			Proven and Probable Reserves		
	Tons (000)	Grade (oz/st Au)	Contained Gold (000 oz)	Tons (000)	Grade (oz/st Au)	Contained Gold (000 oz)	Tons (000)	Grade (oz/st Au)	Contained Gold (000 oz)
Open Pit	2,305	0.130	300	9,596	0.110	1,058	11,901	0.114	1,358
OP Stockpiles	53,119	0.080	4,269				53,119	0.080	4,269
Gold in Inventory			40						40
Subtotal OP	**55,424**	**0.083**	**4,608**	**9,596**	**0.110**	**1,058**	**65,021**	**0.087**	**5,667**
Underground	5,712	0.330	1,888	4,051	0.236	954	9,763	0.291	2,842
UG Stockpile	56	0.297	17				56	0.297	17
Subtotal UG	**5,768**	**0.330**	**1,904**	**4,051**	**0.236**	**954**	**9,819**	**0.291**	**2,859**
TOTAL	**61,192**	**0.106**	**6,513**	**13,647**	**0.147**	**2,012**	**74,840**	**0.114**	**8,525**

Notes:
1. CIM (2014) definitions were followed for Mineral Reserves.
2. Mineral Reserves are estimated using an average long-term gold price of US$1,200 per ounce.
3. Stockpiles include Autoclave, Roaster, and Distal.
4. Cut-off grades vary by processing type, mining method, and location.
5. Open pit autoclave cut-off grade is 0.060 oz/st Au to 0.070 oz/st Au and the open pit roaster cut-off grade is 0.035 oz/st Au. The majority of the ore material in stockpile was generated at higher cut-off grades because of lower gold prices.
6. Underground cut-off grades are between 0.158 oz/st Au and 0.194 oz/st Au.
7. The Mineral Reserve estimate includes inventory.
8. Totals may not reconcile due to rounding.
9. North Post JV (Barrick 70% and Newmont 30%) reported at 70%.

TABLE 1-4 MINERAL RESERVES - DECEMBER 31, 2018 (METRIC UNITS)
Barrick Gold Corporation - Goldstrike Mine

	Proven Reserves			Probable Reserves			Proven and Probable Reserves		
	Tonnes (000)	Grade (g/t Au)	Contained Gold (000 oz)	Tonnes (000)	Grade (g/t Au)	Contained Gold (000 oz)	Tonnes (000)	Grade (g/t Au)	Contained Gold (000 oz)
Open Pit	2,091	4.46	300	8,706	3.78	1,058	10,797	3.91	1,358
OP Stockpiles	48,189	2.76	4,269				48,189	2.76	4,269
Gold in Inventory			40						40
Subtotal OP	50,281	2.85	4,609	8,706	3.78	1,058	58,987	2.99	5,667
Underground	5,182	11.33	1,888	3,675	8.08	954	8,857	9.98	2,842
UG Stockpile	51	10.19	17				51	10.19	17
Subtotal UG	5,233	11.32	1,904	3,675	8.07	954	8,908	9.98	2,858
TOTAL	55,514	3.65	6,513	12,381	5.05	2,012	67,895	3.91	8,525

Notes:
1. CIM (2014) definitions were followed for Mineral Reserves.
2. Mineral Reserves are estimated using an average long-term gold price of US$1,200 per ounce.
3. Stockpiles include Autoclave, Roaster, and Distal.
4. Cut-off grades vary by processing type, mining method, and location.

5. Open pit autoclave cut-off grade is 1.69 g/t Au to 1.98 g/t Au and the open pit roaster cut-off grade is 0.99 g/t Au. The majority of the ore material in stockpile was generated at higher cut-off grades because of lower gold prices.
6. Underground cut-off grades are between 4.46 g/t Au and 5.47 g/t Au.
7. The Mineral Reserve estimate includes inventory.
8. Totals may not reconcile due to rounding.
9. North Post JV (Barrick 70% and Newmont 30%) reported at 70%.

RPA is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors which could materially affect the Open Pit or Underground Mineral Resource and Mineral Reserve estimates.

CONCLUSIONS

Based on the site visit and subsequent review, RPA offers the following conclusions.

GEOLOGY AND MINERAL RESOURCE ESTIMATION

General

- Mineral Resource estimates have been prepared utilizing acceptable estimation methodologies. The classification of Measured, Indicated, and Inferred Resources conforms to CIM (2014) definitions.

- The sampling, sample preparation, and analyses are appropriate for the style of mineralization and Mineral Resource estimation. The current drill hole database is reasonable for supporting the Mineral Resource and Mineral Reserve estimates.

- Drilling, sampling, and data warehousing are all conducted according to industry best practice.
- With minor local exceptions, visual inspection of block and composite grades across all of the models shows relatively tight and conservative grade extrapolation which falls in general accord with very closely drilled areas.

- The EOY2018 open pit and underground resource block models are reasonable for supporting the Mineral Resource and Mineral Reserve estimates.

- The Mineral Resource modelling steps and results are comprehensively recorded in the master spreadsheets as the workflow is executed.

- Goldstrike geological personnel have conducted high quality geological and resource modelling work that meets or exceeds industry standard practice.

- Site geological staff are using the aggregate data mined at the deposits to develop further geological understanding of regional mineralized trends.

- Mineral Resources are reported exclusive of Mineral Reserves and are estimated effective December 31, 2018 (EOY2018).

- Measured and Indicated Mineral Resources total 9.0 million tons grading 0.181 oz/st Au, containing 1.63 million ounces of gold. In addition, Inferred Mineral Resources total 2.0 million tons grading 0.237 oz/st Au, containing 474 thousand ounces of gold.

- *In metric units, the Measured and Indicated Mineral Resources total 8.164 million tonnes grading 6.21 g/t Au, containing 1.632 million ounces of gold. In addition, Inferred Mineral Resources total 1.817 million tonnes grading 8.11 g/t Au, containing 474,000 ounces of gold.*

Open Pit

- Open Pit Measured and Indicated Mineral Resources included in the Mineral Resource total 3.32 million tons grading 0.035 oz/st Au, containing 115,200 ounces of gold. In addition, Inferred Mineral Resources total 236,100 tons grading 0.063 oz/st Au, containing 15,000 ounces of gold. The Open Pit Measured Resources include 0.97 million tons averaging 0.045 oz/st Au from the BMW and BMW2 stockpiles, containing 43,900 ounces of gold.

- On-going work to update lithology and fault models should improve future open pit resource models.

Underground

- Barrick staff understands the deposit well, and utilize modern industry standard techniques to control development and record geological information.

- Underground Measured and Indicated Mineral Resources included in the Mineral Resource total 5.68 million tons grading 0.267 oz/st Au, containing 1.52 million ounces of gold. Underground Inferred Mineral Resources are estimated to be 1.77 million tons grading 0.260 oz/st Au, containing 459,000 ounces of gold.

MINING AND MINERAL RESERVES

General

- The Mineral Reserve estimates have been prepared utilizing acceptable estimation methodologies and the classification of Proven and Probable Mineral Reserves conforms to CIM (2014) definitions.

- Mine planning for the Goldstrike Mine follows industry standards.

- RPA considers the selection of mining methods and the design practices to be appropriate for the deposits.

- Equipment purchases scheduled for the current Life of Mine (LOM) plan are reasonable.

- The workforce is well trained and capable of achieving the necessary production targets established by the Engineering Department in a safe manner.

- The EOY2018 Proven and Probable Mineral Reserves for the open pit, underground, stockpiles, and inventory total 74.840 million tons grading 0.114 oz/st Au and contain 8.525 million ounces of gold.

- *In metric units, the Proven and Probable Reserves for the Goldstrike Mine total 67.895 million tonnes grading 3.91 g/t Au and contain 8.525 million ounces of gold.*

- The LOM plan is in place and is based upon current operating experience. Recovery and cost estimates are based upon actual operating data and engineering to support a Mineral Reserve statement. Economic analysis using these estimates generates a positive cash flow, which supports a statement of Mineral Reserves.

Open Pit and Stockpiles

- Open Pit Proven and Probable Mineral Reserves total 11.90 million tons grading 0.114 oz/st Au, containing 1.36 million ounces of gold.

- Ore control procedures and results for the Goldstrike open pit are well documented. All records have been kept in good condition and are readily accessible.

- The EOY2018 Proven Mineral Reserves located in 28 different open pit stockpiles are estimated to be 53.1 million tons grading 0.080 oz/st Au, containing 4.27 million ounces of gold. The accounting methods used to track the stockpile tonnages and grades are reasonable.

- The stockpiles represent approximately 50% of the Mineral Reserve gold ounces and 87% of the Mineral Reserve tons.

- Reconciliation of open pit estimates to production is difficult to evaluate, because most mined ore goes to stockpiles. Reconciliation to grade control models results in a good match.

Underground and Stockpiles

- Underground Proven and Probable Mineral Reserves are estimated to be 9.76 million tons grading 0.291 oz/st Au, containing 2.84 million ounces of gold.

- The reconciliation between production and Mineral Reserves is completed in a comprehensive manner on a monthly basis. Results indicate significant gains over Mineral Reserve estimates, due to mining of material classified as Inferred or unclassified at the time of the estimate. This material is generally upgraded by infill drilling between the time of the estimate and mining.

- There is potential to extend Mineral Reserves at depth, given further dewatering to depress the water table.

- The EOY2018 Proven Mineral Reserves located in the underground stockpiles are estimated to be 56,000 tons grading 0.297 oz/st Au, containing 16,734 ounces of gold. The estimation methods used to track the stockpile tonnages and grades are reasonable.

- Reconciliation of previous underground estimates to production shows positive results, due to material outside of Mineral Reserves being mined during 2018.

PROCESSING

- Based on an evaluation of the methodology, data analysis and procedures associated with accounting and reconciliation, RPA is of the opinion that head grade estimation and adjustments, recovery calculations, and gold production accounting are acceptable and aligned with industry practices.

- While procedures used to estimate gold recovery meet industry standards, they are backwards-looking, based on recent operating performance. A more forward-looking, predictive model may provide better estimates.

- Planning the process feed is a well-coordinated and complex operation to ensure ore going to the processing operation provides optimum results. The milling operations are well run, safe, and environmentally sound and meet industry standards.

- The roaster operation was running well during the site visit.

- The adjustments made to the process production data and mill head grades based on actual gold production conform to industry standards.

ENVIRONMENTAL CONSIDERATIONS

- Goldstrike has an experienced staff of professionals who are diligent in the maintenance of their permits.

- Reclamation estimates are realistic, in RPA's opinion.

RISKS

RPA has not identified any significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information, the Mineral Resource and Mineral Reserve estimates, or associated projected economic outcomes.

RECOMMENDATIONS

Based on the site visits and review of available data, RPA presents the following recommendations.

GEOLOGY AND MINERAL RESOURCE ESTIMATION

General

- Add a tab to the master spreadsheet for each model which summarizes the information usually included in Technical Reports.

- Create Mineral Resource workflow documents explaining the workflows encapsulated in the master spreadsheets.

Open Pit

- Review/update the composite weighting scheme with more recent reconciliation data.
- Include the underground and blast hole data in future variography studies.
- Investigate using the blast hole, drill hole, and mapping data to build high grade wireframes for structurally controlled mineralization.

Underground

- Use a resource classification clean-up script or classification wireframes to upgrade a small amount of Inferred Mineral Resource blocks that are scattered within the Indicated Mineral Resource areas.
- Additional density test work is warranted in some areas.

MINING AND MINERAL RESERVES

- Use reconciliation results and stope performance analysis to evaluate stope designs to determine where improvements in mine planning would be most advantageous.
- Review reconciliation of Underground Mineral Reserves to production after first deducting areas mined from outside the Mineral Reserve estimate.
- Continue to evaluate an extension of the dewatering program to access mineralization at depth.
- Continue the stockpile sampling program to confirm the grades, especially stockpiles that will be processed within the short term.
- Continue to sample, test, and review the metallurgical characteristics of the ore stockpiles on a periodic basis to ascertain how they may affect the process and impact recovery and costs.
- Develop a comprehensive mine planning procedure manual.

PROCESSING

- Carry out a structured geometallurgical program involving the bench-scale testing of discrete interval geological samples, which will ideally provide a predictive model of expected metallurgical performance for feed blends that differ from recent production.
- Review roaster feed belt sampling. Improved definition of head grade may serve to improve process feed blending practices and mine to process reconciliation.
- Real-time analysis of moisture in roaster feed would also be beneficial. The same microwave technology as is currently applied on the Cortez underground mine transfer conveyor could be used at Goldstrike.

ECONOMIC ANALYSIS

Under NI 43-101, producing issuers may exclude the information required for Section 22 Economic Analysis on properties currently in production, unless the technical report includes a material expansion of current production. Barrick is a producing issuer, the Goldstrike Mine is currently in production, and a material expansion is not being planned. RPA has performed an economic analysis of the Goldstrike Mine using the estimates presented in this report and confirms that the outcome is a positive cash flow that supports the statement of Mineral Reserves.

TECHNICAL SUMMARY

PROPERTY DESCRIPTION, LOCATION, AND LAND TENURE

The Goldstrike Mine property is located within the northern Carlin Trend on the western flank of the Tuscarora Mountains in Eureka and Elko Counties, Nevada, USA, approximately 38 mi northwest of Elko and 25 mi north of the town of Carlin.

The Goldstrike Mine area is composed of approximately 10,372 acres of surface rights of which approximately 1,922 acres are public lands administered by the Bureau of Land Management (BLM) and 8,450 acres are patented, and private lands owned by Barrick Goldstrike Mines, Inc. (Goldstrike), Barrick's wholly-owned subsidiary. There are approximately 8,736 acres of mineral rights ownership/control made up of 1,962 acres of public lands and 6,774 acres of private land. These rights are owned or controlled through ownership of various forms of patents issued by the USA and by ownership of unpatented mining and mill site claims held subject to the paramount title of the USA.

The Goldstrike Mine property includes a total of 298 unpatented mining and mill-site claims. Unpatented mining claims are maintained on an annual basis, and do not expire as long as the payments are made. All mining leases and subleases are reviewed on a monthly basis and all payments and commitments are paid as required by the specific agreements.

A total disturbance of 9,028 acres is currently authorized for the Mine. The majority (87%) of the total authorized disturbance will occur on private lands owned by Goldstrike. The remainder (13%) of the authorized disturbance will occur on public lands administered by the BLM.

The Goldstrike property has various royalty holders with a maximum overriding Net Smelter Royalty (NSR) of 4% and Net Profit Interest Royalties (NPI) of between 2.4% and 6% over various parts of the property. Key royalty holders are Franco-Nevada U.S. Corp and Royal Gold, Inc.

INFRASTRUCTURE

The Goldstrike Mine is located in a major mining region and local resources including labour, water, power, and local infrastructure for transportation of supplies are well established. The majority of the workforce lives in the nearby towns of Elko, Spring Creek, Carlin, and Battle Mountain.

The surface rights secured for the Goldstrike Mine are sufficient to provide the necessary space required for all mining and quarrying activities. Enough land area also exists on the property to accommodate all foreseeable processing plants, ore and low-grade stockpiles, tailings impoundments, and waste disposal areas.

Currently, the major assets and facilities associated with the Goldstrike Mine are:

- Underground and open pit mines with production from several mineralized zones.
- The physical plant site including the administrative office complex and associated facilities, the open pit and underground mine workings and associated facilities, ore processing plants (autoclave pressure oxidation and roaster circuit) and associated facilities such as the laboratories, ore stockpiles, waste dumps, coarse ore storage, tailings storage, workshops, warehouses.
- Facilities providing basic infrastructure to the mine, including electric power, water treatment and supply, and sewage treatment.
- Surface and underground infrastructure including mine ramps, headframes, hoists, ventilation raises, maintenance shops, and mobile equipment fleets.

The water for processing and mining is delivered from dewatering production wells and is more than adequate for current and planned requirements. Active dewatering operations are required, and a water management group is in place to carry out all dewatering including pumping, distribution, delivery, and disposal.

Barrick has a 115 MW natural gas-fired power plant, located near Reno, Nevada, that allows the flexibility to provide power to the Mine through a combination of self-generation and market purchases. There is also a 1 MW solar plant at the same site.

HISTORY

The earliest gold mining activity in the northern part of the Carlin Trend occurred at the Bootstrap and Blue Star mines prior to the discovery of gold at the Goldstrike Mine property. At Bootstrap, just northwest of the Goldstrike Mine, antimony was discovered in 1918, followed by gold in 1946. Gold was produced at Bootstrap during 1957 to 1960. At Blue Star, immediately south of the Goldstrike Mine, gold was identified in 1957 in areas that had been mined for turquoise.

The first discovery of gold in the Goldstrike property was in 1962 by Atlas Minerals. Soil samples and drilling discovered low-grade gold mineralization. In 1973 to 1974, the Nevada Syndicate (funded by Lac Minerals) outlined shallow mineralization in the Long Lac and Winston areas. Polar Resources (Polar) in 1975, followed by Pancana Minerals Ltd. (Pancana) from 1976 to 1977, delineated the Number 9 deposit and several low-grade zones within the Goldstrike intrusion to the east of Nevada Syndicate property. From 1975 to 1977, Polar and Pancana operated a small open pit and heap leach.

In 1978, Western States Minerals Corporation (Western States) entered into a 50/50 joint venture with Pancana, which had consolidated the various claims and leases in the Goldstrike Mine area. The bulk of the production was from oxidized zones, chiefly from the Long Lac, Bazza, and West Bazza deposits, plus some production from deposits within the Goldstrike intrusion. The Post deposit was discovered in 1982. Exploration continued until 1986 when a deep core hole was drilled at Post and the Deep Post deposit was discovered.

American Barrick Resources Corporation acquired the mine and properties from Western States (50%) in December 1986 and subsequently purchased Pancana's interest (50%) in January 1987 for a total purchase price of $62 million. A deep drilling program outlined the large, high-grade Deep Post deposit, which was subsequently found to continue onto the adjacent property owned by Newmont Gold Company (Newmont). Exploration drilling in 1987 to 1988 led to the discovery of a number of other deposits similar to Deep Post. These included Betze and Screamer, which, together with Deep Post, comprise the Betze-Post deposit. Other discoveries in 1987 and 1988 included Deep Star, Rodeo, Meikle, South Meikle, and Griffin.

Heap leach ore production from the Betze-Post pit continued from the time of purchase to the end of 1998. Oxide mill ore processing started in August 1988 and the autoclave portion of

the mill commenced operation in early 1990. The processing of ores by the roaster began in 2000.

The 1999 Asset Exchange with Newmont resulted in the acquisition of the Goldbug (the southern portion of Rodeo), West Rodeo, Barrel, and North Post deposits. These deposits were in the Newmont land corridor separating the Betze-Post and Meikle mines. The Banshee property north of the Meikle was also part of the exchange.

Past production from the Goldstrike Mine from 1987 to the end of 2018 totals over 44 million ounces of gold.

GEOLOGY AND MINERALIZATION

The Goldstrike Mine is located in the eastern Great Basin (Basin and Range Province) within the northern Carlin Trend on the western flank of the Tuscarora Mountains. The Carlin Trend is an alignment of gold mines located in a northwest-southeast belt extending five miles wide and 40 mi long, which accounts for more gold production than any other mining district in the United States. The northern trends account for more than twenty gold mines and deposits.

Carlin deposits comprise stratabound and structurally controlled disseminated hydrothermal gold mineralization hosted by Silurian-Devonian carbonate rocks that have been metamorphosed to varying degrees. The deposits are hydrothermal in origin and are usually structurally controlled. The carbonate host rocks are part of an autochthonous miogeoclinal carbonate sequence exposed as tectonic windows beneath the Roberts Mountains allochthon. The allochthonous rocks are a sequence of lower Paleozoic dominantly siliciclastic eugeoclinal rocks that were displaced eastward along the Roberts Mountains Thrust over younger units during the Upper Paleozoic Antler orogeny.

The western or siliciclastic allochthonous assemblage consists of mudstone, chert, siltstone, and minor limestone and includes imbricate thrust slices of Devonian Slaven, Silurian Elder, and Ordovician Vinini Formations. The eastern autochthonous assemblage of carbonate rocks consists of calcareous mudstone, siltstone and sandstone of the Rodeo Creek Unit, muddy limestone of the Devonian Popovich Formation, silty limestone to massive fossiliferous limestone of the Silurian-Devonian Roberts Mountains Formation, sandy dolomite of the Ordovician Hanson Creek Formation, quartzite of the Ordovician Eureka Quartzite, and limestone, cherty limestone and dolomite of the Ordovician Pogonip Group. Jurassic quartz

diorite, as plugs, sills, and dikes, has intruded the Paleozoic sedimentary rocks. Dikes and sills of Jurassic monzonite and lamprophyre, and Tertiary dacite and rhyodacites, are mapped in the area.

Gold mineralization was emplaced approximately 39 Ma ago along favorable stratigraphy and structural features such as faults and folds, and along contacts between sedimentary rocks and the Goldstrike stock. Faulting provided major conduits for mineralizing fluids and may also have produced clay alteration that can act as a mineralizing barrier. Intense fracturing around the contact zone of the Goldstrike stock caused solution collapse and brecciation of the surrounding sedimentary units. Secondary fracture permeability was generated along the crests of anticlines, creating focal points for collapse breccia and dissolution zone formation. Finally, lithology and alteration contacts act as permeability barriers to fluids causing mineralization to pond along them particularly where feeder structures intersect these contacts. Alteration is characterized by decalcification of limestone, silicification of all rock types, and clay development in (argillization) structurally disturbed areas.

The gold mineralization is associated with silicification, argillization, and sulphide mineralization. In refractory sulphide ore, the gold is intimately associated with very fine-grained pyrite and marcasite. In some areas, the pyrite oxidized, freeing the gold and making its extraction relatively easy, as in the historic Post Oxide deposit. Sulphide minerals associated with gold mineralization include arsenopyrite, realgar, orpiment, and stibnite. Gangue minerals include quartz, calcite, and barite. Realgar and orpiment are generally low in abundance; however, these minerals are locally common in stockwork veinlets, fracture fillings, and breccia matrices.

EXPLORATION STATUS

To date, surface geological mapping and prospecting has been completed on the property, with pit mapping on-going. Approximately 28,500 diamond and reverse circulation (RC) holes have been drilled on the property to the end of 2018. Geochemical soil and rock sampling was carried out on the property in early exploration phases. Geophysical surveys include airborne and ground magnetometer; gravity; time domain pole-dipole induced polarization (IP); DC resistivity; controlled source audio magnetotellurics (CSAMT) and magnetotellurics (MT); time domain MT/IP using a distributed assay system; electrical logging of drill holes; and downhole IP. Gold mineralization is not directly detectable by geophysical methods; however, surveys identify subsurface properties that are useful in interpreting lithology, alteration, and structure

as guides to gold mineralization. Aerial photographic surveys are performed every other year for open pit survey control.

MINERAL RESOURCES

The Mineral Resource estimate has an effective date of December 31, 2018. The open pit resource estimates were based on depleting the 2018 mid-year block models, which were built using data available up to May 31, 2018. The Underground Mineral Resource estimates were based on the EOY2018 block models, which were built using data up to November 28, 2018. RPA examined the EOY2018 Open Pit and Underground Mineral Resource estimates, is of the opinion that they meet or exceed industry standards, and that the Mineral Resource estimates are acceptable to support Mineral Reserve estimation.

The Mineral Resources are reported exclusive of Mineral Reserves. The EOY2018 Measured and Indicated Mineral Resources total 9.0 million tons grading 0.181 oz/st Au and contain 1.63 million ounces of gold. In addition, EOY2018 Inferred Mineral Resources total 2.0 million tons grading 0.237 oz/st Au and contain 474,000 ounces of gold.

Goldstrike has experienced on-site staff dedicated to maintaining the Betze-Post open pit resource block model and the Meikle and Rodeo underground block models. Different resource estimation procedures and block models are used to estimate the open pit and underground resources at the Goldstrike Mine.

RPA is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors which could materially affect the Open Pit or Underground Mineral Resource estimates.

MINERAL RESERVES

The Mineral Reserves are generated based upon the mine designs applied to the Mineral Resources. The design methodology uses cut-off grade estimates, confidence ratings, and economic assessment for validation. The Mineral Reserve estimates have been prepared utilizing acceptable estimation methodologies and the classification of Proven and Probable Reserves conforms to CIM (2014) definitions.

The EOY2018 Proven and Probable Mineral Reserves for the open pit, underground, stockpiles, and inventory total 74.840 million tons grading 0.114 oz/st Au and contain 8.525 million ounces of gold.

Goldstrike maintains a complex system of ore and low-grade stockpiles, which have been growing since the late 1980s. There are primarily three major ore stockpile categories: Autoclave, Roaster, and Distal (stockpiles around the property).

The Proven Mineral Reserves located in open pit stockpiles are estimated to be 53.1 million tons grading 0.080 oz/st Au, containing 4.27 million ounces of gold, as of December 31, 2018. RPA agrees with the ore control rationale for creating the stockpiles, and the accounting methods used to track the stockpile quantities and grades. In addition to the open pit stockpiles, a small underground stockpile at the roaster is included in Mineral Reserves.

RPA is not aware of any mining, metallurgical, infrastructure, permitting, and other relevant factors which could materially affect the Mineral Reserve estimates.

MINING METHODS

OPEN PIT

Barrick's Betze-Post open pit is a large-scale operation utilizing a conventional truck and shovel fleet. With completion of the 3rd NW pushback targeted for March 2019, the open pit currently has two remaining phases, with the ultimate pit to measure approximately two miles east to west, 1.5 mi north to south, and have an average depth of approximately 1,300 ft. The Bazza Waste Dump, located to the southwest of the open pit, has been closed and reclaimed. The mine plan includes continued use of the Clydesdale Dump to the west, and backfilling of the southeast and southwest portion of the open pit. Internal to the pit is the Betze Portal, which connects to the Rodeo underground mine, the North Post Portal, which connects to North Post and Rodeo underground, and the Betze Portal 2, which is used for ventilation.

Ultimate pit limits were determined by generating Whittle pit shells based on the net cash generated, and the pit slopes recommended by Piteau Associates Engineering Ltd. Haul ramps were designed to be 130 ft to 140 ft wide, including a safety berm for double lane traffic accommodating the 320-ton class haul trucks, and have a maximum grade of 10%. Mining thickness is 40 ft in waste, and 20 ft in ore to help minimize dilution. In ore, triple benching is

utilized creating 60 ft faces between catch benches when needed to steepen the high walls or maximize ore recovery.

Barrick optimizes mining by using a multi-phased approach, which maximizes stripping rates to keep an ore producing face available as much as possible. This multi-phase technique consists of a primary ore layback and a primary stripping layback. Historically, this approach was put in place to maintain a consistent mill feed and keep mine production in the range of 14 to 15 benches per layback per year.

UNDERGROUND

Generally low-strength rock conditions are the key factor in the underground mine design and mining method selection. This has led to two mining methods, both of which rely on cemented backfill for support. In relatively good to fair ground conditions, where longhole stoping methods are used, the wall and back instability is reduced by mining smaller, long-hole sections and filling before mining the next section. In poor ground, the underhand drift and fill method provides a backfill roof for subsequent lifts in the mining cycle.

Transverse longhole stoping is used where the mineralized zone has a significant width. Footwall drifts are driven parallel to the strike of the ore to provide access for stoping. Mining with transverse stopes requires a primary, secondary, and sometimes tertiary extraction to completely mine out the area. Longitudinal stopes are utilized in areas of the mine where the geometry and ground conditions allow. The stopes are accessed from a footwall drive and then driven parallel to the strike of ore. Each section is mined and filled before the next section is mined.

The underhand drift and fill method is utilized in areas with rock quality ratings of fair to poor, regardless of the width of the zone. The underhand drifts are nominally designed as 15 ft wide by 15 ft high. The minimum ore width is 15 ft (one drift). A primary drift is driven with increased ground support to hold the ground open, then backfilled with a high strength cemented rock fill or paste fill. Where the ore width exceeds the nominal drift width, subsequent drifts are developed (parallel or at oblique angles to the primary drift) and then backfilled. This process continues until the entire ore shape at a given elevation has been excavated and filled. Successive lifts are taken beneath the primary workings, utilizing the backfill as an engineered back.

MINERAL PROCESSING

The Goldstrike Mine has two separate processing facilities each capable of treating single or double refractory ore including:

1. An autoclave circuit with:
    - Primary crushing
    - Two parallel semi-autogenous grinding (SAG) Mill-Ball Mill grinding circuits with pebble crushing
    - Five parallel autoclaves capable of alkaline or acid pressure oxidation (POX)
    - Two parallel calcium thiosulphate (CaTS) leaching circuits with resin-in-leach (RIL) and electrowinning for gold recovery
    - A refinery producing doré bullion from both autoclave and roaster circuits

2. A roaster circuit with:
    - Primary and secondary crushing
    - Two parallel dry grinding circuits
    - Two parallel dual stage fluid bed roasters
    - Roaster off-gas handling and mercury recovery systems
    - A slurry neutralization circuit
    - A carbon-in-leach (CIL) circuit with carbon stripping, carbon acid wash, carbon regeneration (ADR) and electrowinning for gold recovery
    - Cyanide destruction circuit

Ore from Goldstrike, Cortez, or external sources for toll processing are dispatched to various blend stockpiles dependent on mineralogical composition including gold, sulphide, arsenic, carbonate and organic carbon content. The routing of ore from stockpiles to the roaster and autoclave circuits is coordinated at Goldstrike by the Strategic Planning department to achieve optimal Au, CO_3/S^{2-} and $C_{ORGANIC}$ blends to respective processes. Higher grade underground ore from Goldstrike and Cortez is fed to the Roaster-CIL circuit.

METALLURGICAL RECOVERY

Barrick has developed recovery calculations based on evaluation of historical data. They have changed over time as the ore and operations have changed. Based on the evaluation of the head grade adjustments, RPA is of the opinion that the recovery calculations and the equations used to estimate gold recoveries are adequate.

MARKET STUDIES

Gold is the principal commodity at the Goldstrike Mine and is freely traded, at prices that are widely known, so that prospects for sale of any production are virtually assured.

ENVIRONMENTAL, PERMITTING, AND SOCIAL CONSIDERATIONS

The Goldstrike operations consist of operating open pit and underground mines and process plant facilities. The mines and the corporation have environmental groups and management systems to ensure that the necessary permits and licences are obtained and maintained. These groups also carry out the required monitoring and reporting.

TAILINGS STORAGE FACILITY

Tailings from the roaster operations are deposited in the North Block Tailings Disposal Facility (NBTDF) located immediately to the east of the roaster facility and the Meikle mine. The NBTDF operates as a zero-discharge facility under Water Pollution Control Permit NEV091029 with the Nevada Division of Environment Protection (NDEP) and Jurisdictional Dam Permit J-699 with the Nevada Division of Water Resources (NDWR). The NBTDF is expanded approximately every two years and is currently permitted through a Stage 12 expansion.

Tailings from the TCM Leach operations are deposited in the Tailings Storage Facility 3 (TSF3) located immediately south of the NBTDF. TSF3 operates as a zero-discharge facility under Water Pollution Control Permit NEV091029 with the NDEP and Jurisdictional Dam Permit J-662 with the NDWR. TSF3 is expanded approximately every two years and is currently constructed through Stage 3 and permitted through Stage 6.

An appropriate level of importance and due diligence is being given to the design, integrity, and construction of site tailings facilities. Barrick completes regularly scheduled quarterly and bi-annual reviews of the facilities involving internal subject matter experts, the Engineer of Record (EoR) who is responsible for the design, as well as external third-party subject matter experts.

PROJECT PERMITTING

The BLM issued a Decision on the Amendment to the Plan of Operations for the 2017 Goldstrike Pit Expansion through the Determination of National Environmental Protection Act (NEPA) Adequacy process. The approval of this Amendment ensured the continuance of mining and processing at the Goldstrike Mine.

COMMUNITY AND SOCIAL ENGAGEMENT

There are no specifically identified social or community requirements at the Goldstrike Mine, however, the Mine is a prominent local business and applies industry best practice social and community engagement standards at its operation.

CAPITAL AND OPERATING COST ESTIMATES

CAPITAL COSTS

Current LOM capital costs are estimated to be $732.9 million. The major capital cost for the open pit will be capitalized waste stripping, which is estimated to be $163.4 million. Sustaining capital is estimated to be $337.0 million, which consists primarily of equipment replacement capital and tailings expansions. Underground mine development is projected to be $197.1 million.

OPERATING COSTS

The total operating cost has been estimated by Goldstrike to be approximately $4.7 billion over the LOM plan (2019-2037). Over the same time period, the average open pit mining operating cost is estimated to be $1.85 per ton mined. Underground mining cost will average $107.11 per ton mined. Processing costs will average $26.56 per ton processed.

2 INTRODUCTION

Roscoe Postle Associates Inc. (RPA) was retained by Barrick Gold Corporation (Barrick) to prepare an independent Technical Report on the Goldstrike Mine (the Mine), in Eureka and Elko Counties, Nevada, USA. The purpose of this report is to support public disclosure of Mineral Resource and Mineral Reserve estimates at the Mine as of December 31, 2018. This Technical Report conforms to NI 43-101 Standards of Disclosure for Mineral Projects. The effective date of the Mineral Resource and Mineral Reserve estimates in this Technical Report is December 31, 2018, and information in this Technical Report is current as of that date unless otherwise specified.

Barrick is a publicly traded Canadian mining company with a large portfolio of operating mines and projects. The Goldstrike Mine property is located within the northern Carlin Trend on the western flank of the Tuscarora Mountains in Eureka and Elko Counties, north central Nevada, USA, approximately 38 mi northwest of Elko and 25 mi north of the town of Carlin.

On March 10, 2019, Barrick and Newmont Mining Corporation entered into an implementation agreement (Implementation Agreement) to create a joint venture combining their respective mining operations, assets, reserves and talent in Nevada (Barrick-Newmont Joint Venture). In connection with the completion of the transactions contemplated by the Implementation Agreement expected later this year, the Mine will be contributed to the Barrick-Newmont Joint Venture. This report documents estimates as of December 31, 2018, for Mineral Resources, Mineral Reserves, production schedules, and cost projections. These estimates do not take into account any changes or benefits that might arise from the commencement of Barrick-Newmont Joint Venture operations.

The Mine consists of both open pit and underground operations. The Betze-Post open pit is a large-scale operation utilizing a conventional truck and shovel fleet. The ultimate pit will measure approximately two miles east to west, 1.5 mi north to south, and have an average depth of approximately 1,300 ft.

The underground mine consists of 11 separate zones stretching over a length of 12,000 ft and a vertical distance from approximately 600 ft to 2,000 ft below surface. Underground mine production is planned from the Rodeo, Meikle, North Post, JV Post, and Banshee mine areas.

A large amount of stockpiled ore, which has been accumulating since the late 1980s, is included in Mineral Reserves.

SOURCES OF INFORMATION

RPA visited the Goldstrike Mine from December 3 to 5, 2018. The RPA team consisted of the following members:

- Jason J. Cox, P.Eng., Project Manager, Principal Mining Engineer
- Wayne W. Valliant, P.Geo., Principal Geologist
- Phillip A. Geusebroek, P.Geo., Senior Geologist
- Steve Haggarty, Managing Director, Haggarty Technical Services

Discussions were held with personnel from Barrick:

- Ettienne Du Plessis, VP Mineral Exploration, Barrick
- Rick Sims, Senior Director Reserves and Resources, Barrick
- Edward Mahoney, Mineral Resources Manager, Goldstrike Operations
- Janna Linebarger, Chief Resource, Goldstrike Operations
- Jim Byars, Chief Geologist, Open Pit, Goldstrike Operations
- Doug Eck, Senior Geologist, Ore Control, Goldstrike
- Nathan Forsythe, Senior Mine Geologist, Goldstrike
- Chadwick Spencer, Senior Data Administrator, Goldstrike

The Goldstrike Betze-Post and Meikle operations have been the subject of Technical Reports and resource/reserve technical audits as follows:

- April 25, 2017, Technical Report on the Goldstrike Mine, Eureka and Elko Counties, Nevada, USA, Roscoe Postle Associates Inc.
- March 2012, NI 43-101 Technical Report, RPA (RPA, 2012)
- December 2010, Mineral Reserve & Resource Review, RPA
- December 2008, Mineral Reserve & Resource Review, Scott Wilson Roscoe Postle Associates Inc. (Scott Wilson RPA, a predecessor company to RPA)
- June 29, 2008, 2008 Mid-year Model Review, Resource Modeling Inc.
- January 2006, Reserve Procedure Audit, Scott Wilson RPA
- February 7, 2005, Review of Mineral Reserve Estimation Procedures, Scott Wilson RPA November 2004, Sarbanes Oxley Review, Scott Wilson RPA

Mr. Cox is responsible for the overall preparation of this report, and reviewed the underground and open pit mine planning and production and is responsible for Sections 15, 16, 18, 19, 21, 22, and 24. Mr. Valliant is responsible for Sections 2 through 11 and 23. Mr. Geusebroek reviewed the resource estimates and is responsible for Sections 12 and 14. Mr. Haggarty reviewed the metallurgical and environmental aspects of the operation and is responsible for Sections 13, 17, 20, and contributed to Section 21. The authors share responsibility for Sections 1, 25, 26, and 27 of this Technical Report. RPA would like to acknowledge the excellent cooperation in the transmittal of data by Barrick and Goldstrike personnel.

This report does not include information on the South Arturo property, located adjacent to the Goldstrike Mine, except where expressly indicated. South Arturo is a joint venture between Premier Gold Mines Limited (40%) and Barrick (60%). The mineralized material from South Arturo is trucked to Goldstrike and toll milled.

The documentation reviewed, and other sources of information, are listed at the end of this report in Section 27 References.

LIST OF ABBREVIATIONS

Units of measurement used in this report conform to the US customary system. All currency in this report is US dollars (US$) unless otherwise noted.

μ	micron
μg	microgram
a	annum
A	ampere
bbl	barrels
Btu	British thermal units
°C	degree Celsius
C$	Canadian dollars
cal	calorie
cfm	cubic feet per minute
cm	centimetre
cm^2	square centimetre
d	day
dia	diameter
dmt	dry metric tonne
dwt	dead-weight ton
°F	degree Fahrenheit
ft	foot
ft^2	square foot
ft^3	cubic foot
ft/s	foot per second
g	gram
G	giga (billion)
Gal	Imperial gallon
g/L	gram per litre
Gpm	Imperial gallons per minute
g/t	gram per tonne
gr/ft^3	grain per cubic foot
gr/m^3	grain per cubic metre
ha	hectare
hp	horsepower
hr	hour
Hz	hertz
in.	inch
in^2	square inch
J	joule
k	kilo (thousand)
kcal	kilocalorie
kg	kilogram
km	kilometre
km^2	square kilometre
km/h	kilometre per hour
kPa	kilopascal
kVA	kilovolt-amperes
kW	kilowatt
kWh	kilowatt-hour
L	litre
lb	pound
L/s	litres per second
m	metre
M	mega (million); molar
m^2	square metre
m^3	cubic metre
MASL	metres above sea level
m^3/h	cubic metres per hour
mi	mile
min	minute
μm	micrometre
mm	millimetre
mph	miles per hour
MVA	megavolt-amperes
MW	megawatt
MWh	megawatt-hour
oz	Troy ounce (31.1035g)
oz/st, opt	ounce per short ton
ppb	part per billion
ppm	part per million
psia	pound per square inch absolute
psig	pound per square inch gauge
RL	relative elevation
s	second
st	short ton
stpa	short ton per year
stpd	short ton per day
t	metric tonne
tpa	metric tonne per year
tpd	metric tonne per day
US$	United States dollar
USg	United States gallon
USgpm	US gallon per minute
V	volt
W	watt
wmt	wet metric tonne
wt%	weight percent
yd^3	cubic yard
yr	year

3 RELIANCE ON OTHER EXPERTS

This report has been prepared by RPA for Barrick. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to RPA at the time of preparation of this report; and
- Assumptions, conditions, and qualifications as set forth in this report.

For the purpose of this report, RPA has relied on ownership information provided by Barrick. The properties and mineral rights are owned or controlled through ownership of various forms of patents issued by the USA and by ownership of unpatented mining and millsite claims held subject to the paramount title of the USA. RPA has not researched property title or mineral rights for the Goldstrike Mine and expresses no opinion as to the ownership status of the property.

RPA has relied on Barrick for guidance on applicable taxes, royalties, and other government levies or interests, applicable to revenue or income from the Goldstrike Mine.

Except for the purposes legislated under provincial securities laws, any use of this report by any third party is at that party's sole risk.

4 PROPERTY DESCRIPTION AND LOCATION

The Goldstrike Mine property is located within the northern Carlin Trend on the western flank of the Tuscarora Mountains in Eureka and Elko Counties, north central Nevada, USA, approximately 38 mi northwest of Elko and 25 mi north-northwest of the town of Carlin. The Goldstrike Mine lies within Township 36 North and Ranges 49 & 50 East MDM. The administration building is located at approximately 40º58.389 N 116º21.149 W NAD 27 (Figure 4-1).

Barrick acquired the interest of Western States Minerals Corporation (WSMC) in the Goldstrike Mine in December 1986. In 1994, Barrick Goldstrike Mines, Inc. (Goldstrike), a wholly-owned subsidiary of Barrick, received patents under the General Mining Law to 1,793 acres of land on which the Betze-Post Mine, the Meikle Mine, and most of Goldstrike's milling and beneficiation operations are situated. In June 1995, Goldstrike acquired title to 1,657.5 acres of public lands in a land exchange with the Bureau of Land Management (BLM) that were subject to Goldstrike's unpatented millsite claims within or adjacent to Goldstrike's mining and milling operation. A second land exchange to consolidate land ownership occurred between Goldstrike and the BLM in 1995. The Section 31 land exchange (BLM 1995) resulted in Goldstrike acquiring title to 1,279 acres of public land that was subject to Goldstrike's unpatented mining claims within or adjacent to Goldstrike's mining and milling operations.

On May 3, 1999, Newmont Gold Company (Newmont) and Goldstrike completed a transaction known as the asset exchange. The purpose of the asset exchange was to rationalize the ownership and control of both the surface and subsurface estates that were jointly owned by the parties and to reduce the number of complex agreements that were needed to permit efficient operation and development of properties owned by both companies.

As a result of these exchanges, Goldstrike obtained:

(1) the land needed for the development of the west end of the Betze-Post open pit;
(2) control of the open pit, including the right to backfill the pit;
(3) control of other lands important to its security that were needed for waste rock facilities;
(4) the underground deposits adjacent to its Meikle and Rodeo mines.

A joint venture agreement between Goldstrike, holding 70%, and Newmont, holding 30%, allows mining of a small area in the North Post area owned by Newmont.

Current land ownership is shown in Figure 4-2.

The Goldstrike Mine area is composed of approximately 10,372 acres of surface rights of which approximately 1,922 acres are public lands administered by the BLM and 8,450 acres are patented and private lands owned by Goldstrike. There are approximately 8,736 acres of mineral rights ownership/control made up of 1,962 acres of public lands and 6,774 acres of private land. These rights are owned or controlled through ownership of various forms of patents issued by the USA and by ownership of unpatented mining and millsite claims held subject to the paramount title of the USA.

The Goldstrike Mine property includes a total of 298 unpatented mining and mill-site claims. Unpatented mining and mill-site claims are maintained on an annual basis, and do not expire as long as the maintenance fee payments are made. All mining leases and subleases are reviewed on a monthly basis and all payments and commitments are paid as required by the specific agreements. Details of the claims are a matter of public record, available at the BLM Land & Mineral Legacy Rehost System (LR2000 website).

Figure 4-3 shows the general surface arrangement of the property and the footprint of the Goldstrike mineralization relative to the property boundaries.

A total disturbance of 9,028 acres is currently authorized for the Mine. The majority (87%) of the total authorized disturbance will occur on private lands owned by Goldstrike. The remainder (13%) of the authorized disturbance will occur on public lands administered by the BLM.

The Goldstrike property has various royalty holders with a maximum overriding Net Smelter Royalty (NSR) of 4% and Net Profit Interest Royalties (NPI) of between 2.4% and 6% over various parts of the property. Key royalty holders are Franco-Nevada U.S. Corp. and Royal Gold, Inc.



Figure 4-1

Barrick Gold Corporation

Goldstrike Mine

Eureka & Elko Counties
State of Nevada, U.S.A.

Location Map

March 2019

Source: RPA Map Library, 2012.

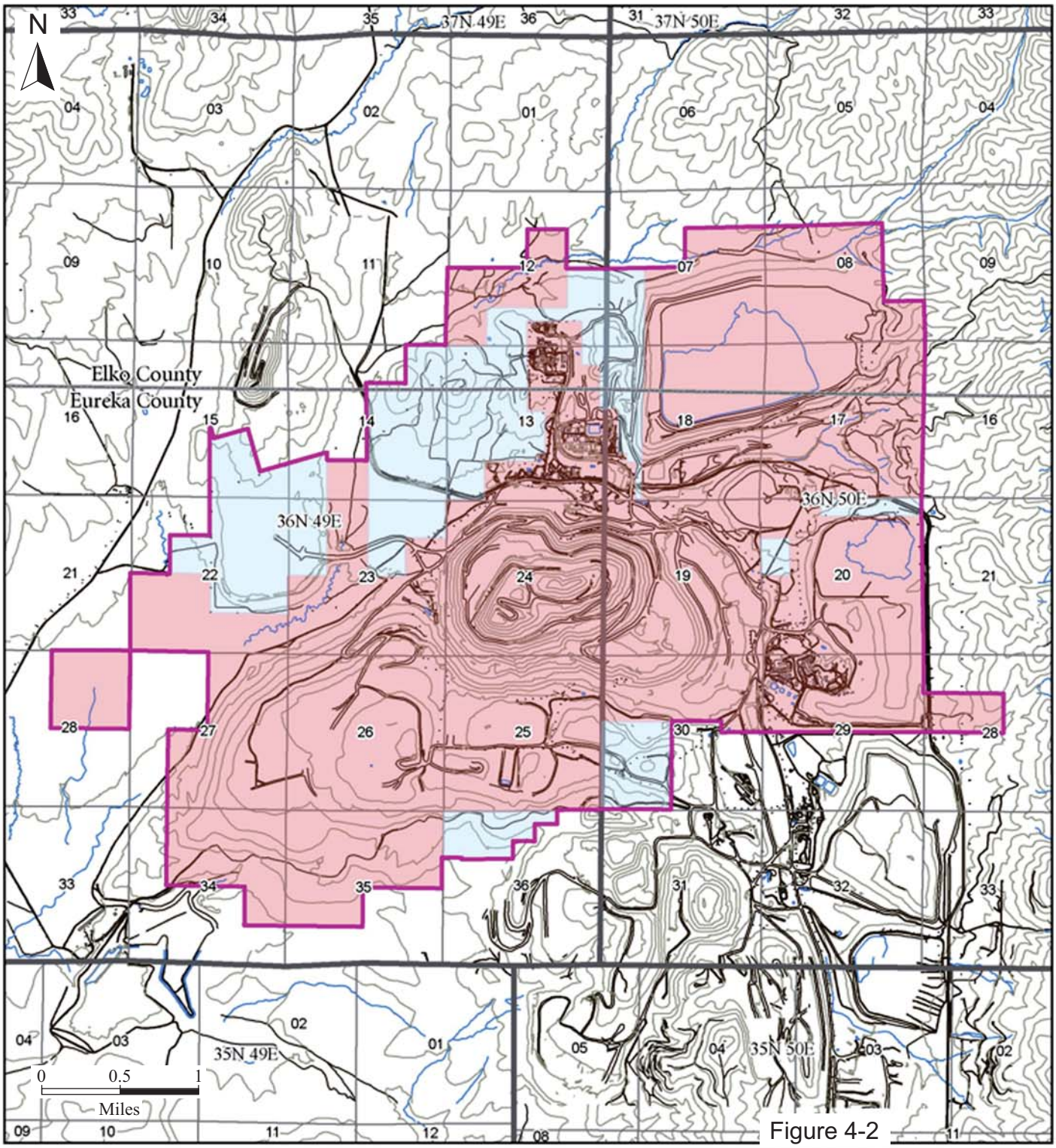


Figure 4-2

Legend:

- Goldstrike Property Boundary
- Barrick Owned Patented
- USA Public Land Controlled by Barrick Claims

Barrick Gold Corporation

Goldstrike Mine

Eureka & Elko Counties
State of Nevada, U.S.A.

Land Ownership

March 2019

Source: Barrick, 2016.

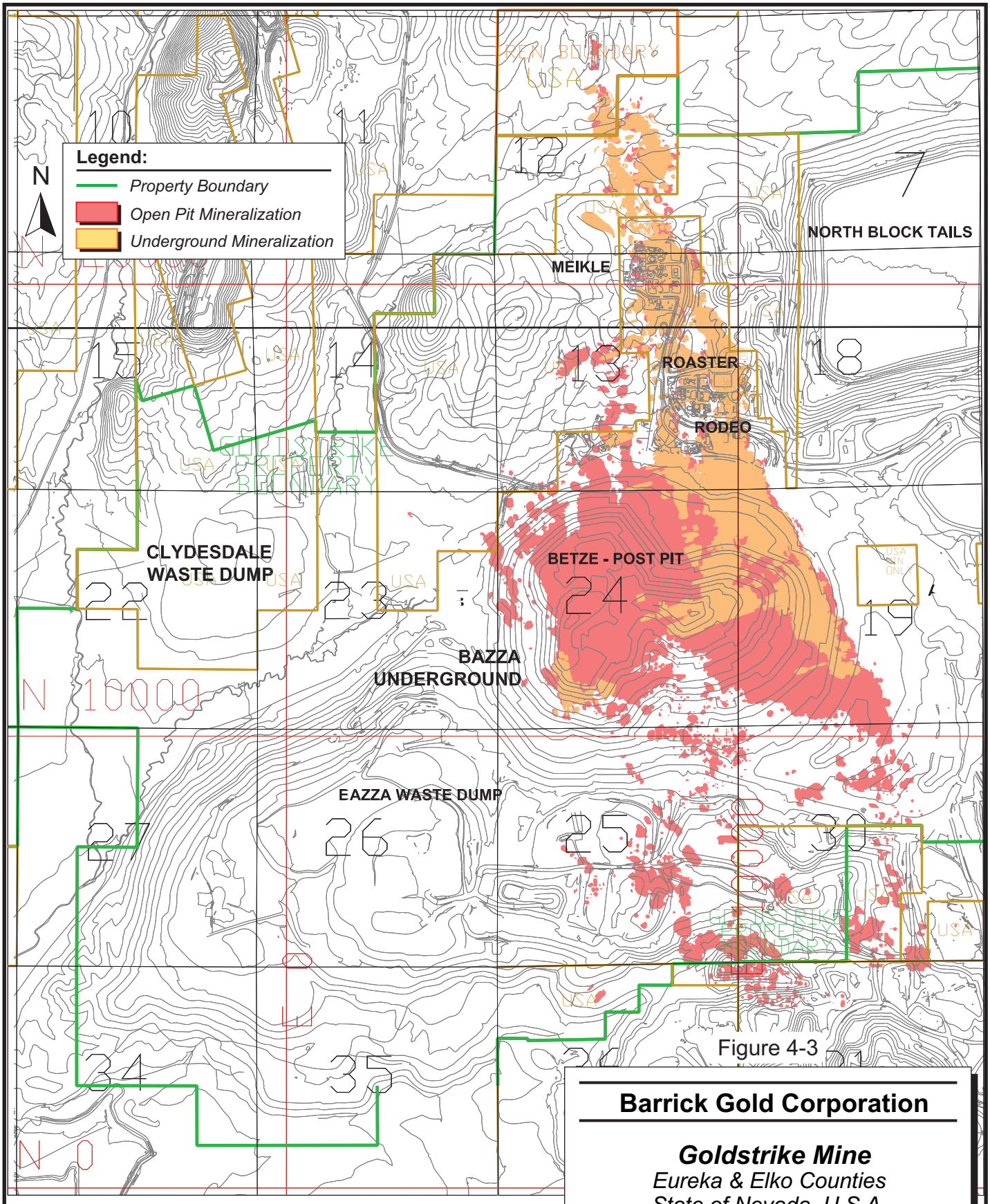


Figure 4-3

Barrick Gold Corporation

Goldstrike Mine
Eureka & Elko Counties
State of Nevada, U.S.A.
Footprint of Mineralization

March 2019

Source: Barrick, 2019.

In order to minimize environmental liabilities on the property, Barrick has secured all required environmental permits and conducts work in compliance with these permits. Additionally, Barrick complies with all applicable legal and other obligations. RPA is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the property.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

ACCESSIBILITY

The Goldstrike Mine is accessed from Elko, Nevada, by travelling west approximately 26 mi on U.S. Interstate 80 to Carlin, Nevada, where State Route 766 provides access to various mining operations, including the Goldstrike Mine. Access to the property is provided by access agreements with Newmont that allow for the use of various roads in the area and a right-of-way issued by the BLM. The roads are well-maintained and most are paved.

CLIMATE

Annual temperatures range from minus 38ºF to plus 104ºF. Average annual snowfall averages 30 in., while annual rainfall averages eight to ten inches. The heaviest months of precipitation are during the winter, as snow, and in May and June, as rain. Summer precipitation occurs mostly as scattered showers and thunderstorms, making only a minor contribution to overall precipitation. The effect of climate on operations is minimal. Approximately two processing shifts per year are lost due to weather.

LOCAL RESOURCES

The Goldstrike Mine is located in a major mining region and local resources including labour, water, power, natural gas, and local infrastructure for transportation of supplies are well established. The majority of the workforce lives in the nearby towns of Elko, Spring Creek, Carlin, and Battle Mountain.

The water for process and mining is delivered from dewatering production wells. The water supply is more than adequate for present and planned requirements. Active dewatering operations are required and a water management group is in place to carry out all dewatering including pumping, distribution, delivery, and disposal.

Barrick built a 115 MW natural gas-fired power plant near Reno, Nevada that became operational in the fourth quarter of 2005. This allows Goldstrike the flexibility to provide power through a combination of self-generation and market purchases.

Natural gas is delivered via a natural gas pipeline. The natural gas pipeline is a continuation of the North Elko Pipeline (NEP) that is a lateral of the Ruby Pipe Line and extends to a metering station at the fence line of the Goldstrike Mine property. The new pipeline starts at the main metering station located at the southeast corner of the Goldstrike Mine. The pipeline terminates at several locations where major pieces of equipment are located within the autoclave and roaster facilities.

An integral part of the work was the conversion of all major consumers from propane-fired to natural gas-fired service. Conversion includes burners, burner controls, and two sub-metering flow/pressure regulation stations where gas parameters are adjusted to an operating range. The entire four miles of pipeline has been constructed within the fence line of the Goldstrike Mine property.

INFRASTRUCTURE

The surface rights secured for the Goldstrike Mine are sufficient to provide the necessary space required for all mining and quarrying activities. Enough land area also exists on the property to accommodate all foreseeable processing plants, ore and stockpiles, tailings impoundments, and waste disposal areas.

Currently, the major assets and facilities associated with the Goldstrike Mine are:

- Underground and open pit mines with production from several mineralized zones.
- The physical plant site including the administrative office complex and associated facilities, the open pit and underground mine workings and associated facilities, ore processing plants (autoclave pressure oxidation and roaster circuit) and associated facilities such as laboratories, ore stockpiles, waste dumps, coarse ore storage, tailings storage, workshops, and warehouses.
- Facilities providing basic infrastructure to the mine, including electric power, water treatment and supply, and sewage treatment.
- Surface and underground infrastructure including mine ramps, headframes, hoists, ventilation raises, maintenance shops, and mobile equipment fleets.

PHYSIOGRAPHY

The Goldstrike property is located in the Great Basin of north central Nevada, USA. The Mine is at an elevation of approximately 5,600 ft in the hilly terrain of the Tuscarora Mountains with elevations varying from 5,400 ft to 6,000 ft in the immediate area.

The combination of topography and a mid-latitude steppe climate, common to the Great Basin, has produced grass and shrub dominated vegetation. Disturbances to the vegetation, including overgrazing, large-scale range fires of the 1960s, past and present mining operations, and mineral exploration have converted much of the remaining native vegetation within the area to early non-native annuals, sagebrush, and rabbit brush. Riparian vegetation exists in association with perennial stream flow in Bell, Brush, and Rodeo Creeks, as well as near springs located throughout the Little Boulder Basin.

6 HISTORY

The following history of the Goldstrike Mine property owned by Barrick was obtained from Keith Bettles' report (Bettles, 2002).

The earliest gold mining activity in the northern part of the Carlin Trend occurred at the Bootstrap and Blue Star mines prior to the discovery of gold at the Goldstrike Mine property. At Bootstrap, just northwest of the Goldstrike Mine, antimony was discovered in 1918, followed by gold in 1946. Gold was produced at Bootstrap during 1957 to 1960. At Blue Star, immediately south of the Goldstrike Mine, gold was identified in 1957 in areas that had been mined for turquoise. At the Goldstrike Mine, the only evidence of early mining activities is small workings for mercury of unknown age, located along the Post fault zone, south of the Meikle deposit.

The first discovery of gold in the Goldstrike Mine property was in 1962 by Atlas Minerals. Soil samples and drilling discovered low-grade gold mineralization. No further work was conducted until an increase in gold price was seen in 1973 to 1974, which led the Nevada Syndicate (funded by Lac Minerals) to re-evaluate the area. Using various exploration methods, shallow mineralization in the Long Lac and Winston areas was outlined. Polar Resources (Polar) in 1975, followed by Pancana Minerals Ltd. (Pancana) from 1976 to 1977, delineated the Number 9 deposit and several low-grade zones within the Goldstrike intrusion to the east of Nevada Syndicate property. From 1975 to 1977, Polar and Pancana operated a small open pit and heap leach.

In 1978, WSMC entered into a 50/50 joint venture with Pancana, which had consolidated the various claims and leases in the Goldstrike Mine area. The bulk of the production was from oxidized zones, chiefly from the Long Lac, Bazza, and West Bazza deposits, plus some production from deposits within the Goldstrike intrusion. The Post deposit was discovered in 1982. Exploration continued until 1986 when a deep core hole was drilled at Post and the Deep Post deposit was discovered.

American Barrick Resources Corporation acquired the mine and properties from WSMC (50%) in December 1986 and subsequently purchased Pancana's interest (50%) in January 1987 for a total purchase price of $62 million. An aggressive deep drilling program outlined the large,

high-grade Deep Post deposit, which was subsequently found to continue onto the adjacent property owned by Newmont. Exploration drilling in 1987 to 1988 led to the discovery of a number of other deposits similar to Deep Post. These included Betze and Screamer which, together with Deep Post, comprise the Betze-Post deposit. Other discoveries in 1987 and 1988 included Deep Star, Rodeo, Meikle (previously named Purple Vein), South Meikle, and Griffin.

Additional drilling in 1987 and 1988 expanded the reserve to justify bringing the Betze-Post deposit into production by open pit methods. Even though the deposit was deep, the size and grade allowed for economic development. Heap leach ore production from the Betze-Post pit continued from the time of purchase to the end of 1998. Oxide mill ore processing started in August 1988 and the autoclave portion of the mill, which oxidizes sulphide ores, commenced operation in early 1990. The processing of ores by the roaster began in 2000.

The Meikle deposit, formerly known as the Purple Vein, is located approximately 1.5 mi north-northwest of Barrick's Betze-Post deposit and is currently in production. The deposit is approximately 800 ft to 2,000 ft below the surface. Although there is very little gold at the surface above the Meikle, Rodeo/Goldbug, and Griffin deposits, there is extensive silicification of the rocks along fault zones and a weak arsenic anomaly has been detected in soil samples. The Meikle deposit was discovered in September 1989 when the tenth deep drill hole EX-89-4 intersected 540 ft of 0.41 oz/st Au from 1,305 ft to 1,845 ft. This hole was targeted at an inferred structural intersection associated with induced polarization (IP) geophysical and soil geochemistry anomalies. Gold mineralization is absent at surface (in contrast to the Betze-Post deposit), although the area was the site of small-scale mercury workings in the 1940s.

Discovery of the Rodeo and Griffin deposits were part of the original deep exploration program. Both predate the discovery of Meikle. The discovery of the Rodeo deposit was in June 1988 and Griffin in July 1988. Their development since discovery has been significantly aided by the knowledge gained from the Meikle mine and from the underground access from the Meikle mine.

The 1999 Asset Exchange with Newmont resulted in the acquisition of the Goldbug (the southern portion of Rodeo), West Rodeo, Barrel, and North Post deposits. These deposits were in the Newmont land corridor separating the Betze-Post and Meikle mines. The Banshee property north of the Meikle was also part of the exchange.

PAST PRODUCTION

Past production (tons hoisted) from the underground operations for the past 10 years is listed in Table 6-1.

TABLE 6-1 PAST 10 YEARS PRODUCTION - UNDERGROUND MINE
Barrick Gold Corporation – Goldstrike Mine

Year	Tons Mined (000)	Grade (oz/st Au)	Contained Gold (000 oz)
2009	1,252	0.366	458
2010	978	0.307	300
2011	1,154	0.284	327
2012	1,312	0.277	364
2013	1,497	0.277	415
2014	1,766	0.258	455
2015	1,618	0.280	452
2016	1,604	0.287	461
2017	1,376	0.259	356
2018	1,411	0.274	387
Total	**13,968**	**0.285**	**3,975**

Past production from the open pit mine for the past 10 years is listed in Table 6-2.

TABLE 6-2 PAST 10 YEARS PRODUCTION - OPEN PIT MINE
Barrick Gold Corporation – Goldstrike Mine

Year	Tons Mined (000)	Grade (oz/st Au)	Contained Gold (000 oz)
2009	3,990	0.188	749
2010	13,734	0.134	1,847
2011	3,064	0.097	298
2012	12,748	0.113	1,443
2013	6,032	0.119	717
2014	6,549	0.136	892
2015	8,011	0.122	974
2016	1,818	0.156	284
2017	1,372	0.099	136
2018	5,088	0.109	556
Total	**62,408**	**0.127**	**7,896**

Production at the Goldstrike Mine has varied on an annual basis, with the largest annual variance in production being the open pit mining, where ore production is a function of the ore

availability in the pit. The large annual variance is smoothed through the use of stockpiles. The total gold production at the Goldstrike Mine since 1987 is shown in Table 6-3. The difference between the contained gold mined and the gold production from the plant is a combination of metallurgical recovery, variations in the grade of material taken from stockpiles, and other minor items.

TABLE 6-3 HISTORICAL PRODUCTION – PLANT FACILITIES
Barrick Gold Corporation – Goldstrike Mine

Year	Open Pit (oz)	Underground (oz)	Total (oz)
1987	40,144	-	40,144
1988	119,418	-	119,418
1989	207,264	-	207,264
1990	352,880	-	352,880
1991	546,146	-	546,146
1992	1,108,218	-	1,108,218
1993	1,439,928	-	1,439,928
1994	1,849,503	-	1,849,503
1995	2,031,885	-	2,031,885
1996	1,934,966	78,442	2,013,408
1997	1,605,836	574,308	2,180,144
1998	1,498,683	847,312	2,345,995
1999	1,130,093	977,357	2,107,450
2000	1,646,640	805,719	2,452,358
2001	1,549,975	712,688	2,262,663
2002	1,409,985	640,337	2,050,322
2003	1,559,461	551,664	2,111,125
2004	1,381,315	561,345	1,942,660
2005	1,514,320	509,568	2,023,887
2006	1,387,864	477,036	1,864,900
2007	1,215,447	413,186	1,628,632
2008	1,281,450	424,447	1,705,897
2009	961,906	388,548	1,350,454
2010	884,200	281,308	1,165,508
2011	721,534	279,349	1,000,882
2012	812,707	327,203	1,139,910
2013	521,489	360,578	882,067
2014	515,641	386,679	902,320
2015	642,493	411,003	1,053,496
2016	544,736	417,438	962,174
2017	433,422	332,315	765,737
2018	458,287	337,376	795,664
Total	**33,307,836**	**11,095,206**	**44,403,039**

7 GEOLOGICAL SETTING AND MINERALIZATION

REGIONAL GEOLOGY

The Goldstrike Mine is located in the eastern Great Basin (Basin and Range Province) within the northern Carlin Trend on the western flank of the Tuscarora Mountains. The Carlin Trend is an alignment of gold mines located in a northwest-southeast belt extending five miles wide and 40 mi long, which accounts for more gold production than any other mining district in the United States. The northern trends account for in excess of twenty gold mines and deposits.

Two regionally recognized assemblages comprise the sedimentary strata of northeastern Nevada (Figure 7-1). The western or siliciclastic assemblage consists of mudstone, chert, siltstone, and minor limestone and includes imbricate thrust slices of Devonian Slaven, Silurian Elder, and Ordovician Vinini Formations. The eastern assemblage of carbonate rocks consists of calcareous mudstone, siltstone and sandstone of the Rodeo Creek Unit, muddy limestone of the Devonian Popovich Formation, silty limestone to massive fossiliferous limestone of the Silurian-Devonian Roberts Mountains Formation, sandy dolomite of the Ordovician Hanson Creek Formation, quartzite of the Ordovician Eureka Quartzite, and limestone, cherty limestone, and dolomite of the Ordovician Pogonip Group.

Jurassic quartz diorite, as plugs, sills, and dikes, has intruded the Paleozoic sedimentary rocks. Contact metamorphism affects the sedimentary rocks adjacent to the larger igneous bodies and is evident in the formation of marble, calc-silicates, hornfels, and skarn. Dikes and sills of Jurassic monzonite and lamprophyre, and Tertiary dacite and rhyodacites, are mapped in the area. Miocene rhyolite flows occur to the west in Boulder Valley. Tuffaceous fluvial and lacustrine semi-consolidated sediments of the Tertiary Carlin Formation and Quaternary alluvium unconformably top the stratigraphic section.

The Antler orogeny extensively deformed Paleozoic rocks of the Great Basin in Nevada and western Utah during Late Devonian and Early Mississippian time. In the late Devonian some 350 million years B.P., the Antler volcanic island arc terrane collided with what was then the west coast of North America and the North American Plate. The collision zone is marked by the Carlin Trend and the Roberts Mountains Thrust. The siliciclastic rocks were thrust

eastward over the carbonate rocks during the Antler Orogeny (Roberts Mountains Thrust). Mesozoic compressional deformation was also important regionally as indicated by various east and west as well as north-northeast and south-southwest verging thrusts. Tertiary faulting developed basins and ranges with the former subsequently filled with volcanics and sediments during Tertiary time. Gold mineralization occurred at the onset of Tertiary volcanism, approximately 39 million years ago.

The stratigraphic section is cut by a series of north-northwest, northwest, northeast and north-northeast striking high and low-angle faults with extensive fracturing, brecciation, and folding. These faults both control and displace mineralization, with evidence for both dip-slip and oblique-slip displacements. Jurassic and Tertiary intrusives utilized both high and low angle faults as they intruded the Paleozoic section. Cenozoic Basin and Range deformation most likely reactivated many of the faults in the area.

In terms of their regional tectonic setting, the Carlin Trend gold deposits are hosted in carbonate rocks within a thick sequence of Paleozoic miogeoclinal sedimentary rocks coincident with:

1) the thinned western margin of the North American craton in early Paleozoic times;
2) the west-central portion of the Lower Devonian Antler foreland basin;
3) the east edge of deformation related to the late Paleozoic Humboldt orogeny;
4) Jurassic plutonism, metamorphism and deformation;
5) the hinterland of the early Tertiary Sevier orogenic belt; and
6) the broad zone of Eocene to Miocene calc alkaline magmatism and tectonic extension that occurred throughout much of the Great Basin.

The collision between Antler terrane and the North America plate induced higher crustal temperatures and pressures which produced numerous hot springs along the suture zone. Several episodes of subsurface magmatism are known to have occurred subsequent to the collision. During these episodes, and particularly during the Eocene epoch, hydrothermal fluids brought dissolved minerals toward the surface, precipitating them out along fissures. Among these minerals were gold and silver. Most of the largest gold deposits lie within 350 ft of the Roberts Mountain Thrust at the base of the allochthon. Geochronologic study indicates that most of the gold in the Carlin Trend was emplaced over a short interval of time between approximately 42 and 36 Ma. Analyses of the sulphosalt galkhaite from the Rodeo deposit at the Goldstrike Mine have yielded a mineralization age of 39.8 ± 0.6 Ma.

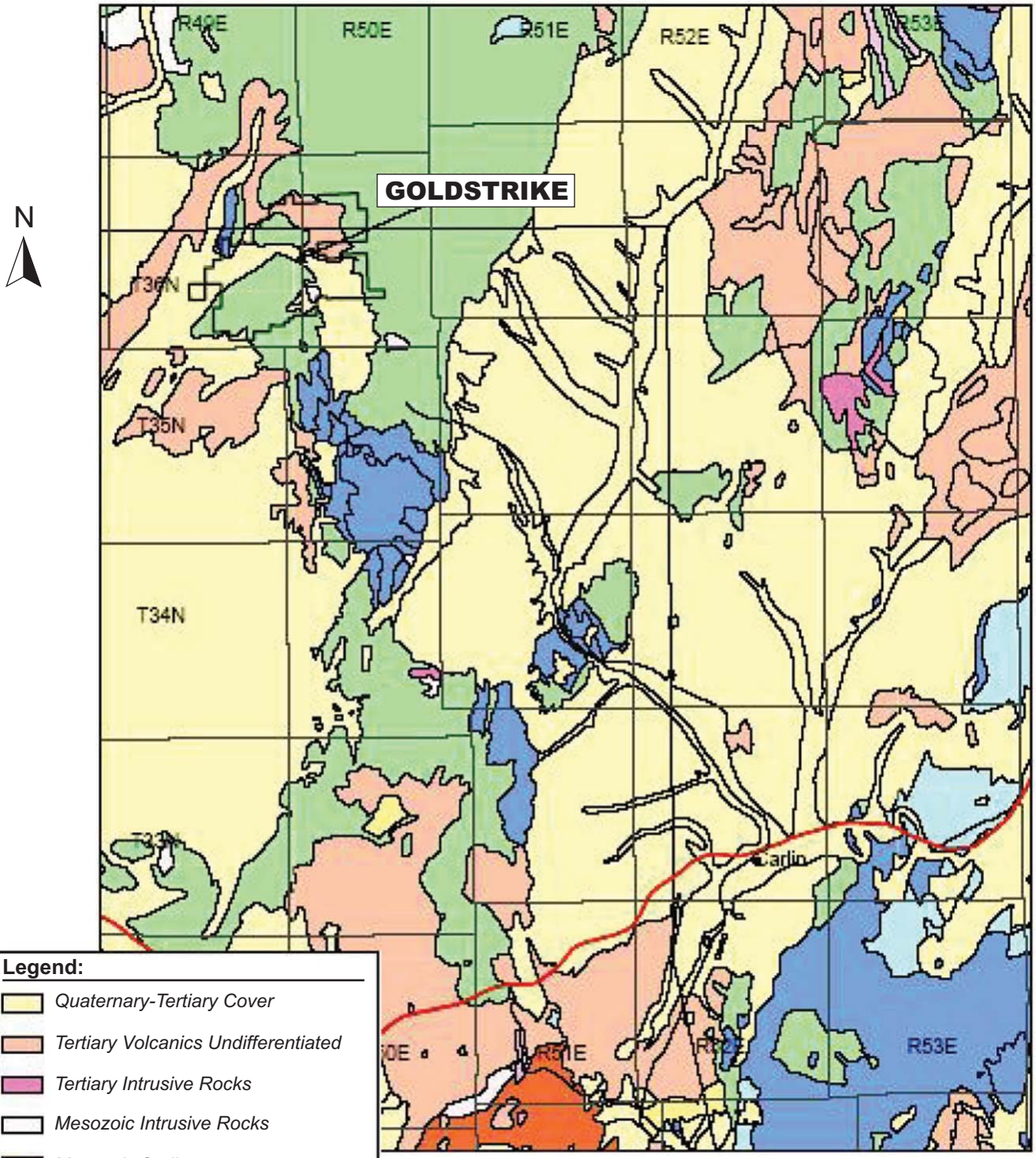


Figure 7-1

Barrick Gold Corporation

Goldstrike Mine
Eureka & Elko Counties
State of Nevada, U.S.A.
Regional Geology

March 2019

Source: Murray et al., 2005.

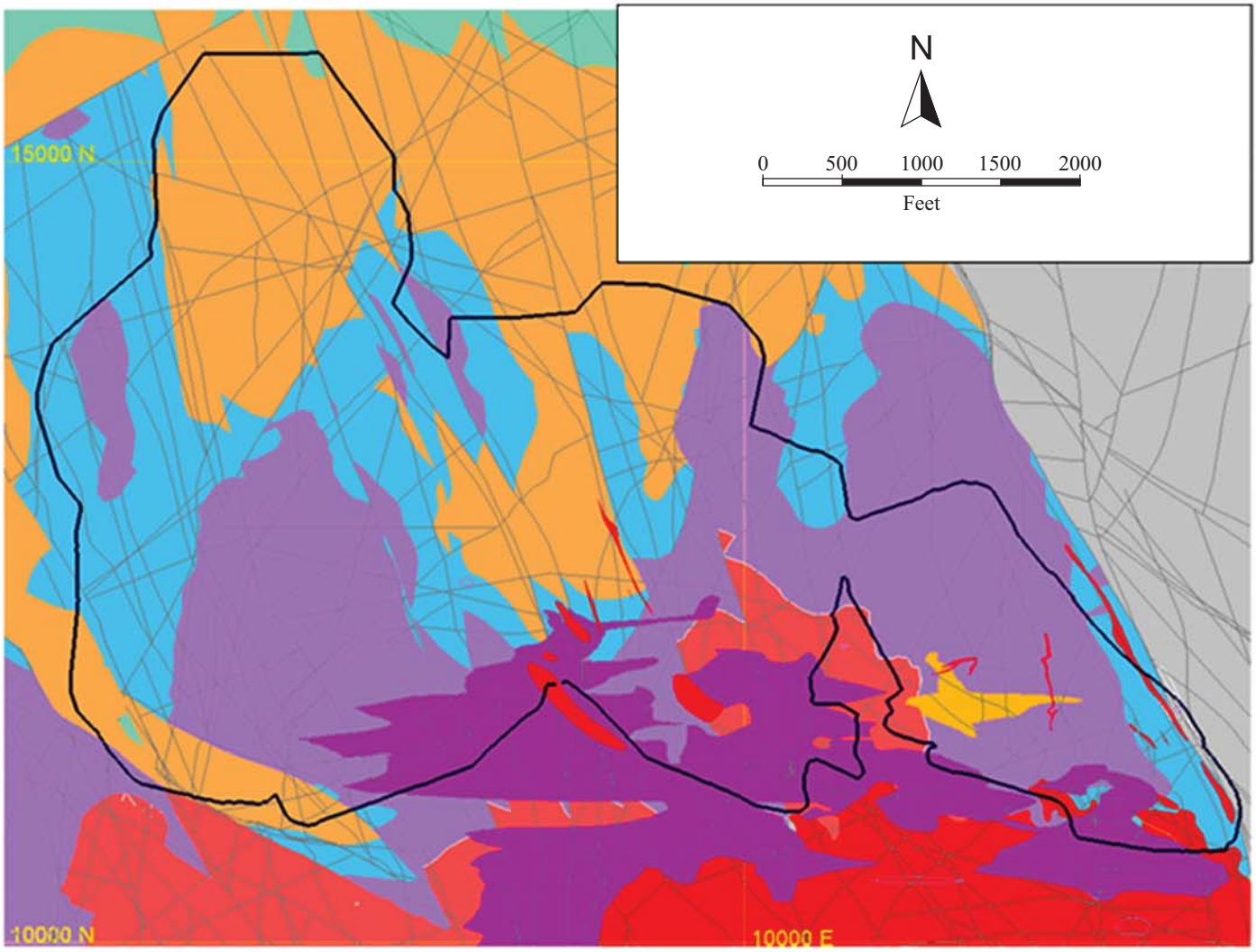
PROPERTY GEOLOGY

OPEN PIT

At the Betze-Post open pit, the stratigraphic sequence from the base is as follows: Silurian-Devonian Roberts Mountains Formation silty/fossiliferous/laminated limestones and sedimentary breccias; Devonian Popovich limestones, limey mudstones and sedimentary breccias; and Devonian Rodeo Creek siltstones and argillites; Ordovician Vinini Formation siltstones, mudstones, and cherts (Figures 7-2 and 7-3). These formations have been intruded by the Goldstrike stock and other Jurassic diorite dikes and sills as well as by Tertiary dikes and sills. The Vinini Formation rocks, which lie mostly east of the pit, have been thrust over the younger units along the Roberts Mountains Thrust that is exposed in the wall of the Betze-Post open pit. Unconformably overlying the older units are volcaniclastic sedimentary rocks, tuffs, and gravels of the Tertiary-aged Carlin Formation in turn succeeded by Quaternary alluvium.

The Slaven, Elder, and Vinini Formations contain similar lithologies and are usually collectively referred to as the Vinini Formation. The regional Roberts Mountains Thrust fault separates the Vinini Formation and the Rodeo Creek Unit. The Rodeo Creek Unit has been subdivided into four units: (1) a lower calcareous mudstone-argillite unit; (2) a calcareous sandstone unit; (3) a calcareous mudstone, siltstone, and argillite unit; and (4) an upper carbonaceous limestone unit.

The Popovich Formation is subdivided into four units: (1) the lower Wispy Unit, which consists of wispy laminated muddy to silty limestone with abundant interbedded debris flows; (2) the planar unit consisting of thin planar bedded muddy limestone, (3) the soft-sediment deformation unit of thick to medium bedded muddy to micritic limestone with occasional soft-sediment deformation features, and (4) the upper muddy limestone unit consisting of thin to medium bedded muddy limestone.



Calc-silicate alteration

Jurassic Goldstrike sill complex

Upper mud member - thin to medium bedded muddy limestone

Soft sediment deformation member - thick to medium. Bedded muddy to micritic limestone with occasional soft sediment deformation features

Planar member - thin planarbedded muddy limestone

Wispy member - wispy laminated muddy to silty limestone with inter edded debris flows

Devonian Popovich Formation

Silurian-Devonian Roberts Mountain Formation

Ordovician Vinini Formation

Faults

Ultimate Pit

Figure 7-2

Barrick Gold Corporation

Goldstrike Mine

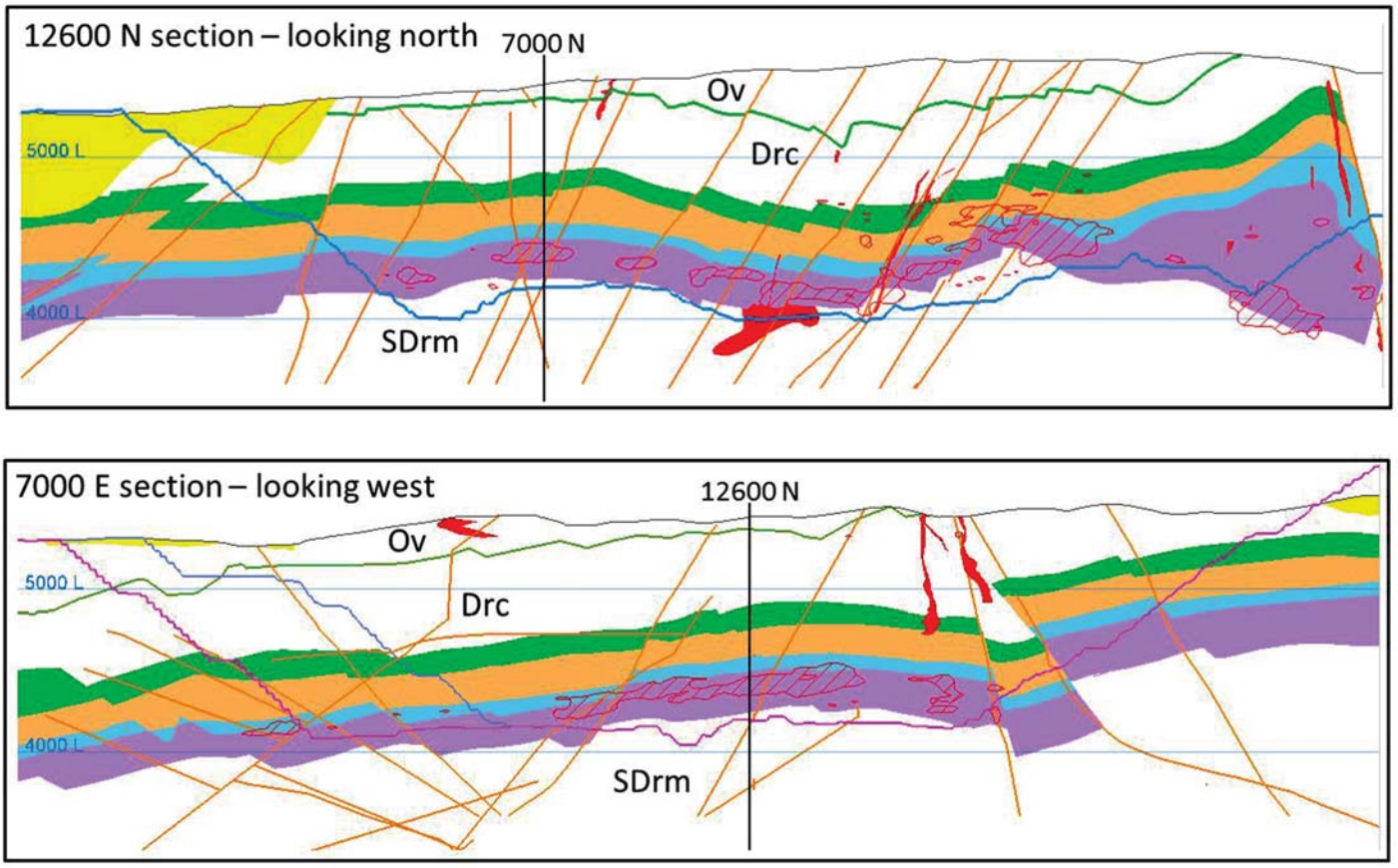
Eureka & Elko Counties

State of Nevada, U.S.A.

Open Pit Geology

March 2019

Source: Barrick, 2014.



Carlin Formation
Igneous Dikes
Drc Devonian Rodeo Creek Unit
Popovich
Upper Mud Unit
Soft Sediment Deformation Unit
Lower Laminated Unit
Wispy Unit
Ov Ordovician Vinini Formation
SDrm Sillurian-Devonian Roberts Mountains Fm.

Faults
Roberts Mountains Thrust
EOY 2016 Topography
LOM Design
0.1 oz/st contour

0 500 1000 1500 2000
Feet

Figure 7-3

Barrick Gold Corporation

Goldstrike Mine
Eureka & Elko Counties
State of Nevada, U.S.A.
Open Pit Geology Cross Sections

March 2019

Source: Barrick, 2016.

The Roberts Mountains Formation is subdivided by a facies change from north to south. In the south, from the Betze-Post open pit through the Rodeo underground mine, a thin bedded, planar laminated silty limestone basinal facies predominates with an upper coarse wispy laminated horizon. To the north of the Rodeo underground mine, the Bootstrap massive fossiliferous limestone is present. This facies relationship reflects a Roberts Mountains high related to reef development along the Paleozoic continental margin. The Popovich Formation thins to the north in response to the Roberts Mountains high, and both the Popovich and the Roberts Mountains units show local facies transitions with the Bootstrap limestone. At Betze-Post through Rodeo, there is a full section of Popovich, however, at the north end of Meikle, only the upper member of the Popovich is present. The Roberts Mountains high at Meikle has been accentuated by high and low angle reverse faulting.

The Hanson Creek Formation is a medium to thick bedded to massive dolomite to sandy dolomite. Drilling to date on the property has intercepted only the top of the Hanson Creek Formation. The Eureka quartzite thickness ranges from a massive to thinly bedded orthoquartzite with local lenses of dolomite. The Pogonip Group contains thin to thick bedded limestone, cherty limestone, and dolomite. The Eureka quartzite and Pogonip Group have not been intercepted with drilling on the property but occur in outcrop to the southeast.

ALTERATION

Pre-mineralization alteration includes dolomitization of limestones and migration and maturation of hydrocarbons. Jurassic intrusive rocks are extensively sericitized, which may be due to retrograde metasomatic alteration in a pre-mineralization Mesozoic hydrothermal event. From east to west, the Deep Post is affected by argillic alteration, the Betze deposit by decarbonatization of its upper zone and silicification of the lower zone, with similar, but weaker alteration affecting the Screamer deposit. Decalcification produced extensive zones of permeable collapse breccias, ground preparation for hydrothermal fluids and gold bearing pyrite mineralization. Ore stage alteration was accompanied by illite and quartz deposition followed by late quartz and kaolinite.

STRATIGRAPHY AND STRUCTURE

Structures on the property record a complex history of contractional and extensional tectonics and later reactivation during successive periods of deformation. Stratigraphic formations have gentle dips except in the vicinity of high angle faults and along the western margin of the

Goldstrike stock where bedding may be steeper. Mesozoic folding and thrust faults form important structural traps for the mineralization in the Betze-Post open pit.

The strata are cut by a series of Tertiary north-northwest, northwest, northeast, and north-northeast striking high and low angle faults accompanied by extensive fracturing, brecciation, and drag folding. Primary high angle faults strike north-northwest and dip east and west. Secondary faults strike east to east-northeast and dip north. These faults both control and displace mineralization, with evidence for both dip-slip and oblique-slip displacements. The structure with the most mineralization offset in the district is the Post Fault Zone, which is approximately 250 ft wide, and has over 2,000 ft of normal displacement at Betze-Post open pit and approximately 1,300 ft of normal displacement to the north at the Meikle deposit. Cenozoic faulting created basins up to 1,000 ft deep, east of the Post Fault, which were then filled by the clastic and volcaniclastic sediments of the Carlin Formation.

Gold mineralization in the open pit occurs at fault intersections as well as where faults intersect anticlinal fold axes in decalcified rocks such as sedimentary and collapse breccias in the lower Popovich limestone.

UNDERGROUND

As in the open pit, the geology of the underground deposits is characterized by two regional lithologic assemblages: (1) the "eastern" or carbonate assemblage of the Devonian Popovich and Silurian-Devonian Roberts Mountains Formations, and (2) the transitional Rodeo Creek Formation (Figure 7-4). The allochthonous western assemblage, which includes the Ordovician Vinini, Silurian Elder, and Slaven Chert Formations, is also present, however, at this time it is not known to host any underground ore bodies.

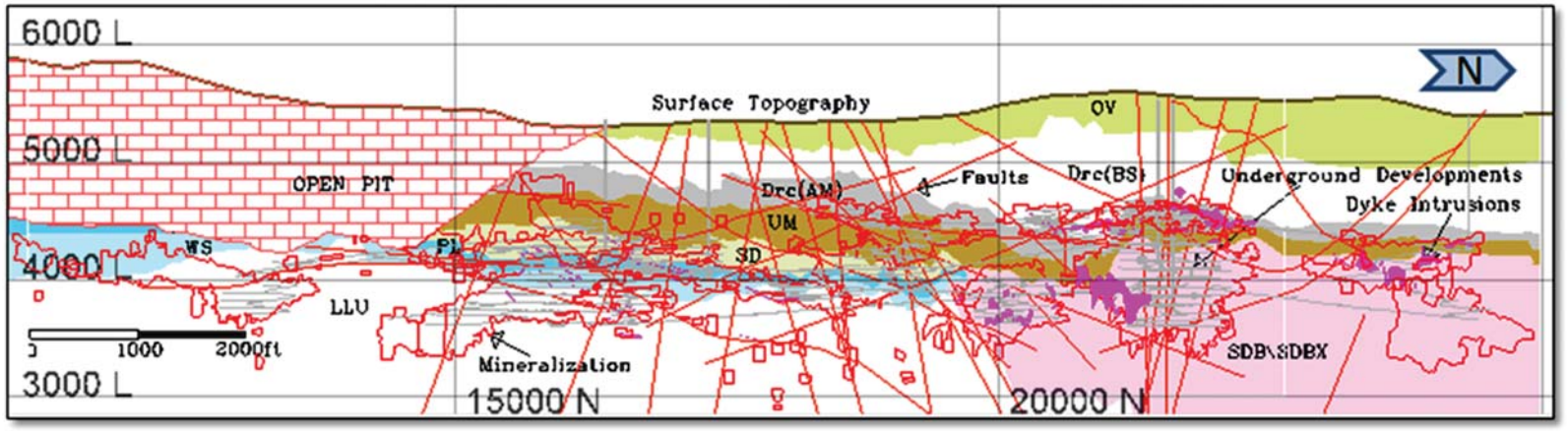
A brief description of the formations starting from the base and moving upwards is taken from Linebarger (2011):

- **Roberts Mountains Formation**: Underlies most of the property and is mineralized when strongly brecciated or intersected by structural features. The Roberts Mountains Formation is predominantly a thin-bedded silty limestone, which is locally dolomitic. This limestone transforms into shallow water reef and shoal facies informally termed the Bootstrap Limestone to the north and northeast. The Bootstrap Limestone at Meikle occurs as a series of structural highs, upon which the Popovich and Rodeo Creek Formations were deposited in an overall progradational environment. Gold mineralization is hosted primarily in rocks overlying the Bootstrap Limestone.

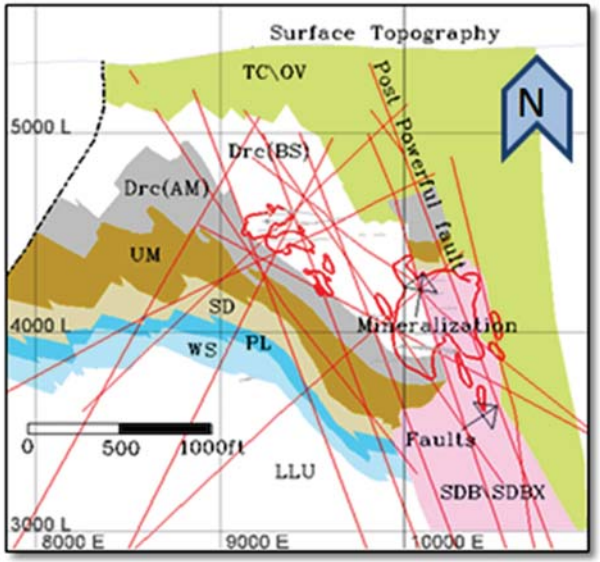
- **Popovich Formation**: The Popovich Formation is a major host for gold mineralization, particularly in the southern mining areas such as the Rodeo deposit. Rocks of the Popovich setting are typically carbonaceous, somewhat permeable, and are part of a marine slope facies. They were products of a shallower water depositional environment than the Vinini Formation and the other western assemblage siliciclastics. This formation overlies the Roberts Mountains Formation and is subdivided into four distinct units (described from base):
  - Wispy (WS): The dominant mineralization host in the Rodeo Lower Zone. It is a grey silty limestone with distinct undulation laminations intercalated with debris flow horizons. A clast supported collapse breccia often occurs near the base.
  - Planar Laminated (PL): A minor mineralization host in the Rodeo Lower Zone, but the predominant host of the Barrel Zone. It is a black to dark grey, fine grained, variably calcareous, and fossiliferous mudstone.
  - Soft Sediment Deformation (SD): Light grey, thickly bedded micritic limestone that hosts some of the Barrel mineralization and is a minor host to the Rodeo Upper Zone. It displays distinctive swirled bedding, but the base can be fresher and better bedded than upper sections.
  - Upper Mud (UM): The Upper Mud is the dominant host for Rodeo Upper Zone mineralization, for mineralized lamprophyre dykes in the South Meikle Zone, and for west dipping dykes in the South Griffin Zone. Characterized by finely bedded limey mudstone, it is interlayered near the upper contact with mudstone beds. There are sub-units of finely disseminated pyritic lamina and cherty and debris flow lenses.

- **Rodeo Creek Formation**: Overlies the Popovich Formation and underlies the Roberts Mountains Thrust (RMT). This formation is represented by a sequence of argillites and a locally mineralized package of silts and sandstones (Bazza Sand). The rocks of the Rodeo Creek are slightly calcareous, but much less so than those rocks of the carbonate assemblage and represent a deep water transitional facies between the eastern and western assemblages. It is the host to the Griffin and Griffin West zones. It is divided into three units (described from base to top).
  - Lower Argillite (AM): The generally barren Lower Argillite unit can host narrow mineralization within silty interbeds if intersected by favorable structures. Composed of thick layers of fine to medium grained carboniferous mudstone and siltstone alternating with thin layers of fine grained siliceous mudstone.
  - Bazza Sands (BS): The Bazza Sands unit forms the main host for the East Griffin and West-Griffin deposits. It is composed of well bedded siltstone and sandstone beds and typically contains a narrow sub-unit of argillite called the Middle Argillite.
  - Upper Argillite (AA): A poor host for mineralization, the Upper Argillite shares characteristics with the Lower Argillite, but with thinner bedding.

- **Intrusive rocks**: Jurassic-aged Rhyodacite Porphyry (MP), lamprophyre (LA) and Tertiary Rhyodacite Biotite Feldspar Porphyry (BFP) dykes and sills occur at various orientations. The MP and BFP host no significant mineralization. Mineralization is found in or near east and west dipping LA, the South Meikle Extension, South-Griffin, and the Rodeo Upper and Lower Zones.



Underground North South Geology Longitudinal Section



LEGEND	
TC: Tertiary Carlin formation	
OV: Ordovician Vinini formation	
BS: Rodeo Creek(Drc) Bazza Sandstone unit	
AM: Rodeo Creek Lower Argillite-Mudstone unit	
UM: Popovich Upper Muddy Limestone unit	
SD: Popovich Soft-sediment Deformation unit	
PL: Popovich Planar unit	
WS: Popovich Wispy unit	
SDBX: Silurian-Devonian Breccia	
SDB: Silurian-Devonian Bootstrap Limestone	
LLU: Roberts Mountain Banded Limestone unit	
Dyke Intrusion	

Underground East West Geology Cross Section

Figure 7-4

Barrick Gold Corporation

Goldstrike Mine

Eureka & Elko Counties

State of Nevada, U.S.A.

Underground Geology Longitudinal and Cross Sections

Source: Barrick, 2015.

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STRUCTURE

The fracturing, brecciation, folding, and mineralization observed underground is primarily controlled by high angle north-northwest and north-northeast trending fault systems. The most prominent system is the Post Fault Zone (PFZ) that strikes N30ºW and dips steeply to the east. The PFZ is a normal fault that down-drops the formations hundreds of feet and marks the eastern edge of known mineralization from Banshee to Betze-Post. North-northwest striking and west-northwest striking low angle faults also influence ore emplacement.

MINERALIZATION

Gold mineralization was emplaced approximately 39 Ma ago along favorable stratigraphy and structural features such as faults and folds, and along contacts between sedimentary rocks and the Goldstrike stock. Faulting provided major conduits for mineralizing fluids and may also have produced clay alteration that may have acted as a barrier to mineralizing fluids. Intense fracturing around the contact zone of the Goldstrike stock caused solution collapse and brecciation of the surrounding sedimentary units. Secondary fracture permeability was generated along the crests of anticlines, creating focal points for collapse breccia and dissolution zone formation. Finally, lithology and alteration contacts act as permeability barriers to fluids causing mineralization to pond along them particularly where feeder structures intersect these contacts. Alteration is characterized by decalcification of limestone, silicification of all rock types, and clay development in structurally disturbed areas.

The gold mineralization is associated with silicification, argillization, and sulphide mineralization with little or no oxide mineralization remaining. In sulphide ore, the gold is intimately associated with very fine-grained pyrite and marcasite and is refractory. Over time, the pyrite oxidized, freeing the gold and making its extraction relatively easy, as in the historic Post Oxide deposit. Associated sulphide minerals include arsenopyrite, realgar, orpiment, and stibnite. Gangue minerals include quartz, calcite, and barite. Realgar and orpiment are generally low in abundance; however, these minerals are locally common in stockwork veinlets, fracture fillings, and breccia matrices.

OPEN PIT

The Betze-Post deposit, the largest on the Carlin Trend, is divided into sub-deposits which, from east to west, are the Deep Post, Post, Betze, West Betze, and Screamer. Other zones

within the pit are North Betze, West Barrel, and North Screamer. The locations of the mineralized zones are illustrated in Figure 7-5.

Five generations of pyrite mineralization have been recognized at the Betze-Post open pit. Early stages of diagenetic pyrite, and coarse-grained pyrite in the metamorphic aureole of the Goldstrike diorite, are barren. Early hydrothermal, very fine-grained pyrite and marcasite grains of the third generation are coated by a 25 µm thick rind and cut by micro-veinlets of arsenic and gold bearing pyrite of the fourth generation. Barren, late hydrothermal coarse-grained pyrite and marcasite is accompanied by barite and stibnite. Sulphides make up approximately 5% by weight of the ore, locally up to 20%.

The gold bearing arsenian pyrite may be subdivided into coarse grained sulphides at ±200 µm diameter and fined grained at 10 µm to 20 µm, with the latter carrying proportionately much more gold. Gold at 0.05 µm to 0.1 µm is occluded in the iron sulphides. Approximately 10% to 20% of the gold is free, 20% to 30% is held in the fine-grained pyrite/marcasite, a few percent is contained in coarse pyrite, and the balance is in very fine pyrite associated with clay.

Mineralization types are described by Leonardson and Rahn (1996) as:

- Disseminated carbonaceous mineralization, sulphide breccia, and siliceous sulphide breccias in the decalcified Popovich limestone consisting of carbonaceous siltstone and grey breccia with quartz veining and marcasite blebs accompanied by high values of Hg, Cr, Zn, and Cu. This type of mineralization occurs as an upper tabular zone of the Popovich Formation and carries high gold grades.

- Siliceous stibnite breccia mineralization in limestone occurs as tabular zones up to 300 ft long and 150 ft thick and is characterized by partially brecciated, silicified limestone with disseminated pyrite and late stibnite occurring as coatings on pyrite and fractures and as vein and vug fillings with barite. This type is rich in Sb with moderate Hg, Tl, As, Ba, and Zn.

- Seam mineralization is rich in realgar and orpiment and occurs as dark decalcified fractures and argillaceous zones in blocks of sheared marble and calc-silicate rocks at the Goldstrike intrusive margin.

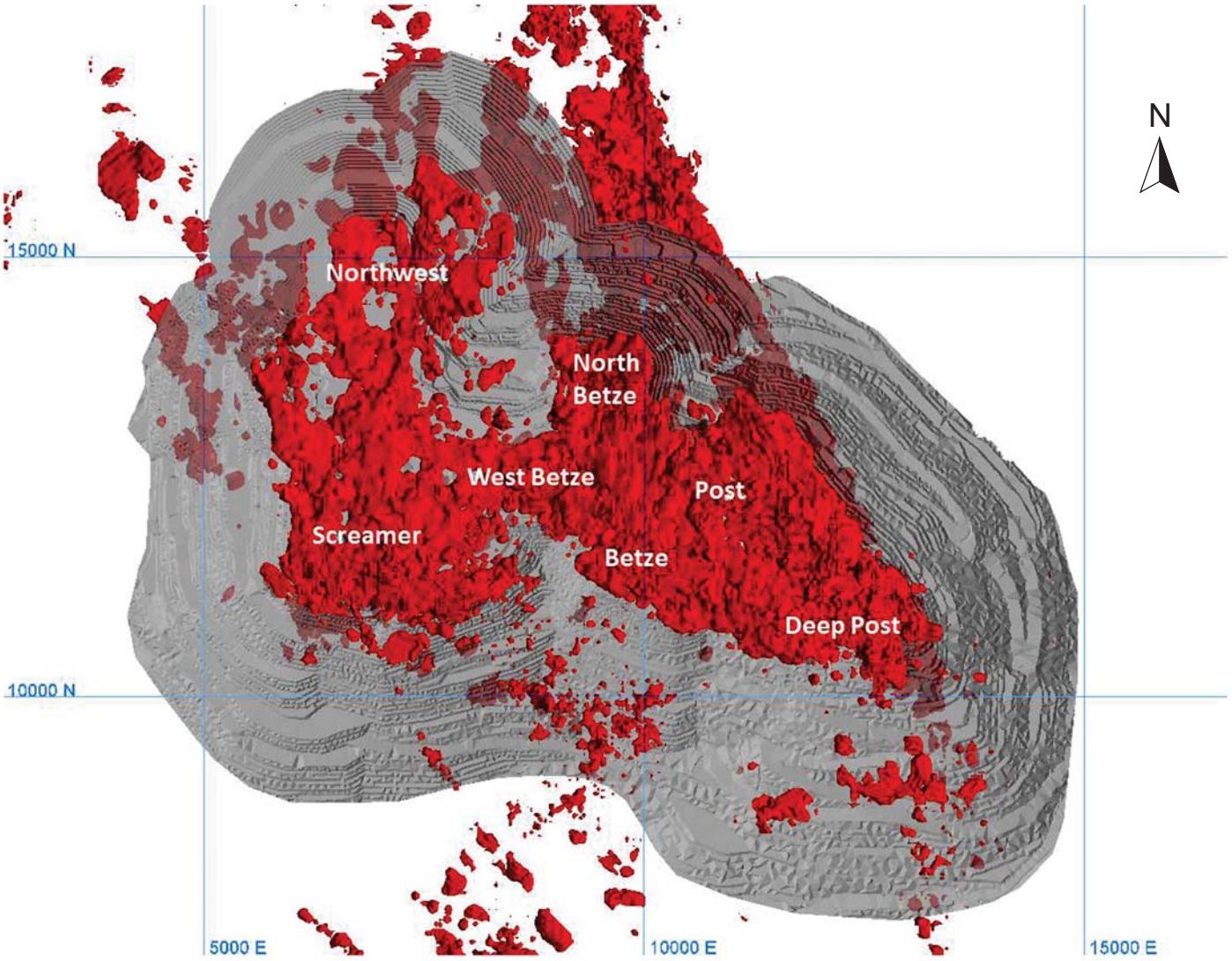


Figure 7-5

Barrick Gold Corporation

Goldstrike Mine
Eureka & Elko Counties
State of Nevada, U.S.A.
Open Pit Zone Locations

0 1000 2000 3000 4000
Feet

March 2019

Source: Barrick, 2017.

Late stage mineralization is characterized by stibnite and barite in silicified zones and realgar, orpiment, calcite, marcasite, and rare fluorite in argillized zones. Other late stage minerals are pyrite, marcasite, gypsum, apatite, siderite, dolomite, sphalerite, and millerite.

Carbon content in the deposits is highly variable and carbon occurs generally in the Popovich Formation, except in the east area of the pit where it is removed or destroyed by contact metamorphism along the Goldstrike intrusive.

Mineralization may be predominantly oxides, sulphides, or refractory or carbonaceous sulphides. Supergene alteration extends up to 655 ft in depth resulting in oxide mineralization, which overlies the refractory sulphides. Alteration has liberated gold by the destruction of pyrite and resulted in the formation of oxide and secondary sulphate minerals, which include goethite, hematite, jarosite, scorodite, alunite, and gypsum. The alteration is deepest in the Post deposit due to extensive fracturing and high pyrite content.

UNDERGROUND

Gold mineralization in the underground mine is subdivided into East Banshee, West Banshee, Meikle, South Meikle, (East) Griffin, Extension, West Griffin, Rodeo, Barrel, West Rodeo, and North Post deposits and sub-deposits (Figure 7-6). The sulphide mineralization is associated with silicification and argillization, and there is little or no oxide mineralization. In sulphide mineralization, the gold is intimately associated with very fine-grained pyrite and marcasite. Associated sulphide minerals include arsenopyrite, realgar, orpiment, and stibnite. Gangue minerals include quartz, calcite, and barite. Realgar and orpiment are generally low in abundance; however, these minerals are locally common in stockwork veinlets, fracture fillings, and breccia matrices.

The orientation of the mineralization is different in each zone. East Banshee, Meikle, Meikle-East, Extension, Rodeo, North Post, and East-Griffin are characterized by steep and shallow angle east-dipping mineralization. South Griffin, West Banshee, and part of Lower Rodeo are more moderately west dipping. South Meikle, West Griffin, and Barrel mineralization are relatively flat lying.

Figure 7-6

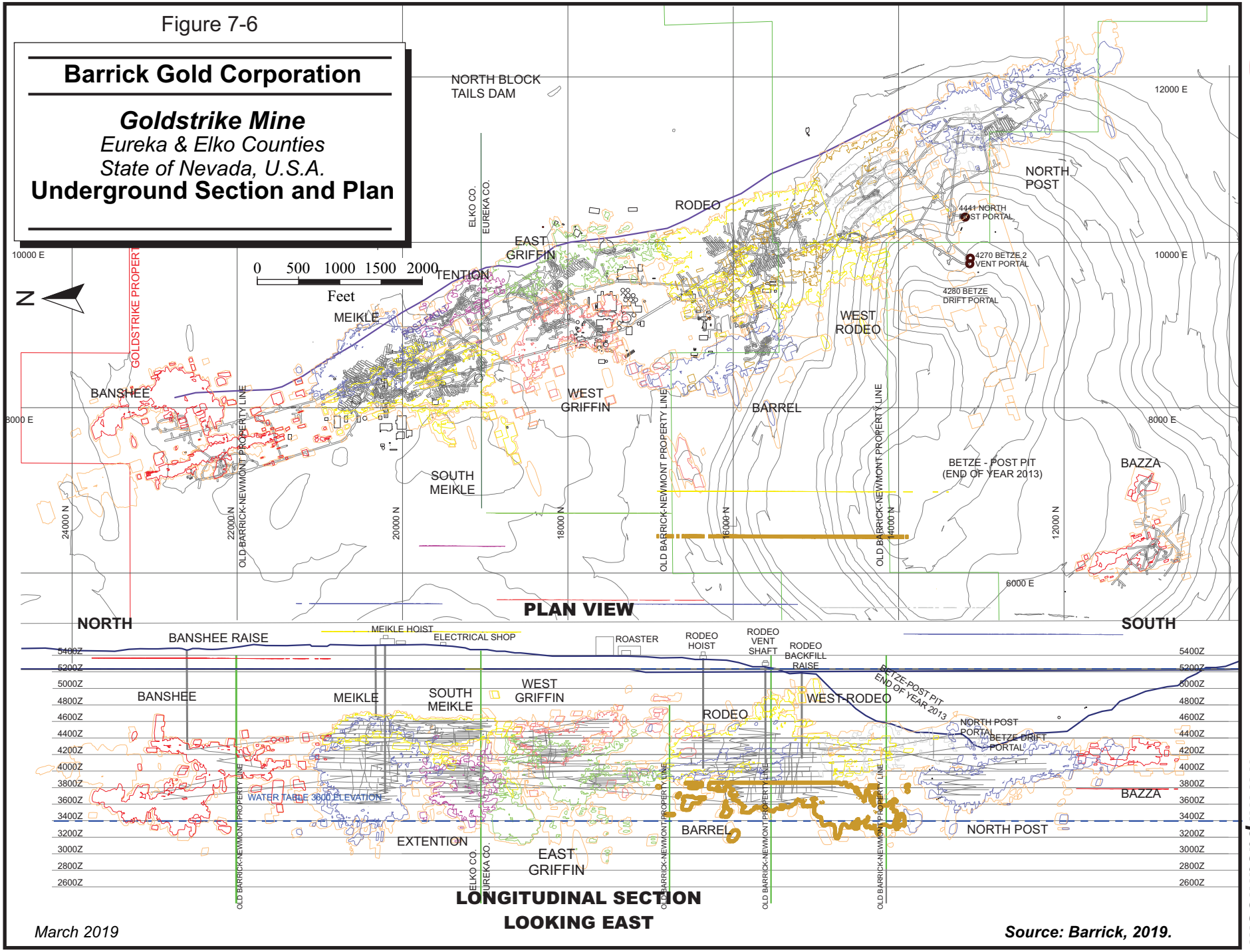
Barrick Gold Corporation

Goldstrike Mine

Eureka & Elko Counties

State of Nevada, U.S.A.

Underground Section and Plan



March 2019

Source: Barrick, 2019.

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MEIKLE

Hydrothermal and collapse breccias in the Bootstrap Limestone member of the Roberts Mountains Formation, and to a lesser extent, the Popovich Formation are the dominant host for gold mineralization at Meikle. Breccia geometries are complex, with multiple breccia types observed. Mineralization is predominantly hosted in a breccia derived from a zone of dolomitic alteration that mantles the Bootstrap Limestone. Dolomite and other carbonate rich rocks occurring within the host breccia have been completely digested and replaced by silica. The gold enriched pyrite is disseminated throughout the siliceous breccia host. A rhyodacite dike, which pre-dates mineralization, also occurs in the Main Zone.

The Meikle deposit is divided into five distinct zones: Main Zone, East Zone, Meikle Extension, South Meikle, and the Lamprophyre Zone. The Main Zone, East Zone, and Meikle Extension parallel the PFZ and exhibit pipe-like geometry, which dip steeply to the east. The South Meikle and Lamprophyre zones have a flatter geometry with a possible stratigraphic component along the Rodeo Creek-Popovich contact. A second component exhibits a pipe-like geometry, which dips 50º to 75º west.

The Main Zone parallels the PFZ and strikes N30°W. It has a strike length of 1,200 ft, an average thickness of approximately 300 ft, and extends from the 4,600 ft to the 3,200 ft elevation. The host breccias occur between a rhyodacite porphyry dike in the hanging wall and a block of Bootstrap Limestone in the footwall. These breccias are highly silicified and pyritized. Locally, large unmineralized dolomite blocks occur within the breccia, which often divide the mineralized zones. The mineralization proximal to the limestone footwall is very high grade in the dolomite breccias, dropping to low grade in the hanging wall rhyodacite dike.

The N30ºW striking East Zone mineralization occurs south of where the Post Fault is cut by northeast faults. It extends from the 4,400 ft to 3,300 ft elevation, with a strike length of 700 ft and an average thickness of approximately 80 ft. The zone contains several rhyodacite, dacite, and lamprophyre dikes with highly silicified and pyritized breccias similar to the Main Zone. The similar orientation and alteration of footwall breccias allowed for the incorporation of the East Zone into the Main Zone model.

The South Meikle Zone is subparallel to and west of the East Zone, over a strike length of 1,400 ft. It has a relatively shallow dip and extends from 4,350 ft to 4,650 ft elevation, with an average thickness of approximately 50 ft. It is located directly above and west of the Bootstrap

Limestone structural block. Economic grade mineralization occurs in lamprophyre bodies, adjacent silicified breccias, and on the west side also in the Bazza Sands unit. Lamprophyre dikes were emplaced along moderate to high angle structures and locally follow bedding and/or contacts within carbon rich Popovich and overlying Rodeo Creek mudstone and siltstone.

The Meikle Extension Zone represents the southeast portion of the deposit and parallels the Post Fault system. It is discontinuous over a 1,500 ft strike length, with an average thickness of approximately 40 ft and extends from 4,400 ft to 3,200 ft elevation. This zone marks the transition between the wide and high-grade breccia lenses to the north and the East Griffin North Zone to the south. The mineralization is similar to that observed in the East Zone to the north, however, it is higher grade and becomes hosted in an east dipping lamprophyre dike further south. This lamprophyre dike is the footwall of an east dipping barren biotite-feldspar porphyry dike. The host rocks and limited thickness distinguish the Meikle Extension Zone from the East Zone.

The Lamprophyre Zone is the extension of the South Meikle Zone through and above the Main Zone, shows a north-northeast trend, and has been incorporated into the west dipping South Meikle model. The average thickness of this zone is approximately 30 ft, from elevation 4,650 ft to 4,400 ft, and along a strike length of 550 ft. The Lamprophyre Zone has a flat lying stratigraphic component along and underneath the Rodeo Creek-Popovich contact. A second component exhibits a pipe-like geometry and dipping of 50^{o} to 75^{o} to the west. This second component splits the Main Zone in two lenses in the west sector of this deposit.

GRIFFIN

The Griffin deposit includes four geologically distinct domains: Breccia-hosted (formerly described as the North Griffin), Bazza Sands (formerly described as the Griffin Main Zone), West Griffin, and the Lamprophyre Zone. Each zone contains typical Carlin-style gold mineralization hosted in fine-grained iron sulphides. Silica-replaced breccias similar to those at Meikle, calcarenites, and lamprophyre are the various host rocks, each dominant in its respective domain. Feeder, boundary, and offsetting structures are the primary controls to mineralization in every case throughout Griffin.

The Griffin Breccia-hosted domain contains similar rocks as the Meikle East Zone. It extends from elevation 4,400 ft to 3,200 ft, with an average thickness of approximately 50 ft and a strike length of 900 ft. Limestones of the Popovich Formation, and possibly of the Bootstrap unit,

comprise the main source of clasts which constitute the heterolithic mineralized breccia body. Rhyodacite dikes bound the breccia to the east and the Barite Fault separates the breccia-hosted mineralization from the Bazza Sands-hosted mineralization on the west. Rhyodacite and lamprophyre clasts are also present in the breccia mass to a lesser degree. Pervasive silicification normally replaces all protolith fabric. Mineralization weakens to the south.

The Griffin Bazza Sands-hosted domain comprises the bulk of Griffin mineralization and occurs southwest of the Barite Fault in a flat-lying, 250 ft to 300 ft thick silty to sandy facies of the Rodeo Creek Unit called the Bazza Sands. This stratigraphic member is sandwiched between two carbonaceous mudstone horizons locally called “argillite”. Mineralization is controlled by subvertical structures that are associated with the northwest trending Barite Fault. It is from 30 ft to 65 ft wide, 1,100 ft along strike, and occurs between the 3,700 ft and 4,500 ft elevation. The gold content decreases away from the Post Fault Zone.

The West Griffin Domain is also hosted in the Bazza Sands unit of the Rodeo Creek Formation. Minor amounts of mineralization are also hosted by carbonaceous argillites of the Rodeo Creek Formation. The mineralization is controlled by N25°W, 70°NE and N10°E, 65°NW trending faults, and extensively by northwest trending, east dipping low angle faults (Zappa faults). The host rock is variably decalcified with weak to moderate silicification. Quartz veins with strong pyrite and some kaolinite localized along fractures characterize alteration within this zone. The zone has an average thickness of approximately 35 ft, from elevation 4,100 ft to 4,700 ft with a strike length of 1,200 ft. Exploration potential lies to the west along the Zappa faults, and north and south along strike with South Meikle and Barrel respectively.

Mineralization distribution in the Lamprophyre Zone tracks mainly along the Dormant Fault (approximately N25ºW strike, 45º to 65º dip to the SW) and is proximal to bodies of lamprophyre. Mineralization occupies an area between the 3,200 ft and 4,100 ft elevation with a strike length 1,700 ft. Gold occurs in multiple west-dipping lenses that vary in thickness from 10 ft to 70 ft. The Zappa and Post fault systems also demonstrate some control on mineralization, particularly where these patterns intersect the Dormant Fault. Lamprophyre is the chief host lithology with minor dissemination into the Popovich Formation country rock. Economical grade mineralization is not ubiquitous within the lamprophyre rock but appears to favor conspicuous regions of intense alteration.

RODEO

The Rodeo deposit is located approximately 4,500 ft south of the Meikle underground mine and 3,600 ft north of the Betze-Post open pit.

Economic grade mineralization occurs in two zones in the Rodeo area, the Upper and Lower zones. The combined dimensions of the two zones have a strike length of 2,300 ft. The zones extend from the elevation of 3,500 ft to 4,700 ft, with a true thickness of 100 ft to 200 ft.

The Upper Zone consists of four subzones: The Upper North, Middle, Upper South, and West subzones. The Upper Zone lies within a stratigraphic and structural antiform that has a shallow plunge to the north-northeast. Mineralization is hosted in the Upper Mud, Soft Sediment Deformation, and Planar units of the Popovich Formation as well as Jurassic lamprophyre dikes. The morphology of the mineralized zone is dictated, in order of significance, by the proximity to favorable feeder structures, receptive lithologies, and structural preparation.

The Lower Zone occurs in the Wispy Unit of the Popovich Formation. The Wispy Unit in Rodeo is characterized by laminated limestone, debris flow horizons, and local collapse breccia zones associated with structural intersections and discontinuous lamprophyre dikes. The morphology of the zone is strongly influenced by the proximity of through-going northwest striking faults, north-northeast striking feeder faults, and favourable lithology.

BARREL

The Barrel mineralized zone is a tabular body located 200 ft northwest to approximately 1,000 ft west-northwest of the Rodeo deposit, between the 3,900 ft and 4,200 ft elevation. It has a strike length of 1,600 ft along a N30ºW orientation and varies in thickness from 30 ft to 50 ft. It is hosted mainly in the Planar unit of the Popovich Formation, with minor values within the overlying Sediment Deformation unit, as well as in the underlying Wispy unit at the south end of the zone. The zone is bounded by a series of low and high angle east dipping structures and is also partly controlled by west dipping lamprophyre dikes.

EAST BANSHEE

The East Banshee deposit is located 1,800 ft to 3,000 ft north of the Meikle deposit, between 3,200 ft and 3,900 ft elevation. The general orientation of high grade mineralization is north-northwest striking and low to moderately northeast dipping. High grade mineralization ranges from 10 ft to 80 ft thick. Gold mineralization is hosted in faulted or brecciated quartz-sericite-pyrite altered lamprophyre, silicified brecciated limestone, collapse breccias, and brecciated

monzonite. The mineralization is focused on a low to moderate northeast dipping lamprophyre filled fault zone (East Banshee Shear Zone). The multiple intrusive rock types that characterize the deposit diverge from this fault zone to the Ren Fault, which is a large displacement normal fault with a north-northwest strike and moderate northeast dip. The Ren Fault merges with the Post Fault to the south at the Meikle deposit. East Banshee high grade mineralization is bound both to the east and west by north-northwest striking steep east dipping faults (similar to the PFZ at Meikle). Mineralization along strike is offset by east-northeast striking, steeply dipping faults. The strike extent of the high-grade mineralization appears to be bound to the north and south by east-northeast striking, steeply south dipping faults. The down-dip extent of higher grade mineralization is primarily controlled by the intersection of the East Banshee shear zone and Post-parallel faults (hinge zone). The Post Fault is the eastern limit of mineralization. It appears significant mineralization continues to the north.

WEST BANSHEE

The West Banshee deposit is located between 600 ft northwest and 1,800 ft north-northwest of the Meikle deposit, between the 3,900 ft and 4,300 ft elevation. Gold mineralization is hosted in north-northwest trending, moderate to steeply west dipping lamprophyre dikes up to 40 ft wide. The 1,500 ft strike length appears to be offset by subvertical east-northeast striking faults. Continuity along dip appears to be approximately 200 ft at the northern end and less than 100 ft at the southern end. The East Banshee shear zone appears to limit the upper and lower extent of high grade mineralization. Low grade mineralization is relatively continuous between East Banshee and West Banshee deposits along the East Banshee shear zone.

NORTH POST

The North Post deposit is located between the southern end of the Rodeo deposit and the northeast final wall of the Betze-Post Pit, between the 3,100 ft and 4,600 ft elevation. North Post mineralization can be subdivided in three zones: the Upper Zone, Main Zone, and Lower Zone. The Main Zone is partially split by a property boundary with Newmont (Figure 7-6).

Upper Zone gold mineralization is hosted in the Popovich Formation limestone along west dipping lamprophyre filled faults. The Main Zone is hosted primarily in the Roberts Mountains limestone, footwall to the Post Fault, between interpreted moderate east dipping reverse faults at intersections with Dormant Fault splays. The Lower Zone or Deep North Post Zone is hosted in the Roberts Mountains Formation limestone, footwall to the Post Fault, between interpreted moderate east dipping reverse faults and between splays of the Dormant Fault.

8 DEPOSIT TYPES

The deposit type at the Goldstrike Mine is Carlin style deposit. Carlin deposits comprise stratabound disseminated gold mineralization hosted by Silurian-Devonian carbonate rocks that have been metamorphosed to varying extents. The deposits are hydrothermal in origin and are usually structurally controlled. The carbonate host rocks are part of an autochthonous miogeoclinal carbonate sequence exposed as tectonic windows beneath the Roberts Mountains allochthon. The allochthonous rocks are a sequence of lower Paleozoic dominantly siliciclastic eugeoclinal rocks that were displaced eastward along the Roberts Mountains Thrust over younger units during the Upper Paleozoic Antler orogeny.

Current models attribute the genesis of the deposits to:

- Epizonal plutons that contributed heat and possibly fluids and metals;
- Meteoric fluid circulation resulting from crustal extension and widespread magmatism;
- Metamorphic fluids, possibly with a magmatic contribution, from deep or mid crustal levels;
- Upper crustal orogenic-gold processes within an extensional tectonic regime.

9 EXPLORATION

To date, surface geological mapping and prospecting has been completed on the property, with pit mapping on-going. Approximately 28,500 diamond and reverse circulation (RC) holes have been drilled on the property to the end of 2018. Geochemical soil and rock sampling was carried out on the property in early exploration phases. Geophysical surveys include airborne and ground magnetometer; gravity; time domain pole-dipole IP; DC resistivity; controlled source audio magnetotellurics (CSAMT) and magnetotellurics (MT); time domain MT/IP using a distributed assay system; electrical logging of drill holes; and downhole IP. Gold mineralization is not directly detectable by geophysical methods; however, these surveys identify subsurface properties that are useful in interpreting lithology, alteration, and structure as guides to gold mineralization. Flyover surveys are performed every two years for open pit survey control.

Currently, exploration is conducted by drilling, rock chip and soil sampling, surface mapping, and trenching.

A summary of the significant exploration targets follows.

- Banshee target - This target is an intrusive breccia, and considered to be the northern extension of the current Banshee mining area. Exploration work in 2018 included 800 ft of development to allow access for additional drilling and a total of 14,172 ft of RC and core drilling.
- Rodeo Deep target - This target is at depth, below the main Rodeo. Mineralization is silicified breccias along Zappa and Dormant style faults hosted in the Lower Laminated Unit of the Silurian Devonian Roberts Mountain Formation. Exploration in 2018 included a total of 10,263 ft of core drilling.
- Post Footwall target - This target is the connection from the Lower Rodeo mining area to the North Post mining area along the PFW fault. The mineralization is silicified breccias within the Lower Laminated Unit of the Silurian Devonian Roberts Mountain Formation. Exploration in 2018 included a total of 4,264 of RC and core drilling.
- Griffin 3400 target - This target is an intrusive breccia and silicified breccia along the west dipping, Dolli Fault. This target is at depth below the Griffin mining area and trends to the north toward the Extension mining area. Exploration in 2018 included a total of 6,267 ft of RC and core drilling.

10 DRILLING

In 2009, the Goldstrike Mine Geology Group began handling its own near field exploration targeting, which was named MineX and subsequently changed to Mineral Resource Management (MRM). The program is a system that Barrick has used for funding of mine exploration through various phases of an exploration program; from a high-quality resource definition phase through to an early exploration stage of target generation.

OPEN PIT

The current Mineral Reserves were defined by drilling from 1994 to 2005 with additional in-fill drilling from 2006 to present. Most of the drilling prior to 2003 was diamond drilling. Since then, near-pit exploration has been conducted using a combination of reverse circulation (RC) and diamond core drilling. A small diameter Cubex RC drilling rig was introduced in 2012 to drill horizontal holes up to 900 ft and vertical holes up to 300 ft to define near pit mineralization and for void detection and delineation.

The geometry of mineralization can be highly variable, controlled by fracturing related to faulting and folding as well as by favorable stratigraphy and variations in rock chemistry, porosity, permeability, bedding habit, etc. Drilling is done at various angles to target various structural and stratigraphic controls, to determine true width and thickness of mineralization. Drill sampling and geological interpretations completed prior to mining are generally effective in predicting the orientation of mineralization.

Drill hole spacing through the Betze, West Betze, and Screamer deposits is approximately 150 ft to 175 ft, and at Post and North Betze is approximately 150 ft. West Barrel is drilled at approximately 130 ft spacing or less, and this has been reduced to approximately 100 ft for the North Screamer Zone. Some holes did not penetrate the entire ore zone. In some areas, the location of the bottom and margins of the ore are not precisely known. Cubex drilling has been effectively utilized to define the margins of the ore and optimize bench plans.

RC drilling (6¼ in.) accounts for approximately two thirds of the drilling, with one third diamond drilling at HQ to NQ (2½ in. to $1^{7}/_{8}$ in.) core diameters. Table 10-1 summarizes drill hole database statistics used in estimation and Figure 10-1 illustrates the drill hole locations.

TABLE 10-1 OPEN PIT DRILL HOLE DATABASE
(Drill hole data used in estimation)
Barrick Gold Corporation – Goldstrike Mine

Number of Holes	30,641
Total Length (ft)	10,426,085
Maximum Depth (ft)	6,044

Table 10-2 is a subset of Table 10-1 indicating the recent drilling in the open pit.

TABLE 10-2 RECENT OPEN PIT DRILLING
Barrick Gold Corporation – Goldstrike Mine

Year	DD Number of Holes	DD Footage	Cubex/RC Number of Holes	Cubex/RC Footage
2012	20	26,585	34	4,240
2013	18	12,995	146	14,380
2014	41	32,090	273	46,085
2015	34	25,985	71	22,533
2016	10	7,960	10	1,530
2017	12	7,306	14	5,260
2018	16	9,200	46	15,974
Totals (2012-2018)	**151**	**122,121**	**594**	**110,002**

Mining in the open pit began encountering large voids in late 2011. In 2012, approximately 500 holes were drilled, primarily with the Cubex drill rig to locate and define voids so that appropriate precautions could be implemented during mining operations. An additional 544 holes were drilled exclusively with the Cubex drill rig to define voids in 2013. A void zone of approximately 800 ft long trending into the pit wall with a vertical extent of more than 300 ft before passing into the bottom of the pit was encountered in 2012, with smaller associated voids located and delineated in late 2012 through 2013. Void drilling continues, as needed. Holes drilled for void definition are not assayed and, therefore, are not used in model estimation.

Planned drill hole collar locations are set out by the open pit surveyors using Trimble High Precision global positioning system (GPS) to determine the location of every hole and to establish foresights for all angle holes. After the holes are drilled, the surveyors pick up the final collar coordinates using GPS.

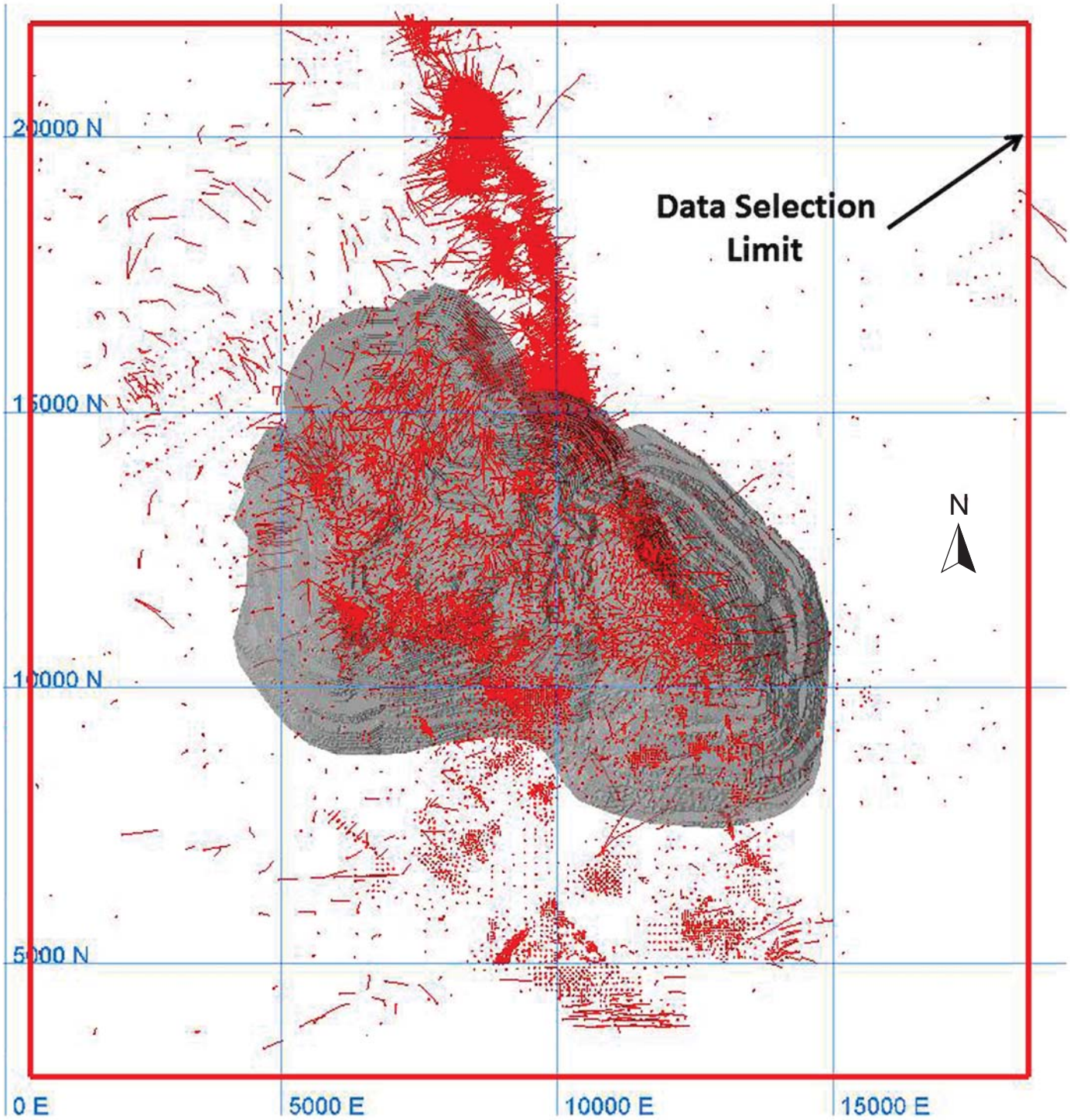


Figure 10-1

Barrick Gold Corporation

Goldstrike Mine

Eureka & Elko Counties

State of Nevada, U.S.A.

Open Pit Drill Hole Location Plan

March 2019

Source: Barrick, 2019.

Downhole surveys are performed on all new exploration drill holes except for shallow vertical holes with depths that are less than approximately 150 ft. Downhole surveys by gyro instrumentation are performed under contract by International Directional Services LLC (IDS).

UNDERGROUND

Both RC and diamond drilling are used underground at the Goldstrike Mine. In the volume defined for the Mineral Resource estimate, over 23,700 underground holes have been drilled up to December 31, 2018 (Table 10-3) utilizing both diamond core and RC holes. The drill hole locations are illustrated in Figure 10-2.

The majority of stope definition drilling is performed using RC. The holes are drilled in areas where the geology and mineralization are generally well understood and serve the purpose of better defining the ore zones prior to extraction. Drill hole lengths vary from 50 ft to 600 ft.

TABLE 10-3 UNDERGROUND DRILL HOLE DATABASE
(Drill hole data used in estimation)
Barrick Gold Corporation – Goldstrike Mine

Number of Holes	23,765
Total Length (ft)	7,566,543
Maximum Depth (ft)	4,528

Table 10-4 is a subset of Table 10-3 indicating the recent drilling underground.

TABLE 10-4 RECENT UNDERGROUND DRILLING
Barrick Gold Corporation – Goldstrike Mine

Year	Footage	Number of Holes
2010	149,234	950
2011	150,955	844
2012	218,729	1,128
2013	173,723	1,075
2014	180,112	981
2015	180,544	677
2016	177,578	739
2017	208,978	777
2018	157,045	602
Totals (2010-2018)	**1,596,898**	**7,773**

Figure 10-2

Barrick Gold Corporation

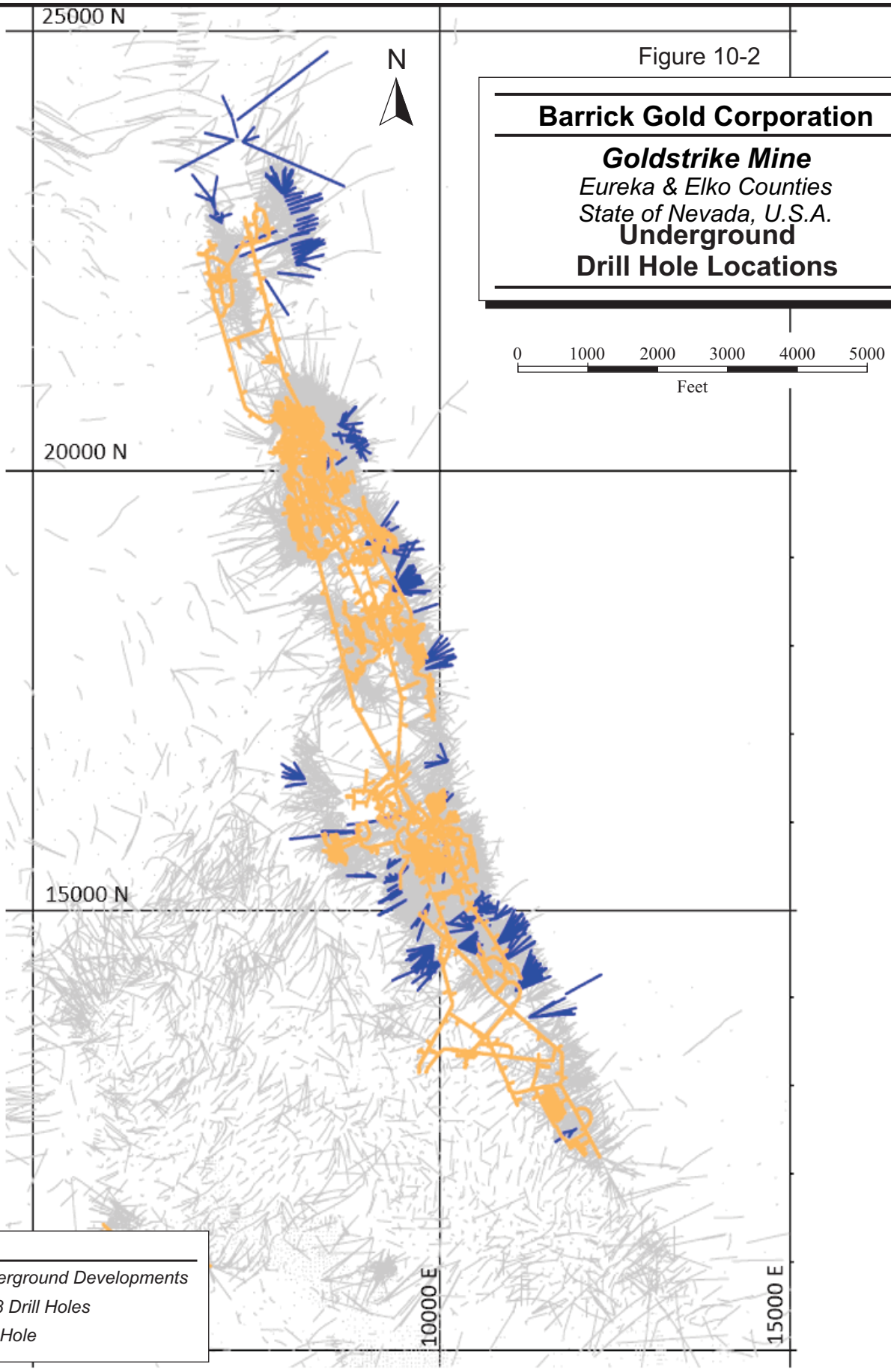
Goldstrike Mine

Eureka & Elko Counties

State of Nevada, U.S.A.

Underground

Drill Hole Locations



March 2019

Source: Barrick, 2019.

For programs categorized as Capital Drilling (defined as drilling of stopes that will not be mined in the next two years) and for exploration/step-out drilling, the holes vary in length from 150 ft to more than 1,800 ft. These holes are usually pre-collared using RC and drilled as far as ground conditions will permit. The holes are then switched over to core drilling, usually starting with HQ and reducing to NQ as required, to achieve the target depth. All holes are given sight lines by underground surveyors based on planned azimuths. Dips are set by the drillers based on the designed collar orientations. When drilling is complete, the collars of the exploration holes are surveyed to determine their final elevation, northing, easting, azimuth, and dip. If circumstances do not allow for survey of the collar, the planned location, azimuth, and dip are used. In the past, several of the longer core and RC holes were surveyed with a MAXIBOR downhole survey tool to determine hole deviation. Beginning in 2009, a new downhole survey tool, Flexit, was introduced. This new tool allows for the survey of RC holes. This information is later uploaded to a database where it is used in conjunction with the geological and assay data.

Initially, drilling is carried out at 100 ft and 50 ft section spacings. Follow-up RC definition drilling is carried out on fans 25 ft apart, depending on the geologic complexity and continuity. Holes are oriented to intersect the target at a spacing of 25 ft to 30 ft.

When possible, drill holes are designed for the best possible angle of intersection with mineralization. The apparent thickness of any mineralized intersection varies greatly and is dependent on drill station location. In most instances, the angle will be between 45^{o} and 90^{o} to core axis, but in the case of holes reaching for step-out targets, this angle could be 30^{o} or lower.

SAMPLING METHOD AND APPROACH

Core and RC holes are logged for lithology, stratigraphy, basic structural data, recovery, alteration, and mineralization. Core is photographed and further logged for detailed structural information including faults and bedding angles and other features that reflect rock mass strength. This information is then used to assign geomechanical properties such as Rock Mass Quality (RQD) and Rock Mass Rating (RMR). This information is entered directly into a geological database, acQuire, and used for interpretation of lithologies, structure, alteration, and modelling of mineralized zones. After the logging of open pit holes is completed, the core is halved with a diamond saw and sampled in five-foot intervals. Underground core samples

are taken as whole core samples as they are used only for definition and not Mineral Resource estimation. Samples are placed in a sample bag with a barcode that clearly identifies the hole number and the starting and ending depth of the sample. This information is also written on the open pit sample bags.

Goldstrike maintains a written protocol for drill core logging and sampling.

In RPA's opinion, drilling, core handling, logging, and sampling protocols are appropriate and are being carried out to an appropriate standard.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

Open pit core and RC samples are sent to an independent laboratory, ALS Chemex Labs, Ltd. (ALS Chemex), for gold, preg rob, and multi-element analysis. ALS Chemex assay laboratories are certified by ISO 2001:2015. Pulps are returned to Goldstrike laboratory for analysis for As, S_2, C, CO_3, and total carbonaceous matter (TCM). Open pit ore control samples are delivered to the Goldstrike laboratory by Goldstrike personnel for assaying. Samples are logged into the laboratory data system, either by scanning the barcode on the sample bag, or manually, when the barcode is damaged or too dirty to scan. The assay suite consists of Au fire assay and arsenic, S_2, C, CO_3, and TCM. Open pit Cubex drill samples may be sent to the Goldstrike laboratory for gold fire assay (AuFA), As, S_2, C, CO_3, and TCM. Exploration Cubex drill samples are sent to the ALS Chemex for AuFA and As, and the pulp is returned to the Goldstrike laboratory for analysis of As, S_2, C, CO_3, and TCM.

Underground exploration drill core and RC samples are sent to an independent laboratory, ALS Chemex, for gold analysis with pulps returned to the Goldstrike laboratory for analysis for As, S_2, C, CO_3, and TCM.

Capital project and near mine exploration underground core and RC samples are sent directly to the Goldstrike laboratory for analysis for Au, As, S_2, C, CO_3, and TCM. If Goldstrike's laboratory was not able to process the samples in a timely manner, they are sent to an independent commercial laboratory.

Core samples are taken at five-foot intervals as a standard length to define variability in grade over a minimum mining height and width (20 ft for surface mining and 15 ft for underground mining). Studies have shown that smaller sampling lengths are not cost effective in terms of handling or processing. Core sampling to one-foot intervals has not revealed significant additional grade variability.

The upper unmineralized portions of RC drill holes are sampled on five-foot intervals. This can be extended to ten-foot intervals with Cubex drilling provided staff know the expected depth of the mineralization. RC samples are returned through the cyclone and automated splitter,

collected by the drillers, inserted into marked bags, and tagged via a plastic label with a unique barcode comprising the hole number and the sample interval.

GOLDSTRIKE MINE ON-SITE ASSAY LABORATORY

Goldstrike's on-site assay laboratory receives samples from both the open pit and underground divisions. Samples are delivered to the laboratory by Goldstrike personnel or drill contractors. All samples remain in Goldstrike custody and control from the drill rig to the assay laboratory. This is common practice for the mining industry. Sample barcode labels are scanned into a Laboratory Information Management System (LIMS) computer by the person delivering samples, to record and time stamp delivery.

GOLDSTRIKE SAMPLE PREPARATION METHODS

Sample preparation at the assay laboratory consists of three automated preparation systems as well as a manual crusher and pulverizer method. All samples must be dried prior to crushing. Each is described in detail below.

SYSTEM 1 AND SYSTEM 2

Samples to be prepared on System 1 are scanned into the preparation equipment by barcode scanner to keep track and order of the samples being processed by the system. Samples are then poured into a corresponding drying pan which is then sent into a drying oven. These ovens are set at 250°F and contain conveyors which move the drying pans through the system. When samples are dried according to the protocol for the set of samples, the system discharges the drying pans from the oven. The samples are moved by conveyor to a scale to be weighed prior to crushing. This weight is used to determine the speed and cuts of the splitter which reduces the original sample to 1,000 g for pulverizing.

Samples to be prepared on System 2 are pre-dried in ovens set at 250°F on drying racks. Samples are scanned into the preparation equipment by a barcode scanner to keep track of the sample order being processed by the system. Sample is then transferred from bags into bins on the conveyor where it is weighed. This weight is used to determine the speed and cuts of the splitter which reduces the original sample to 1,000 g for pulverizing.

Samples processed on System 1 and System 2 are crushed and pulverized as follows. The dry sample is first crushed to 65% passing ten mesh, then goes through a rotary splitter that

takes a 1,000 g split based on the initial dry weight (with any sample under 1,000 g all the sample is taken as the split); any reject is directed to the waste conveyor. The crushed sample is then processed through a continuous ring mill (CRM) pulverizer down to 100% passing 50 mesh. The sample is fed into a second rotary splitter and a split of approximately 500 g is fed to another continuous ring mill pulverizer. The secondary CRM pulverizes the sample to 80% passing 200 mesh. The pulverized sample is then sent to a vibrating platform with a scale where the sample is weighed and then fed into a rotary splitter for a final weight of 250 g. The pulverized sample is then deposited into a sample cup.

The preparation systems send scanned sample information to LIMS, which then creates labels for each of the sample cups. Samples are grouped into numbered projects in LIMS and analytical tests can then be assigned as needed. Labelled sample cups are then blended by inversion in a sample blender for five minutes.

SYSTEM 3

System 3 is used for larger sample sizes. Sample bags received are loaded onto carts and are dried in ovens set to 250ºF. Dry samples are weighed before being fed to a primary crusher. This weight and the desired sample size are used to determine the sample split after the secondary crusher.

At the primary crusher, the sample is crushed to minus 3/8 inch before being taken by a conveyor belt to the secondary crusher where the sample is further crushed to 65% passing 10 mesh. The sample is then fed into a rotary splitter and the desired weight is split out to a CRM pulverizer. Pulverized sample is now 80% passing 200 mesh and is dispensed into a labeled sample cup. Sample cups are then blended by inversion in a sample blender for five minutes. Samples are then manually logged into the LIMS to be placed under project numbers and have analytical tests added.

BOYD CRUSHER / TM PULVERIZER

Sample bags received are loaded onto carts and are dried in ovens set to 250ºF. The dried sample is run through a Boyd crusher which crushes to ¼ inch. The sample is then split through a riffle splitter by hand to obtain a representative split of roughly 250 g of crushed material. This crushed material is then placed onto the TM pulverizer which pulverizes the material to 80% passing 200 mesh and then it dispenses it to a labeled sample cup. Sample cups are then blended by inversion in a sample blender for five minutes. Samples are then

manually logged into the LIMS to be placed under project numbers and have analytical tests added.

OPEN PIT SAMPLES

Blast hole samples are delivered to the Goldstrike laboratory by Goldstrike personnel for assaying. Samples are logged into the laboratory data system, either by scanning the barcode on the sample bag, or manually, when the barcode is too damaged to scan.

Samples are exclusively prepared and analyzed by the Goldstrike laboratory. The blast hole samples received are prepared using System 1, System 2, or the Boyd/TM Pulverizer. Once prepared, blast hole samples are analyzed for gold by a ½ assay ton fire assay analysis with an atomic absorption (AA) instrument finish. If the sample gold grade is above open pit ore cut-off grade, the samples will be analyzed for CN leach, % preg rob, total carbon, total sulphur, sulphide sulphur, carbonate, and organic carbon for ore characterization purposes. Samples greater than 0.438 oz/st Au will be completed by a ½ assay ton fire assay with a gravimetric finish.

Exploration drill samples are sent to independent laboratories for preparation and analysis. Samples from Cubex in-fill drilling may be sent to independent laboratories depending on the Goldstrike laboratory workload. Samples from the open pit have predominantly been sent to ALS Chemex for external assays. Samples are typically prepared in the Elko, Nevada branch of ALS Chemex preparation lab and once prepared the pulp samples are shipped to its Reno laboratory for assay or occasionally to its Vancouver laboratory if the Reno facility is overloaded.

At the ALS Chemex Elko preparation laboratory, the Goldstrike open pit exploration samples are oven dried, crushed to 70% minus ten mesh, and riffle split with a 250-g subsample pulverized to greater than 85% minus 200 mesh. Gold analysis by the ALS Chemex Vancouver or Reno branches is completed by a one assay ton fire assay with an AA instrument finish. Samples that are greater than seven ppm gold are rerun by a one assay ton fire assay with a gravimetric finish. ALS Chemex laboratories in Nevada are certified to standards within ISO 9001-2008. The ALS Chemex laboratory in Vancouver is accredited in accordance with ISO/IEC 17025:2005. Internal quality assurance/quality control (QA/QC) batch duplicates showing wide variation are re-assayed using the metallic screen method to improve assay confidence for possible free gold intervals.

UNDERGROUND SAMPLES

Samples from the Goldstrike underground division that require a rapid turnaround time (rush samples) are sent to the Goldstrike laboratory and are scanned in by Goldstrike underground personnel. Samples are exclusively prepared and analyzed by the Goldstrike laboratory. These rush samples received in house are prepared by the Boyd/TM Pulverizer. Once prepared, the rush samples are analyzed for Au by a ½ assay ton fire assay analysis with a gravimetric finish.

Muck and stope test hole samples from the Goldstrike underground division are received by the Goldstrike laboratory and are scanned in by Goldstrike underground personnel as mentioned previously. Samples are exclusively prepared and analyzed by the Goldstrike laboratory. The muck samples received in house are prepared by System 3 and/or Boyd/TM Pulverizer. Once prepared, muck samples are analyzed for gold by a ½ assay ton fire assay analysis with an atomic absorption instrument finish. Samples with gold grade greater than 0.438 oz/st will be completed by a ½ assay ton fire assay with a gravimetric finish. As requested by Goldstrike personnel, underground muck samples can be equal weight composited for further ore characterization analyses including total carbon, total sulphur, sulphide sulphur, carbonate carbon, organic carbon, and arsenic.

Chip and core drill samples from the Goldstrike underground division (not including Far MineX drilling) are received by the Goldstrike laboratory with chain of custody from Goldstrike underground personnel when samples are to be analyzed in house. Drill samples are sometimes sent to independent laboratories for preparation and analysis depending on the Goldstrike laboratory workload. The core and chip samples received in house are prepared by System 1, System 2, System 3, or the Boyd/TM Pulverizer depending on sample type. Once prepared, chip and core drill samples are analyzed for gold by a ½ assay ton fire assay analysis with an atomic absorption instrument finish. Samples with gold grade greater than 0.438 oz/st will be completed by a ½ assay ton fire assay with a gravimetric finish. Other analyses are sometimes requested by Goldstrike personnel including density, arsenic, total carbon, total sulphur, sulphide sulphur, carbonate carbon, and organic carbon. These are on a case by case basis. American Assay Laboratories Inc., located in Sparks, NV (which is independent and accredited in accordance with ISO/IEC 17025:2005), is typically used for the preparation of chip and core samples as needed. American Assay Laboratories Inc. has also been used to complete 1 assay ton fire assay for gold content. Samples are then sent back to

the Goldstrike laboratory for the required analyses or storage if requested. One in twenty core samples are used for density measurements.

CORE AND SAMPLE STORAGE

After it is logged and split for assay, drill core is either kept on site at the core shed or shipped to the on-site core laydown yard. Much of the underground drill core is not split for assay (the whole core sample is assayed). Assay pulps are saved and stored inside the core handling facility. Coarse rejects are stored at the core laydown facility.

Historically, not all samples were stored on site. Samples from mineralized intervals were selected for storage with the rest disposed at the mine waste dumps. The storage selection basis was:

i. Select all intervals that contain in excess of 0.020 oz/st Au.

ii. Select at least four intervals above and below the above intervals as a buffer.

iii. Select intervals that outline small gaps of four (more or less) unselected intervals between other intervals that are selected.

iv. Select any other interval that may require further analyses.

Historically, sample rejects were only saved for mineralized intervals and 20 ft above and below the ore intervals. Rejects are kept in sealed steel barrels that are stored at the core laydown yard.

PULPS

Exploration and Definition Drilling Pulps – Open Pit

For at least the last six years, all pulps from exploration and definition drilling are stored on site. Historically, pulps from exploration and definition drilling were stored for six months. After this time, the pulps were discarded. If additional analyses are required from holes drilled during that time, samples may be constructed from chip trays stored in numbered boxes. Both electronic and hard copy manifests of chip tray contents are maintained.

Underground Samples Pulps

Pulps from channels, mucks, and rush samples were usually discarded once the results have been approved. However, since 2016 exploration pulps have been kept. Underground sample rejects are routinely discarded once results have been confirmed by the Geology Department.

SAMPLE SECURITY

All blast hole samples remain in Goldstrike custody and control generally from the drill rig to the mine assay laboratory. Exploration drill core and RC chip samples sent to ALS Chemex laboratories for analysis are either picked up on site by ALS Chemex personnel or transported to the ALS Chemex facility by exploration personnel. Security is not an issue since Goldstrike employees hand off the samples directly to ALS Chemex or the Goldstrike main assay laboratory and the chain of custody is complete.

In RPA's opinion, the sample preparation, analysis, and security procedures at Goldstrike are appropriate for use in the estimation of Mineral Resources.

QUALITY ASSURANCE AND QUALITY CONTROL

Goldstrike has QA/QC protocols in place to monitor contamination, accuracy, and precision of the sample preparation and analyses. The QA/QC program includes the insertion of blank, standard reference material, and duplicates into the sample stream. The insertion rate is nominally five percent for blanks and standard reference material and less than three percent for field duplicates but varies somewhat depending on whether the samples are dispatched to the Goldstrike laboratory or the ALS Chemex laboratory.

The blank, standard reference, and pulp duplicate sample numbers are entered in the sample sheet by the geologist. The field duplicate for RC drilling is completed by the contract driller at the rig using a riffle splitter. As the underground core drilling is whole core sampled, no field duplicates are taken. The pulp duplicate is selected randomly by the assay laboratory.

The assay result of a standard reference material (SRM) is considered a failure if the result is greater than three standard deviations from the expected value or if any two consecutive returns are greater than two standard deviations from the expected value. A blank sample is considered a failure if it is greater than five times the lower detection limit of the analytical method.

The assay results of the field duplicates are analyzed by preparing scatter plots and relative difference plots that compared the difference of grade of the pairs to the mean grade of the pairs.

Monthly QA/QC reports are prepared by the Database Administrator. The report evaluates the performance of the QA/QC samples, identifies any QA/QC failures, and tracks their investigation and resolution including any assay re-runs. Failures are presented to the project geologist to determine if re-runs are warranted. If warranted, assay re-runs are then performed on five samples previous and five sample after the failed SRM or blank. Assays are maintained on temporary status until signed off by the project geologist and Database Administrator.

Table 11-1 summarizes the results of the QA/QC; blanks, standards, and duplicate samples, in 2017 and 2018.

TABLE 11-1 QA/QC SAMPLES - SUMMARY 2017-2018
Barrick Gold Corporation - Goldstrike Mine

Year	Samples Submitted	Failures	Accepted	Rejected Resolved
Blanks				
2017	251	3	2	1
2018	719	15	N/A	15
Standards				
2017	407	4	0	4
2018	1338	26	N/A	26
Field Duplicates				
2017	108	0	0	0
2018	427	4	N/A	4

GOLDSTRIKE ASSAY LABORATORY QA/QC

Gold analysis by fire assay includes a blank sample, two certified gold reference material samples, and a repeat assay of a sample for each set of 24 samples analyzed. Contamination, accuracy, and precision are monitored daily using the internal QA/QC to ensure good sample results. Sample sets that include certified reference material or blank results that are out of set specifications are not reported to clients and the entire set must be re-assayed.

QA/QC reports are distributed daily, and results are reviewed by the chemists and laboratory supervision. A monthly QA/QC report is also distributed to laboratory supervision and personnel. With close monitoring of QA/QC, issues or problems can be corrected quickly.

The Goldstrike laboratory also participates in four separate round robin programs, carried out monthly to bi-annually, to ensure quality results are being produced. Unknown samples from a third party are sent to the laboratory for analysis. Reported results are statistically compared to other participants as a gauge of quality.

Goldstrike participates in the following round robin programs, typically carried out at the frequency indicated:

- Corporate Mandated GeoStats – Bi-Annual
- Newmont Leco Round Robin – Monthly
- Society of Mineral Analysts Round Robin – Frequency varies depending on participation but usually quarterly if not more
- Rocklabs Proficiency Testing – Once or twice a year

GOLDSTRIKE EXPLORATION QA/QC

Barrick exploration and site geologists are responsible for the QA/QC for all exploration drilling on site, surface and underground. Goldstrike has checks in place to prevent non-compliance with sampling procedures that include daily observation of contractor RC sampling techniques by geologists and/or drill supervisors. Immediate action is taken to correct any non-compliance with sampling procedures. A visual estimate of any downhole contamination is recorded by geologists on the drill hole log and the contractor, driller, and crew responsible are notified and proper drilling and sampling procedures are reviewed.

Sample weights are checked and may be used to plan new exploration and infill drilling because low RC sample weights are usually due to low recovery and may not yield a representative sample.

Drill holes are designed and assigned drill hole name, planned collar coordinates, depth, and appropriate sample intervals. The targeted mineralized interval is used to assign the QA/QC standards, blanks, and duplicates for each drill hole. A list is prepared, and barcoded sample tags are printed. Sample bags are prepared by a geotechnician and checked for accuracy. The bags are then given to the drillers. Duplicate sample intervals are marked by red flagging to warn the driller's helper of an upcoming duplicate. Blank control samples are included in the sample sequence and reference standard samples are marked and prepared after completion of the drilling and prior to submittal to the laboratory. Samples are collected in bins and transported to the laboratory either by mine or laboratory vehicle accompanied by

completed submittal forms for each drill hole. One blank, one standard, and one duplicate are randomly inserted in the assaying stream for every 30 samples submitted.

QA/QC data are tracked as returned from the laboratory and assays validated before finalizing them in the database.

The Goldstrike underground division has checks in place to prevent non-compliance with sampling procedures that include training and checking of proper sampling procedures for contractor RC drilling, core sampling by Goldstrike geotechnicians, temporary contractor geotechnicians, and muck sampling by Goldstrike truck operators. Immediate action is taken to correct any non-compliance with sampling procedures. A visual estimate of any downhole contamination is recorded by geologists on the drill hole log and the contractor, driller, and crew responsible are notified and proper drilling and sampling procedures are reviewed.

One pulp blank, one pulp standard, one field duplicate and one pulp duplicate are inserted randomly into the assay stream. The pulp blank and standard are entered in the sample sheet by the geologist. The field duplicate for RC drilling is completed by the contract driller at the rig using a riffle splitter. As the underground core drilling is whole core sampled, no field duplicates are taken. The pulp duplicate is selected randomly by the assay laboratory.

12 DATA VERIFICATION

The Barrick Database Manager exports a project level drill and sample database from the Barrick exploration and underground drilling databases prior to updating the open pit or underground resource model. Database security and integrity is accomplished by restricting access and user level permissions that are set by the Database Manager. Once data entry and validation are completed for a drill hole, access is locked. There are procedures for updates that retain all the original information and prioritize use of the updates.

For Mineral Resource estimates, a Vulcan database is created from the exported dataset, and is checked for duplicate collars, missing data, bad depth data, overlapping intervals, and other anomalies. Drill holes or intervals with errors are documented by the Resource Geologist. In each case, either the error is fixed, or the hole is removed from the estimation database. Where possible, the error is also corrected in the master acQuire database. If problems are found with the database export, the modeling group works with the Database Manager to obtain a valid export. Access to the Vulcan database used for resource and reserve estimation is restricted to the Goldstrike Resource Geology team to ensure that the data integrity is preserved.

The open pit and underground resource drill hole databases are validated before they are used for model estimation. The first step in validating a Vulcan database is running the database validation tool in Vulcan and/or JMP statistical software. This tool checks for duplicate collar coordinates, overlapping intervals, the validity of From/To fields, blank tables, and certain other possible errors. The tool generates a report that is reviewed by the Resource Geologist, who makes and documents any changes. The gold and metallurgical data are analyzed to check on the validity of the data in the database. Checks are run for unreasonable values. Negative values that represent detection limits (below lower detection limits or above maximum detection limit) are recorded.

In late 2018, Barrick retained an external consultant to perform a verification audit of the Goldstrike database. The audit compared approximately 10% (26,623) of the fire assays in the database to original certificates and determined an error rate of only 0.15%. However, the analysis appears not to have incorporated a proxy of the re-assay supersedence built into acQuire, so the error rate is likely to be even lower. The consultant also compared

approximately 78% of the gold cyanide (AuCN) assays to the certificates and found that some of the final data were not entered, leaving a very low grade (0.0004 oz/st Au) as a placeholder value. RPA considers the AuCN check to be of less importance, as these assays are not used in the current Mineral Resource and Mineral Reserve estimates or are in mined out areas. RPA cross examined the assay certificates and database export used in this external review and found few minor differences in gold grades between matching sample IDs. RPA thus concurs with the results of the external review.

Based on RPA's past and current examination of the Goldstrike Mineral Resource, and the external verification work presented for this Mineral Resource model, it is RPA's opinion that the Goldstrike open pit and underground drill hole databases are valid and acceptable for Mineral Resource estimation. The acQuire data management workflows and checks are among industry best practice and help to improve the quality of the master database year-on-year. As a global perspective on the veracity of the acQuire source data, Barrick also performs regular reconciliation analyses which compare the Mineral Resource models to actual production.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

MINERAL PROCESSING

The Goldstrike Mine has two separate processing facilities each capable of treating single or double refractory ore including:

1. An autoclave circuit with:
    - Primary crushing
    - Two parallel semi-autogenous grinding (SAG) Mill-Ball Mill grinding circuits with pebble crushing
    - Five parallel autoclaves capable of alkaline or acid pressure oxidation (POX)
    - Two parallel calcium thiosulphate (CaTS) leaching circuits with resin-in-leach (RIL) and electrowinning for gold recovery
    - A refinery producing doré bullion from both autoclave and roaster circuits

2. A roaster circuit with:
    - Primary and secondary crushing
    - Two parallel dry grinding circuits
    - Two parallel dual stage fluid bed roasters
    - Roaster off-gas handling and mercury recovery systems
    - A slurry neutralization circuit
    - A carbon-in-leach (CIL) circuit with carbon stripping, carbon acid wash, carbon regeneration (ADR) and electrowinning for gold recovery
    - Cyanide destruction circuit

Ore from Goldstrike, Cortez, or external sources for toll processing are dispatched to various blend stockpiles dependent on mineralogical composition including gold, sulphide, arsenic, carbonate, and organic carbon content. The routing of ore from stockpiles to the roaster and autoclave circuits is coordinated at Goldstrike by the Strategic Planning department to achieve optimal Au, CO_3/S^{2-} and $C_{ORGANIC}$ blends to respective processes. Higher grade underground ore from Goldstrike and Cortez is fed to the Roaster-CIL circuit.

METALLURGICAL TESTING

Recent metallurgical efforts have focused on optimization of the CaTS circuit, which is also referred to as the Thiosulphate Leach Conversion (TLC) circuit, involving the use of CaTS for leaching and RIL for gold adsorption. The leaching circuit is preceded by either Alkaline or

Acid POX, dependent upon the characteristics of the feed. The TLC circuit was commissioned in 2014 with the first gold pour on November 28, 2014.

Performance of the TLC circuit has been constrained by the capacity and efficiency of the RIL elution circuit requiring that the process be fed with lower gold grade materials. Decreased sulphide oxidation efficiency associated with alkaline versus acid autoclave process chemistry has also required that feed blends target carbonate to sulphide ratios less than 7:1 with the addition of sulphuric acid to maintain free acid levels in the autoclave residue. Optimization of the POX-TLC circuit is ongoing to determine optimal circuit configuration, feed types and blends from within the Barrick Nevada portfolio.

RECOVERY

The Goldstrike Mine has developed a series of empirical equations to estimate gold recovery for each circuit as a function of head grade (HG). The most recent equations for 2018 and the LOM Plan are listed in Tables 13-1 to 13-3. The equations have been modified over time to adjust for operational and mineralogical variability, based on operating performance. Estimated gold recovery as a function of head grade is depicted in Figure 13-1.

A structured program of geometallurgical investigation is recommended, involving the bench scale testing of discrete interval geological samples, and will ideally provide a predictive model of expected metallurgical performance. When compared to the present practice of analyzing past operational data, influences of lithology, mineralogy, blended feed, process plant upsets and potential for improvement may otherwise be undefined and overlooked.

FIGURE 13-1 GOLD RECOVERY

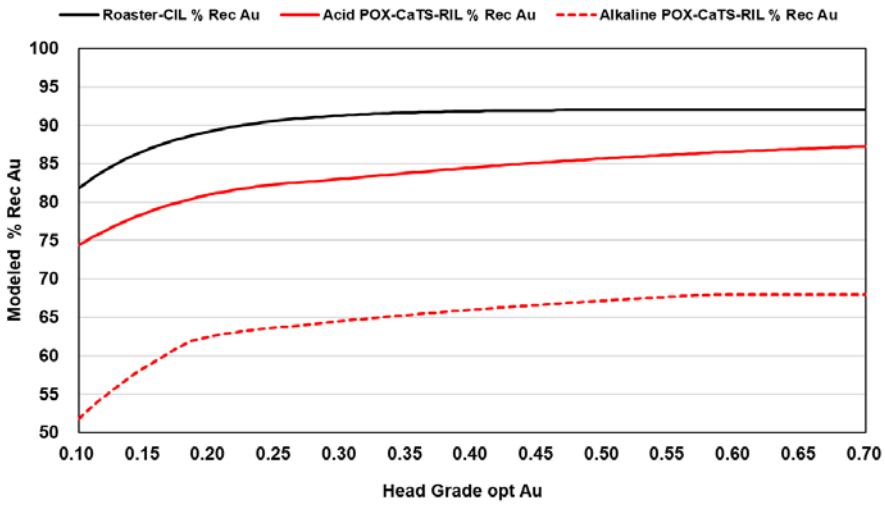


TABLE 13-1 ALKALINE POX-CaTS-RIL RECOVERY EQUATIONS FOR 2018
Barrick Gold Corporation – Goldstrike Mine

Head Grade (oz/st Au)	Equations
HG > 0.59	%Rec Au=82.0-14.0=68.0
0.215 < HG ≤ 0.59	%Rec Au=6.43*(HG^3)-23.02*(HG^2)+28.56*(HG)+82.25+1.23-8.09+1.95-1.5-4.0-14.0
0.18 < HG ≤ 0.215	%Rec Au=661.36*(HG^3)-628.91*(HG^2)+208.23*(HG)+65.11+1.23-8.09+1.95-1.5-4.0-14.0
HG ≤ 0.18	%Rec Au=16.41*LN(HG)+103.58-14.0

TABLE 13-2 ACID POX-CaTS-RIL RECOVERY EQUATIONS FOR 2018
Barrick Gold Corporation – Goldstrike Mine

Head Grade (oz/st Au)	Equations
HG > 1.3	%Rec Au=95.0+1.23+2.35-1.5-8.0=89.1
0.28 < HG ≤ 1.3	%Rec Au=6.43*(HG^3)-23.02*(HG^2)+28.56*(HG)+82.25+1.23+2.35-1.5-8.0
HG ≤ 0.28	%Rec Au=661.36*(HG^3)-628.91*(HG^2)+208.23*(HG)+65.11+1.23+2.35-1.5-8.0

TABLE 13-3 ROASTER-CIL RECOVERY EQUATIONS FOR 2018
Barrick Gold Corporation – Goldstrike Mine

Head Grade (oz/st Au)	Equations
All Head Grades	% Rec Au = 92.03-37.36*EXP(-12.94*HG)

ALLOCATION AND RECONCILIATION

Goldstrike undertakes metallurgical accounting through month-end inventory measurements and production calculations. Allocations to the various ore zones are a function of relative

tonnage and mined grade with metal production determined from recovery equations defined in Tables 13-1 to 13-3 or contract recovery rates established for toll processing.

Differences between estimated and actual head grades and gold recoveries for open pit and underground ores are reconciled to actual gold production. Separate metallurgical balances are maintained for the roaster and autoclave circuits and consider a conservation of mass including tonnage and gold content according to the equation:

$$IN = OUT + \Delta \text{ INVENTORY}$$

The end of month inventory is a key component of the metallurgical balance. At each month-end, measurements are made of material contained in the circuits and representative samples are analyzed to determine total gold content in each circuit.

Feed tonnage to respective facilities is determined from flow meters and densitometers. Automated samplers are used to collect samples of thickener underflow and final tailings for both the autoclave and the roaster. Using this data, the “Ounce Calls” are estimated and reported on the Daily Safe Production Report (DSPR). The tonnages are not adjusted. The head grades are adjusted at the month end based on actual gold production. Tailings grades for individual components may be adjusted based on predicted or contract recovery rates for toll processed material. Actual gold production is reconciled with the Ounce Call for each plant based on actual gold production and the ratios determined from the Ounce Call.

AUTOCLAVE ADJUSTMENTS

Cumulative tonnage fed to the autoclaves is not adjusted and determined from thickener underflow densitometer and flow meter data. Since various ore sources are not campaigned separately, the tonnage of each is determined from a combination of weigh scale measurements, moisture determinations, stockpile surveys, and skipped tons. The estimated tonnage from each ore source is then reconciled to thickener underflow tonnage and adjusted by ratio.

Process head grade is adjusted based on gold production data. Adjustments to process head grade for each ore source considers actual gold production relative to ore source production estimates.

The final tailings grade from the process is determined from the DSPR with no adjustment. The estimated tail grade is determined from gold recovery formulas in Tables 13-1 or 13-2 for Alkaline or Acid POX followed by thiosulphate leaching and RIL. Estimated final tailings grades are corrected by ratio to the actual DSPR tail grade.

ROASTER ADJUSTMENTS

Cumulative tonnage fed to the roaster is not adjusted and is determined from thickener underflow densitometer and flow meter data. Since various ore sources are not campaigned separately, the tonnage of each is determined from a combination of weigh-scale measurements, moisture determinations, stockpile surveys, and skipped tons. Toll ore source tonnages are determined by reconciling delivered tonnages to stockpile surveys, underground ore is calculated using skipped weight and mined volumetric survey, and open pit ore is estimated based on blends throughout the month. The e-pile adjustment is applied, then the open pit is further adjusted so the total matches official roaster tonnage. Production is assigned based on the estimated production from each source (total tons, grade, and metal content) and prorated back to the source by ratio.

The final roaster tail grade is taken from the DSPR with no adjustment. The estimated tail grade from all ore sources is determined using an estimate of gold recovery based on the roaster recovery model in Table 13-3. Estimated tail grades are corrected by applying a ratio to the actual DSPR tail grade.

The recovery is adjusted using the adjusted head grade and the corrected tail grade using the following equation:

Ounce Production = Tons x Adjusted Head Grade X Adjusted Recovery (%)

Adjustments made to the plant head grades for 2016 to 2018 are summarized in Table 13-4.

TABLE 13-4 SUMMARY OF HEAD GRADE ADJUSTMENTS
Barrick Gold Corporation – Goldstrike Mine

		Autoclave			Roaster			Overall		
		2016	2017	2018	2016	2017	2018	2016	2017	2018
Processed Feed	Mt	3.861	4.693	5.218	5.629	5.834	5.842	9.491	10.528	11.060
Calculated Head	oz/st Au	0.103	0.086	0.082	0.235	0.187	0.220	0.181	0.142	0.155
Adjusted Head	oz/st Au	0.100	0.086	0.083	0.238	0.190	0.219	0.182	0.144	0.155
Difference	oz/st Au	-0.003	-	0.001	0.003	0.003	-0.001	0.001	0.002	-0.000
Deviation	%	-2.9%	0.0%	1.2%	1.3%	1.6%	-0.5%	0.5%	1.2%	-0.1%

Results are well within normal variances.

A review of roaster feed belt sampling is recommended. While it is understood that a perfect head grade sample will not increase metal production, improved definition of head grade may serve to improve process feed blending practices and mine to process reconciliation. Real time moisture analysis of roaster feed would also be beneficial and could apply the same microwave technology as is currently applied on the Cortez UG transfer conveyor.

Based on an evaluation of the methodology, data analysis and procedures associated with accounting and reconciliation, RPA is of the opinion that head grade estimation and adjustments, recovery calculations, and gold production accounting are acceptable and aligned with industrial practices.

PRODUCTION STATISTICS

Production statistics from the autoclave and roaster circuits from 2014 through 2018 are detailed in Table 13-5. Data includes all material from Goldstrike, Cortez or other toll ore processed through both facilities.

Roaster-CIL and POX-CaTS-RIL circuit performance was on budget for tonnage processed and -4.3% for gold production on an aggregate YE 2018 basis. This was a direct result of roaster feed grades being 5.6% less than plan, offset partially by an increase in roaster throughput.

Total throughput and throughput rate for the autoclave circuit has increased by an average 20% each year since 2015. Annual gold production from POX-CaTS-RIL is relatively uniform

despite a decline in feed grade to the process and variable metallurgical performance as a result of alkaline POX and RIL elution circuit constraints.

Roaster throughput has increased by an average 1.2% per year since 2015. Annual gold production from Roaster-CIL has been maintained at uniform levels despite a slight decrease in feed grade, an outcome of improved recovery following the addition of two new reactors in the CIL circuit, increased roaster throughput, and efforts by site personnel to optimize roaster feed ore blends and operational criteria that impact process performance.

TABLE 13-5 AUTOCLAVE AND ROASTER PRODUCTION STATISTICS 2014-2018
Barrick Gold Corporation – Goldstrike Mine

AUTOCLAVE	2014	2015	2016	2017	2018	2018 Budget
Tonnage	1,169,057	2,871,201	3,861,376	4,693,488	**5,218,051**	**5,540,954**
Tons/day	3,203	7,866	10,550	12,859	**14,296**	**15, 181**
Feed oz/st Au	0.176	0.122	0.100	0.086	**0.083**	**0.092**
Produced ounces Au	155,070	204,295	242,485	248,454	**229,274**	**355,440**

ROASTER	2014	2015	2016	2017	2018	2018 Budget
Tonnage	5,717,363	5,567,036	5,629,158	5,834,416	**5,841,756**	**5,848,312**
Tons/day	15,664	15,252	15,380	15,985	**16,005**	**16,023**
Feed oz/st Au	0.197	0.238	0.238	0.190	**0.219**	**0.211**
Produced ounces Au	962,578	1,180,151	1,203,994	986,149	**1,140,273**	**1,102,307**

RPA is not aware of any processing factors or deleterious elements that could have a significant effect on production.

14 MINERAL RESOURCE ESTIMATE

SUMMARY

Table 14-1 summarizes the total Open Pit and Underground Mineral Resources, exclusive of Mineral Reserves, at the Goldstrike Mine. The Mineral Resource estimate has an effective date of December 31, 2018. The Open Pit resource estimates were based on depleting the 2018 mid-year block models, which were built using data available up to May 31, 2018. The Underground Mineral Resource estimates were based on the EOY2018 block models, which were built using data up to November 28, 2018.

Measured and Indicated Mineral Resources total 9.0 million tons grading 0.181 oz/st Au, containing 1.63 million ounces of gold. In addition, Inferred Mineral Resources total 2.0 million tons grading 0.237 oz/st Au, containing 474,000 ounces of gold.

In metric units (Table 14-2), the Measured and Indicated Mineral Resources total 8.164 million tonnes grading 6.21 g/t Au, containing 1.632 million ounces of gold. In addition, Inferred Mineral Resources total 1.817 million tonnes grading 8.11 g/t Au, containing 474,000 ounces of gold.

Open Pit Measured and Indicated Mineral Resources included in the Mineral Resource total 3.32 million tons grading 0.035 oz/st Au, containing 115,200 ounces of gold. In addition, Inferred Mineral Resources total 236,100 tons grading 0.063 oz/st Au, containing 15,000 ounces of gold. The Open Pit Measured Resources include 0.97 million tons averaging 0.045 oz/st Au from the BMW and BMW2 stockpiles, containing 43,900 ounces of gold.

Underground Measured and Indicated Mineral Resources included in the Mineral Resource total 5.68 million tons grading 0.267 oz/st Au, containing 1.52 million ounces of gold. Underground Inferred Mineral Resources are estimated to be 1.77 million tons grading 0.260 oz/st Au, containing 459,000 ounces of gold.

Definitions for resource categories used in this report are consistent with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and

Mineral Reserves dated May 10, 2014 (CIM (2014) definitions) as incorporated by reference into NI 43-101.

TABLE 14-1 MINERAL RESOURCES - DECEMBER 31, 2018
Barrick Gold Corporation - Goldstrike Mine

	Tonnage	Grade	Contained Gold
Measured	**(000)**	**(oz/st Au)**	**(000 oz)**
Open Pit	1,370.6	0.041	56.0
Underground	2,567.0	0.280	718.9
Total Measured	**3,937.6**	**0.197**	**774.9**
Indicated			
Open Pit	1,948.7	0.030	59.2
Underground	3,112.6	0.256	798.1
Total Indicated	**5,061.3**	**0.169**	**857.4**
Measured + Indicated			
Open Pit	3,319.3	0.035	115.2
Underground	5,679.6	0.267	1517.0
Total Measured + Indicated	**8,998.9**	**0.181**	**1632.2**
Inferred			
Open Pit	236.1	0.063	15.0
Underground	1,767.4	0.260	458.9
Total Inferred	**2,003.5**	**0.237**	**473.8**

Notes:
1. CIM (2014) definitions were followed for Mineral Resources.
2. Mineral Resources are estimated using a long-term gold price of US$1,500 per ounce.
3. Open Pit Mineral Resources are based on cut-off grades of 0.025 oz/st Au for roaster feed, 0.050 oz/st Au for acid autoclave feed, 0.060 oz/st Au for alkaline autoclave feed.
4. Underground Mineral Resources are reported cut-off grades are between 0.126 oz/st Au and 0.155 oz/st Au. Incremental material at a cut-off grade of 0.10 oz/st Au is included if it is part of the mine sequence.
5. A minimum underground mining width of 15 ft was used.
6. For open pit, an average tonnage factor for non-Carlin Formation ore and waste of approximately 13.5 ft^3/st was used. For Carlin Formation waste, a tonnage factor of 16.0 ft^3/st is used, and for waste dump material, a value of 18.2 ft^3/st was used
7. For underground, bulk density is set by mineralized domain from 12.0 st/ft^3 to 13.6 st/ft^3.
8. Mineral Resources are exclusive of Mineral Reserves.
9. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
10. Totals may not reconcile due to rounding.
11. North Post JV (Barrick 70% and Newmont 30%) reported at 70%.

TABLE 14-2 MINERAL RESOURCES - DECEMBER 31, 2018 (METRIC UNITS)
Barrick Gold Corporation - Goldstrike Mine

Measured	Tonnes ('000 t)	Grade (g/t Au)	Contained Gold ('000 oz)
Open Pit	1,243	1.40	56
Underground	2,329	9.60	719
Total Measured	**3,572**	**6.75**	**775**
Indicated			
Open Pit	1,768	1.04	59
Underground	2,824	8.79	798
Total Indicated	**4,592**	**5.80**	**857**
Measured + Indicated			
Open Pit	3,011	1.20	115
Underground	5,152	9.15	1,517
Total Measured + Indicated	**8,164**	**6.21**	**1,632**
Inferred			
Open Pit	214	2.18	15
Underground	1,603	8.91	459
Total Inferred	1,817	8.11	**474**

Notes:
1. CIM (2014) definitions were followed for Mineral Resources.
2. Mineral Resources are estimated using a long-term gold price of US$1,500 per ounce.
3. Open Pit Mineral Resources are based on cut-off grades of 0.86 g/t Au for roaster feed, 1.71 g/t Au for acid autoclave feed, and 2.06 g/t Au for alkaline autoclave feed.
4. Underground Mineral Resources are reported at cut-off grades between 4.32 g/t Au and 5.31 g/t Au. Incremental material at a cut-off grade of 3.43 g/t Au is included if it is part of the mine sequence.
5. A minimum underground mining width of 4.6 m was used.
6. For Open Pit, an average density for non-Carlin Formation ore and waste of approximately 2.37 t/m^3 was used. For Carlin Formation waste, a density of 2.0 t/m^3 was used, and for waste dump material, a density of 1.76 t/m^3 was used
7. For underground, bulk density is set by mineralized domain from 2.37 t/m^3 to 2.66 t/m^3.
8. Mineral Resources are exclusive of Mineral Reserves.
9. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
10. Totals may not reconcile due to rounding.
11. North Post JV (Barrick 70% and Newmont 30%) reported at 70%.

RPA is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors which could materially affect the Mineral Resource estimates.

Goldstrike has experienced on-site staff dedicated to maintaining the Betze-Post open pit block model, and the Meikle and Rodeo underground block models. Different resource estimation

procedures and block models are used to estimate the open pit and underground resources at the Goldstrike Mine.

RPA examined the EOY2018 Open Pit and Underground Mineral Resource estimates and is of the opinion that they meet industry standards and are acceptable to support Mineral Reserve estimation. The following is a list of some of the checks performed on the Mineral Resource models by RPA:

- Checked for duplicate drill hole traces, twinned holes.
- Checked for overlapping wireframes to determine possible double counting.
  - Solids have priority levels in block definition file.
  - Diamond drill hole domains are likewise flagged by priority.
- Checked orebody/wireframe extensions beyond last holes to see if they are reasonable and consistent.
- Checked for capping of extreme values.
- Checked for reasonable compositing intervals.
- Checked that composite intervals start and stop at wireframe boundaries.
- Checked that assigned composite rock type coding is consistent with intersected wireframe coding.
- Checked if block model size and orientation is appropriate to drilling density, mineralization, and mining method.
- Checked interpolation parameters against available variography.
- Visually checked block resource classification coding for isolated blocks.
- Generated an independent Mineral Resource report to match with the Barrick estimate.
- Compared block statistics (zero grade cut-off) with assay/composite basic statistics.
- Generated swath plots of composites versus blocks and drilling.
- Visually compared block grades to drill hole composite values on sections and/or plans.
- Visually checked for grade banding, smearing of high grades, plumes of high grades, etc., on sections and/or plans.

RPA is of the opinion that the block model is suitable to support Mineral Resource and Mineral Reserve estimation.

OPEN PIT MINERAL RESOURCES

SUMMARY

Table 14-3 provides a detailed breakdown of the Open Pit Measured and Indicated Mineral Resources, which are exclusive of Mineral Reserves. Resources occurring between the reserve pit design and the resource shell are tabulated as “Within Resource Shell”. The incremental resources situated in the reserve pit design with block grades lying between the resource and reserve cut-off grades are tabulated as “Within Reserve Pit”. The low-grade BMW and BMW2 stockpile material is also itemized separately.

TABLE 14-3 OPEN PIT MINERAL RESOURCES – DECEMBER 31, 2018
Barrick Gold Corporation - Goldstrike Mine

Open Pit - Phase	Tons (000)	Grade (oz/st Au)	Ounces (000 Au)
Measured			
Reserve Pit - 3NW	10	0.027	0.3
Reserve Pit - 4NW	137	0.031	4.2
Reserve Pit - WB	84	0.032	2.7
Reserve Pit - 5NW	168	0.030	5.0
Open Pit Sub-total	400	0.030	12.2
Stockpiles			
BMW	557	0.040	22.2
BMW2	414	0.052	21.7
Stockpile Sub-total	971	0.045	43.9
Measured Total	**1,371**	**0.041**	56.0
Indicated			
Reserve Pit - 3NW	47	0.030	1.4
Reserve Pit - 4NW	771	0.030	23.2
Reserve Pit - WB	499	0.033	16.4
Reserve Pit - 5NW	632	0.029	18.2
Indicated Total	**1,949**	**0.030**	59.2
Measured and Indicated			
Reserve Pit - 3NW	57	0.029	1.7
Reserve Pit - 4NW	908	0.030	27.4
Reserve Pit - WB	583	0.033	19.0
Reserve Pit - 5NW	800	0.029	23.3
Open Pit M+I Sub-total	**2,349**	**0.030**	71.4
BMW	557	0.040	22.2

Open Pit - Phase	Tons (000)	Grade (oz/st Au)	Ounces (000 Au)
BMW2	414	0.052	21.7
Stockpile M+I Sub-total	971	0.045	43.9
Measured + Indicated Total	**3,319**	**0.035**	115.3
Inferred Resources			
Reserve Pit - 3NW			
Reserve Pit - 4NW	114	0.057	6.4
Reserve Pit - WB	73	0.088	6.4
Reserve Pit - 5NW	50	0.044	2.2
Open Pit Inferred Sub-total	236	0.063	15.0
Inferred Total	**236**	**0.063**	**15.0**

Notes:
1. Mineral Resources estimated according to CIM (2014) definitions.
2. Mineral Resources are exclusive of Mineral Reserves and are contained within and below the reserve pit.
3. Mineral Resources estimated at $1,500/oz Au.
4. Open Pit Mineral Resources are based on cut-off grades of 0.025 oz/st Au for roaster feed, 0.050 oz/st Au for acid autoclave feed, and 0.060 oz/st Au for alkaline autoclave feed.
5. Tonnages factors vary depending on mineralization domain.
6. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
7. Totals may not reconcile due to rounding.

The open pit block model was created by Goldstrike using Maptek Vulcan software version 10.0.5, supplemented by in-house custom Barrick programs used for capping, and other statistics derived from geostatistical software. The model is an inverse distance squared (ID^2) estimate that uses estimated gold grade indicators and composite weighting to interpolate the gold grades within each mineralized zone. Estimates were generated in 32 separate block model estimation domains, each of which is based on the geologic interpretation of the deposit as represented by three-dimensional fault surfaces, lithologic units, and the orientations of mineralization. Nine of the estimation domains encompass the underground operating area. The volume represented by underground domains is not reported as Open Pit Mineral Resource, but was retained to ensure continuity with underground data.

Barrick interpreted geological wireframes from drill hole logging, blast hole grade contours, and high wall mapping information. In the northwest portion of the pit, which is currently being mined, mineralization is more structurally controlled and features sharper gradations in gold grades than previously encountered.

DOCUMENTATION

The Goldstrike open pit resource team documented the Open Pit Mineral Resource estimate with notes and step by step procedures.

MINERAL RESOURCE DATABASE

BULK DENSITY

The density values used by Goldstrike's open pit modelling team originated from historical tests conducted on core for several areas of the Betze-Post deposit. These tests have indicated an average tonnage factor for non-Carlin Formation ore and waste of approximately 13.5 ft^3/st. For Carlin Formation waste, a tonnage factor of 16.0 ft^3/st is used, and for waste dump material, a value of 18.2 ft^3/st is used.

Mine plans and reconciliation show that the current density model is of sufficient quality to support Mineral Resource and Mineral Reserve estimates. Density samples have been collected and were recently compiled to identify areas and rock types that might need additional data sampling. Additional sample density work is planned to determine whether an update to modelled density is warranted. These new data will be integrated with the existing data to improve the density model.

RESOURCE ASSAYS

For the Mineral Resource estimate, Goldstrike exported a subset of the master database from acQuire and appended open pit and underground tables together. The Mineral Resource database contains tables for collar, downhole survey, assay, lithology, stratigraphy, alteration, Leco sampling, three metallurgy tables, and an RMR table. Barrick investigated the data via visual checks and Vulcan's internal validation routine, and excluded holes or intervals where surveys were unreliable. Default and null values for assay fields were set to negative numbers to exclude them from the Mineral Resource estimate, and then statistics were re-checked in JMP software to confirm the changes. The drill hole selection area was set to a boundary outside of the block model to ensure that all holes crossing the block model volume were captured.

MINERALIZED DOMAIN MODELS

To define areas of differing mineralization characteristics, Barrick created grade estimation domains based on geology, structural data, mineralization trends, and other factors. Barrick

generated variograms for each estimation domain to determine search ellipsoid ranges and orientations. All composites within each domain solid are flagged with the domain value coded into the block model, as summarized in Table 14-4.

TABLE 14-4 OPEN PIT MINERALIZATION DOMAINS
Barrick Gold Corporation - Goldstrike Mine

Domain	Description	Domain	Description
1	Golden April	12	Weird 2
2	Latite	13	JBE
3	Unknown	23	Deep Post
4	North Screamer	24	Deep Star
5	Northwest	27	West Barrel
6	Obiwan	28	Post
7	Brewer	29	Upper Post
8	Bills	20	Upper Oxide
9	Strange	31	Southwest
10	Bridge	32	Skarn Hill
11	Betze		

CAPPING AND HIGH YIELD RESTRICTION

Grade capping level selection is based on Barrick's in-house statistical software. High grade assays are capped in the Mineral Resource drill hole database prior to compositing. Capping thresholds for the Mineral Resource estimate are summarized in Table 14-5.

Capping thresholds are determined from log-probability plots of gold grade distribution in each domain. High-grade outlier populations are identified as separate disruptions in grade distribution, where the highest-grade end of the 'tail' that is part of a smooth or continuous distribution is usually taken as the capping threshold. Capping grades are applied to the assays in each domain and statistics are checked to ensure that the coefficient of variation (CV) and/or Grade-Thickness Lost (GT Lost%) for the capped assays are less than approximately 2% and 10%, respectively. Table 14-6 shows sample statistics for the Goldstrike open pit.

RPA has reviewed Barrick's capping strategy, and is of the opinion that the capping strategy used at Goldstrike effectively prevents anomalous high-grade assays from having unreasonable spatial influence in the Mineral Resource model.

TABLE 14-5 OPEN PIT CAPPING OF HIGH-GRADE VALUES
Barrick Gold Corporation - Goldstrike Mine

Domain	Name	Capping Value (oz/st Au)	GT loss (%)	CV Capped
1	Golden April	0.8	6.77	2.07
2	Latite	0.75	0.62	1.5
3	Unknown	0.7	2.38	1.26
4	North Screamer	0.33	2.51	1.63
5	Northwest	1.25	1.3	1.57
6	Obiwan	0.87	0.89	1.54
7	Brewer	0.9	0.75	1.56
8	Bills	1.1	0.99	1.58
9	Strange	1.1	1.94	1.76
10	Bridge	1	3.54	1.72
11	Betze	1.1	4.86	1.51
12	Weird 2	0.9	2.65	1.54
13	JBE	1.7	2.2	1.7
23	Deep Post	3	2	1.86
24	Deep Star	1.6	4.92	2.23
27	West Barrel	1.1	2.83	2.06
28	Post	0.45	2.94	1.35
29	Upper Post	1	0.74	1.63
30	Upper Oxide	0.75	2.29	1.98
31	Southwest	0.35	1.93	1.75
32	Skarn Hill	0.5	0.63	1.46

TABLE 14-6 OPEN PIT SAMPLE STATISTICS
Barrick Gold Corporation - Goldstrike Mine

Domain	Name	Mean (oz/st Au)	St. Dev. (oz/st Au)	Maximum (oz/st Au)	Number Capped Assays
1	Golden April	0.022	0.092	0.800	18
2	Latite	0.022	0.066	0.680	34
3	Unknown	0.071	0.111	0.700	167
4	North Screamer	0.008	0.027	0.330	14
5	Northwest	0.024	0.069	1.170	11
6	Obiwan	0.024	0.068	0.870	13
7	Brewer	0.044	0.106	0.945	16
8	Bills	0.053	0.123	1.100	27
9	Strange	0.032	0.094	1.100	41
10	Bridge	0.054	0.125	1.000	66
11	Betze	0.053	0.112	1.100	62
12	Weird 2	0.032	0.125	0.900	125
13	JBE	0.083	0.194	1.700	117
23	Deep Post	0.155	0.366	3.000	70
24	Deep Star	0.058	0.196	1.600	18
27	West Barrel	0.009	0.046	0.850	32
28	Post	0.034	0.060	0.450	289
29	Upper Post	0.020	0.053	1.000	23
20	Upper Oxide	0.012	0.046	0.750	64
31	Southwest	0.004	0.017	0.350	6
32	Skarn Hill	0.017	0.046	0.500	9

COMPOSITING

Barrick composited capped Au assays in the Mineral Resource drill hole database into 20 ft downhole intervals for both low grade and high grade estimation. All compositing was performed using the run length method in Maptek Vulcan software. Table 14-7 shows composite statistics.

TABLE 14-7 OPEN PIT COMPOSITE STATISTICS
Barrick Gold Corporation - Goldstrike Mine

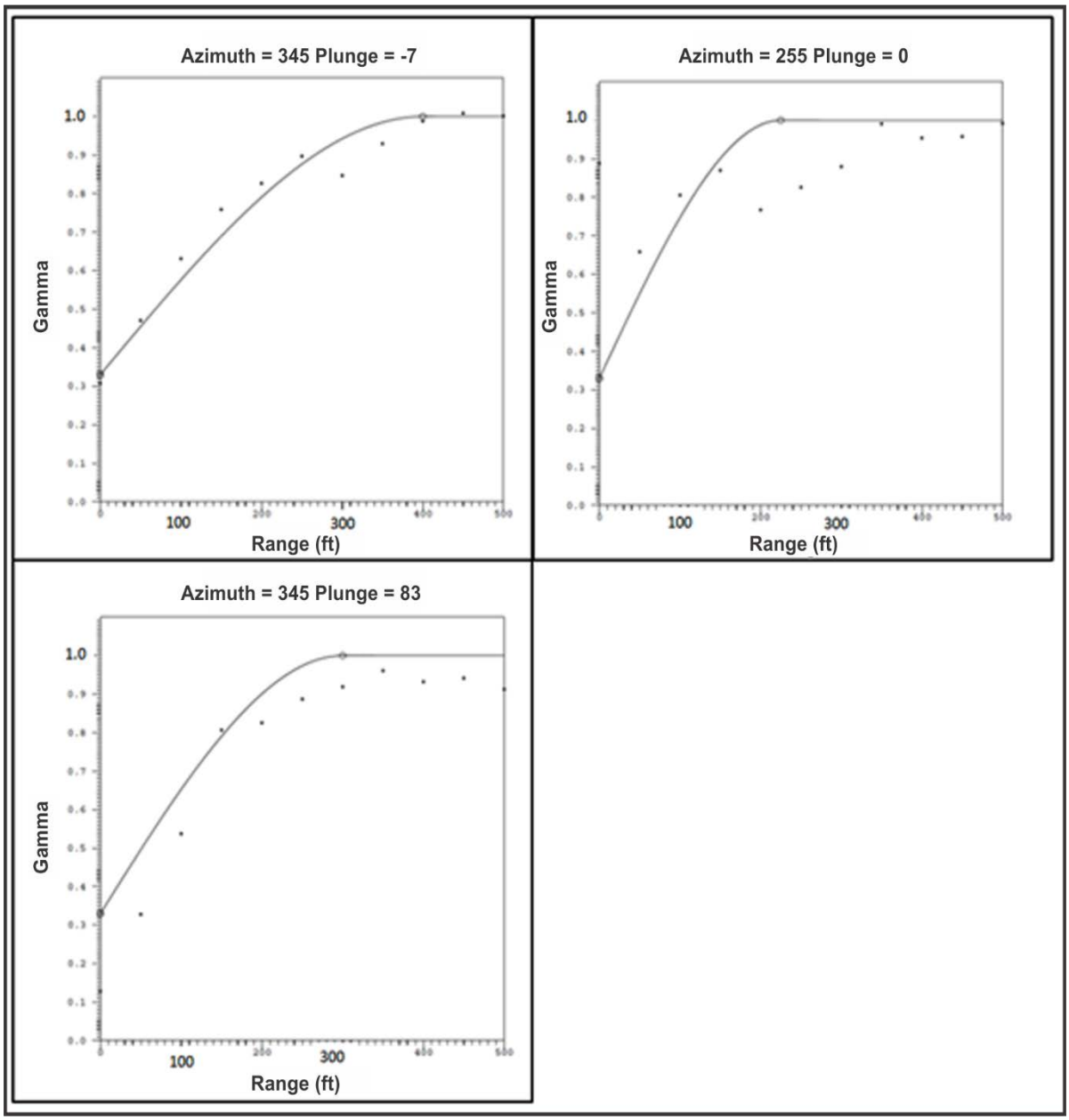
Domain	Name	Mean (oz/st Au)	Std. Dev. (oz/st Au)	Maximum (oz/st Au)
1	Golden April	0.011	0.056	0.784
2	Latite	0.021	0.060	0.680
3	Unknown	0.066	0.097	0.700
4	North Screamer	0.005	0.018	0.250
5	Northwest	0.025	0.063	1.068
6	Obiwan	0.023	0.059	0.817
7	Brewer	0.033	0.081	0.824
8	Bills	0.043	0.099	1.100
9	Strange	0.026	0.075	1.100
10	Bridge	0.044	0.099	1.000
11	Betze	0.049	0.095	1.100
12	Weird 2	0.029	0.110	0.900
13	JBE	0.077	0.162	1.700
23	Deep Post	0.140	0.303	2.890
24	Deep Star	0.036	0.139	1.411
27	West Barrel	0.008	0.040	0.850
28	Post	0.032	0.049	0.450
29	Upper Post	0.020	0.044	0.958
20	Upper Oxide	0.011	0.034	0.750
31	Southwest	0.004	0.014	0.230
32	Skarn Hill	0.019	0.039	0.382

TREND ANALYSIS

VARIOGRAPHY

Using the 20 ft composites, Barrick generated variograms (correlograms) in each domain to determine search ranges for the Betze-Post open pit model. Search ellipse orientations in each domain are based on the geometry of mineralization in that domain. Figure 14-1 shows a correlogram for the Latite Domain. Table 14-8 summarizes the orientation and search ranges used in each domain.

FIGURE 14-1 OPEN PIT - CORRELOGRAM FOR LATITE DOMAIN



Source: Barrick, 2016

TABLE 14-8 OPEN PIT GRADE INTERPOLATION PARAMETERS
Barrick Gold Corporation - Goldstrike Mine

Domain Code		Search Orientation			Search Distances (ft)		
	Pass #	Bearing (Z)	Plunge (Y)	Dip (X)	Major	Semi	Minor
ALL	Pass 1	360	0	0	20	20	10
1	Pass 2	35	45	120	120	70	40
2	Pass 2	-15	-7	0	180	120	100
3	Pass 2	-5	-10	120	120	85	55
4	Pass 2	5	-10	100	100	100	20
5	Pass 2	58	75	65	60	130	150
6	Pass 2	17	0	6	130	140	60
7	Pass 2	-5	5	150	150	150	95
8	Pass 2	5	5	150	150	150	125
9	Pass 2	-55	63	6	60	140	130
10	Pass 2	-39	-14	-2	160	160	100
11	Pass 2	5	-15	10	360	280	130
12	Pass 2	15	45	50	50	45	35
13	Pass 2	5	10	160	160	125	110
23	Pass 2	-30	-35	210	210	160	90
24	Pass 2	-5	45	120	120	110	110
27	Pass 2	-99	-3	-4	100	140	60
28	Pass 2	-10	80	130	130	100	90
29	Pass 2	5	20	290	290	180	165
30	Pass 2	5	5	55	55	50	40
31	Pass 2	0	-10	-5	60	80	40
32	Pass 2	0	15	10	50	60	50
1	Pass 3	35	45	120	60	35	20
2	Pass 3	-15	-7	0	90	60	50
3	Pass 3	-5	-10	120	60	40	30
4	Pass 3	5	-10	100	50	50	10
5	Pass 3	58	75	65	30	65	75
6	Pass 3	17	0	6	65	70	30
7	Pass 3	-5	5	150	75	75	50
8	Pass 3	5	5	150	75	75	65
9	Pass 3	-55	63	6	30	70	65
10	Pass 3	-39	-14	-2	80	80	50
11	Pass 3	5	-15	10	180	140	65
12	Pass 3	15	45	50	25	25	20
13	Pass 3	5	10	160	80	60	55
23	Pass 3	-30	-35	210	105	80	45
24	Pass 3	-5	45	120	60	55	55
27	Pass 3	-99	-3	-4	50	70	30
28	Pass 3	-10	80	130	65	50	45

Domain Code	Pass #	Search Orientation			Search Distances (ft)		
		Bearing (Z)	Plunge (Y)	Dip (X)	Major	Semi	Minor
29	Pass 3	5	20	290	145	90	80
30	Pass 3	5	5	55	30	25	20
31	Pass 3	0	-10	-5	30	40	20
32	Pass 3	0	15	10	25	30	25
1	Pass 4	35	45	120	190	85	60
2	Pass 4	-15	-7	0	270	220	130
3	Pass 4	-5	-10	120	210	125	75
4	Pass 4	5	-10	100	350	200	50
5	Pass 4	58	75	65	90	210	220
6	Pass 4	17	0	6	210	220	90
7	Pass 4	-5	5	150	260	240	125
8	Pass 4	5	5	150	330	210	185
9	Pass 4	-55	63	6	115	210	210
10	Pass 4	-39	-14	-2	220	240	140
11	Pass 4	5	-15	10	590	510	220
12	Pass 4	15	45	50	65	60	40
13	Pass 4	5	10	160	300	200	160
23	Pass 4	-30	-35	210	350	300	140
24	Pass 4	-5	45	120	200	125	125
27	Pass 4	-99	-3	-4	170	230	90
28	Pass 4	-10	80	130	250	160	180
29	Pass 4	5	20	290	650	400	390
30	Pass 4	5	5	55	110	80	65
31	Pass 4	0	-10	-5	80	100	50
32	Pass 4	0	15	10	80	100	50
1	Pass 5	35	45	120	95	45	30
2	Pass 5	-15	-7	0	135	110	65
3	Pass 5	-5	-10	120	105	60	40
4	Pass 5	5	-10	100	175	100	25
5	Pass 5	58	75	65	45	105	110
6	Pass 5	17	0	6	105	110	45
7	Pass 5	-5	5	150	130	120	65
8	Pass 5	5	5	150	165	105	95
9	Pass 5	-55	63	6	57.5	105	105
10	Pass 5	-39	-14	-2	110	120	70
11	Pass 5	5	-15	10	295	255	110
12	Pass 5	15	45	50	35	30	20
13	Pass 5	5	10	160	150	100	80
23	Pass 5	-30	-35	210	175	150	70
24	Pass 5	-5	45	120	100	65	65
27	Pass 5	-99	-3	-4	85	115	45

Domain Code	Pass #	Search Orientation			Search Distances (ft)		
		Bearing (Z)	Plunge (Y)	Dip (X)	Major	Semi	Minor
28	Pass 5	-10	80	130	125	80	90
29	Pass 5	5	20	290	325	200	195
30	Pass 5	5	5	55	55	40	35
31	Pass 5	0	-10	-5	40	50	25
32	Pass 5	0	15	10	40	50	25

BLOCK MODEL PARAMETERS

The Betze-Post open pit block model properties are shown below. The origin is in mine grid coordinates (Table 14-9). Blocks are 20 ft high, 40 ft wide, 40 ft long, in consideration of the smallest mining unit that could be mined with the equipment in the Goldstrike open pit. The block model is not rotated, and has 900 rows, 775 columns, and 220 benches totalling 153,450,000 blocks. The block model extends north-south for 36,000 ft, east-west for 31,000 ft, and vertically for 4,400 ft. Blocks were limited to 26,775,000 blocks in the current mining area.

TABLE 14-9 OPEN PIT BLOCK MODEL DEFINITION
Barrick Gold Corporation - Goldstrike Mine

Axis	Origin (ft)	Start Offset (ft)	End Offset (ft)	Block Size (ft)
X	0	-13,000	18,000	40
Y	0	4,000	40,000	40
Z	0	2,000	6,400	20

INTERPOLATION STRATEGY

For the open pit resource estimation, the grade interpolation was carried out using ID^2 methodology, with a search ellipse consistent with the variography and geological controls on mineralization in each domain. Table 14-10 lists key parameters used for grade interpolation.

The estimation used seventeen passes in each domain. The first pass comprises a box search of 40 ft by 40 ft by 20 ft, using only composites that are found within the block being evaluated. Next, three sets of four passes are run in the low, medium, and high grade blocks as defined by the indicator cut-offs. The first pass in these sets estimates blocks at 80% of the sill range, with a minimum of two and maximum of three samples. The second pass in these sets selects samples at half the 80% sill range, using a minimum of one and maximum of three samples. This second pass is to fill blocks that did not meet the minimum of two samples and two holes

needed in the first pass. The third and fourth passes are similar to the first two passes, but estimate blocks at 90% of the sill range and half of the sill range, respectively. A set of four passes is also run in each domain for blocks outside the 0.4 low grade indicator cut-off. These four passes are used in resource classification, as discussed later in Section 14.

TABLE 14-10 OPEN PIT COMPOSITE WEIGHTING
Barrick Gold Corporation - Goldstrike Mine

Pass	< 0.03 oz/st	≥ 0.03 oz/st	≥ 0.10 oz/st	≥ 0.30 oz/st
High Grade Passes	0.25	0.5	0.75	1
Medium Grade Passes	0.5	0.75	1	0.4
Low Grade Passes	0.5	1	0.75	0
Below Grade Passes	1	0.5	0.25	0

BLOCK MODEL VALIDATION

Barrick performed validation checks on the Goldstrike open pit model using the following methods:

- Comparisons of assay, composite, and block model statistics
- Visual comparisons between block and composite grades on plans and sections
- Visual inspections to confirm all block coding completed properly at each estimation step
- Comparison of estimated and nearest neighbour models in Vulcan and in-house software
- Comparison with previous model
- Comparison with production

Since the drill spacing used in the block model estimation was insufficient to define narrow, high grade zones, the blast hole data were used. A structure on the west side of the pit was not well defined with drill spacing.

Model estimation is performed in Vulcan, while the mine planning department uses Deswik for pit design and sequencing. Barrick performed checks in Vulcan and Deswik to ensure that the block model transferred correctly between the two programs. This included spot checks of various blocks with low, medium, and high estimated gold grades. Reports were also run and compared by rock type and routing classification in both programs. RPA generated

comparative histograms, box plots, and swath plots to compare composite grades against block grades, and performed visual spot checks of the block model grades against composite grades.

CUT-OFF GRADE

Metal prices used for reserves are based on consensus long term forecasts from banks, financial institutions, and other sources. For resources, metal prices used are slightly higher than those for reserves. Mineral Resources are estimated using a long-term gold price of US$1,500 per ounce. Open Pit Mineral Resources are based on cut-off grades of 0.025 oz/st Au for roaster feed, 0.050 oz/st Au for acid autoclave feed, and 0.060 oz/st Au for alkaline autoclave feed.

MINERAL RESOURCE CLASSIFICATION

Definitions for resource categories used in this report are consistent with CIM (2014) definitions and adopted by NI 43-101. In the CIM classification, a Mineral Resource is defined as “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”. Mineral Resources are classified into Measured, Indicated, and Inferred categories. A Mineral Reserve is defined as the “economically mineable part of a Measured and/or Indicated Mineral Resource” demonstrated by studies at Pre-Feasibility or Feasibility level as appropriate. Mineral Reserves are classified into Proven and Probable categories.

Mineral Resource classification is based on a combination of economic criteria and the pass in which each block was estimated. Criteria for Measured, Indicated, and Inferred classification are summarized in Table 14-11. The Measured Mineral Resource is defined as any block which has one or more composite samples inside it (and therefore received an estimate in Pass 1). Indicated Mineral Resource is determined from variogram ranges at 80% of the sill (passes 2 and 3 in each indicator grade zone). Estimation criteria for Inferred Mineral Resource are defined by those blocks within 90% of the sill (passes 4 and 5).

TABLE 14-11 OPEN PIT RESOURCE CLASSIFICATION
Barrick Gold Corporation - Goldstrike Mine

Estimation Pass #	Resource Classification	Sample Selection Min	Max	Per Hole	Classification Category	Remarks
1	Measured	1	99	99	1	Box Search
2	Indicated	2	3	1	2	Indicated 80% Sill
3	Indicated	1	3	1	2	Indicated Fill in, "Donut"
4	Inferred	2	3	1	3	Inferred 90% Sill
5	Inferred	1	3	1	3	Inferred Fill in, "Donut"

RPA has reviewed Barrick's classification schema, and is of the opinion that the approach to resource estimation and classification used in the Goldstrike open pit model is consistent with industry standards. The classification of Measured Mineral Resource material according to the box search could be modified to prevent isolated pockets of Measured Mineral Resource material in areas of sparser drill hole and sample information. RPA recommends regular review of the classification criteria to determine if changes are warranted or improvements in methodology could be implemented.

MINERAL RESOURCE REPORTING

Most of the reported resources are situated between the Mineral Reserve pit design and the Mineral Resource pit shell. The Mineral Resource pit shell was optimized at a $1,500/oz gold price. Incremental resources situated in the Mineral Reserve pit design with block grades lying between the Mineral Resource and Mineral Reserve cut-off grades are also included. Some stockpiles with grades above the Mineral Resource cut-off grades, but below the Mineral Reserve cut-off grades, are included in the resource estimate.

Open pit Mineral Resources are based on cut-off grades of 0.025 oz/st Au for roaster feed, 0.050 oz/st Au for acid autoclave feed, and 0.060 oz/st Au for alkaline autoclave feed.

RPA has reviewed the procedures used to report the open pit resources at the Goldstrike Mine, and is of the opinion that these are reasonable and conform to industry best practice.

UNDERGROUND MINERAL RESOURCES

SUMMARY

Table 14-12 provides a detailed breakdown of the Underground Mineral Resources, which are exclusive of Mineral Reserves. The Measured and Indicated Mineral Resources could not be converted to Mineral Reserves due to operational constraints and Inferred Mineral Resources have an insufficient level of confidence for conversion to reserves.

Underground Measured and Indicated Mineral Resources in 11 zones total 5.68 million tons grading 0.267 oz/st Au and contain 1.52 million ounces of gold. Underground Inferred Mineral Resources are estimated to be 1.77 million tons grading 0.260 oz/st Au, containing 459,000 ounces of gold.

The Underground Mineral Resource was estimated by the Goldstrike underground division using block models constrained by three-dimensional models of the mineralized bodies and domains. The gold grades are interpolated into the blocks using inverse distance to the fifth power (ID^5) weighting. The models are constructed using Maptek Vulcan 3D software version 10.0 supplemented by in-house custom Barrick programs used for capping and other statistics derived from geostatistical software.

RPA examined the EOY2018 Underground Mineral Resources and found them to meet or exceed industry standards. The Underground EOY2018 Mineral Resource estimates were completed to a high standard of quality by very experienced on-site Goldstrike personnel using reasonable and appropriate procedures and input parameters.

TABLE 14-12 UNDERGROUND MEASURED AND INDICATED MINERAL RESOURCES – DECEMBER 31, 2018
Barrick Gold Corporation - Goldstrike Mine

Underground Zone	Tons (000)	Grade (oz/st Au)	Contained Gold (000 oz)
Measured Resources			
Main / East	187.0	0.386	72.2
South Meikle	88.7	0.378	33.5
Extension	71.5	0.353	25.3
Griffin	149.9	0.263	39.4
West Griffin	82.3	0.291	23.9
Rodeo - Upper	659.5	0.242	159.6
Rodeo - Lower	330.0	0.292	96.3

Underground Zone	Tons (000)	Grade (oz/st Au)	Contained Gold (000 oz)
North Post	310.5	0.209	64.9
Barrel	238.7	0.212	50.5
Banshee	373.7	0.362	135.5
Liberty	52.1	0.255	13.3
North Post JV (BARRICK ONLY)	23.0	0.197	4.5
Measured Total	**2,567.0**	**0.280**	**718.9**
Indicated Resources			
Main / East	133.7	0.250	33.4
South Meikle	36.4	0.286	10.4
Extension	491.7	0.311	153.0
Griffin	103.6	0.249	25.8
West Griffin	32.9	0.222	7.3
Rodeo - Upper	866	0.208	180.3
Rodeo - Lower	399.4	0.268	106.9
North Post	187.7	0.217	40.7
Barrel	206.1	0.213	43.9
Banshee	534.7	0.320	171.1
Liberty	84.4	0.215	18.1
North Post JV (BARRICK ONLY)	35.9	0.204	7.4
Indicated Total	**3,112.60**	**0.256**	**798.2**
Measured + Indicated			
Main / East	320.7	0.329	105.6
South Meikle	125.1	0.351	43.9
Extension	563.2	0.316	178.3
Griffin	253.6	0.257	65.1
West Griffin	115.2	0.271	31.2
Rodeo - Upper	1525.4	0.223	339.9
Rodeo - Lower	729.4	0.279	203.2
North Post	498.3	0.212	105.6
Barrel	444.7	0.212	94.4
Banshee	908.5	0.337	306.6
Liberty	136.5	0.23	31.4
North Post JV (BARRICK ONLY)	59.0	0.201	11.9
Measured + Indicated Total	**5,679.6**	**0.267**	**1,517.0**
Inferred			
Main / East	41.9	0.203	8.5
South Meikle	65.8	0.321	21.1
Extension	533.6	0.250	133.2
Griffin	45.7	0.255	11.7
West Griffin	38.0	0.259	9.8
Rodeo - Upper	242.0	0.226	54.7

Underground Zone	Tons (000)	Grade (oz/st Au)	Contained Gold (000 oz)
Rodeo - Lower	346.8	0.278	96.4
North Post	15.5	0.179	2.8
Barrel	55.9	0.227	12.7
Banshee	370.0	0.285	105.4
Liberty	12.3	0.225	2.8
North Post JV (BARRICK ONLY)	-	-	-
Inferred Total	**1,767.4**	**0.260**	**458.9**

Notes:
1. Mineral Resources estimated according to CIM (2014) definitions.
2. Mineral Resources are reported using a long-term gold price of US$1,500 per ounce.
3. Underground Mineral Resources are reported cut-off grades are between 0.126 oz/st Au and 0.155 oz/st Au. Incremental material at a cut-off grade of 0.100 oz/st Au is included if it is part of the mine sequence.
4. Minimum underground mining width varies.
5. Mineral Resources are exclusive of Mineral Reserves.
6. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
7. Totals may not reconcile due to rounding.
8. North Post JV (Barrick 70% and Newmont 30%) reported at 70%

DOCUMENTATION

The methodology used in creating the Underground Mineral Resource model was documented by the Goldstrike underground resource team into documents including multi-tabbed Excel files which also record results encountered during the process.

MINERAL RESOURCE DATABASE

BULK DENSITY

Bulk density was based on over 990 determinations carried out over a span of several years. The determinations were made by submerging rock specimens in either water or mercury to determine the volume, then estimating the bulk density by dividing the weight of the sample by its volume. The measurements have been conducted on most of the mineralized zones on the property and tonnage factors are applied by zone in the block model. Tonnage factors and bulk densities of the various zones are provided in Table 14-13.

The tonnage factors appear to be reasonable. Mine plans and reconciliation data show that the current density model is adequate. Goldstrike is in process of collecting more bulk density data for some zones, including East and West Banshee.

TABLE 14-13 UNDERGROUND DENSITIES
Barrick Gold Corporation – Goldstrike Mine

Zones	Tonnage Factor (ft^3/st)	Bulk Density (st/ft^3)
Meikle		
Meikle Main Ore	12.0	0.083
South Meikle East Dipping (ED)	12.9	0.078
South Meikle West Dipping (WD)	12.9	0.078
Meikle Extension	12.0	0.083
Griffin Bx	12.0	0.083
Griffin Bs	13.1	0.076
Griffin La	12.9	0.078
West Griffin ED	13.1	0.076
West Griffin WD	13.1	0.076
Mineralized Main ED	12.0	0.083
Mineralized Main WD	12.0	0.083
Mineralized East ED	12.0	0.083
Mineralized East WD	12.0	0.083
Mineralized West ED	12.0	0.083
Mineralized West WD	12.0	0.083
Rodeo		
Rodeo WD (Jfault)	13.0	0.077
Rodeo ED (Zappa)	13.0	0.077
Rodeo ED (N300) (above 4040 RL)	13.6	0.074
Rodeo ED (N300) (below 4040 RL)	12.9	0.078
Mineralized Rodeo WD (above 4040 RL)	13.6	0.074
Mineralized Rodeo WD (below 4040 RL)	12.9	0.078
Mineralized Rodeo ED (above 4040 RL)	13.6	0.074
Mineralized Rodeo ED (below 4040 RL)	12.9	0.078
North Post		
North Post Main	13.5	0.074
Mineralized North Post	13.5	0.074
Banshee		
Banshee West	12.2	0.082
Mineralized Banshee West	13.0	0.077
Banshee East	13.0	0.077
Mineralized Banshee East	13.0	0.077

RESOURCE ASSAYS

For the Underground Mineral Resource estimate, Goldstrike exported a subset of the master database from acQuire software. The drill hole selection area was set to a boundary outside of the block model to ensure all holes crossing the block model volume were captured. The Mineral Resource database contains tables for collar, downhole survey, assay, lithology, alteration, stratigraphy, RMR, Leco, and geochemistry tables. Barrick then performed visual checks and ran Vulcan's internal validation routine to ensure the data was imported correctly, and excluded holes or intervals where surveys or assay information were deemed to be unreliable. Default and null values for assay fields were set to negative numbers to exclude them from the Mineral Resource estimate, and then statistics were re-checked in JMP software to confirm the changes.

MINERALIZED DOMAIN MODELS

The mineralized domain models are constructed from the drilling and muck sample data, at 0.05 oz/st Au and 0.10 oz/st Au cut-off grades. The general approach is to build a "mineralized" zone at the lower cut-off grade, which encompasses higher grade zones built at the higher cut-off grade. This allows for reasonable estimates of the dilution grade surrounding the higher grade zones. Figure 14-2 provides a three-dimensional view of the main underground domain models by mineralized zones.

Mineralized domains are generated based on grade, informed by geological features such as faults and lithological boundaries. The interpretations are drawn as polylines in cross section, using a minimum horizontal mining width constraint of 15 ft. Sections are generally spaced at multiples of 20 ft, with a maximum spacing of 40 ft for highly mineralized lenses and 60 ft for mineralized lenses. In areas where complex grade boundaries exist, the average spacing of sections is 20 ft but can be as little as five feet or less. The polylines are linked together to create the solid models.

Barrick geological staff reviews and validates completed domain models, updating them as necessary. They are validated and checked again by a Barrick resource geologist prior to inclusion in the Mineral Resource block model. The domain models are used for estimation of domain volumes and tonnages for validation against previous models. The domains are then used to assign domain codes to both the block model and the samples to perform varying compositing and grade estimation techniques in each domain.

Figure 14-2

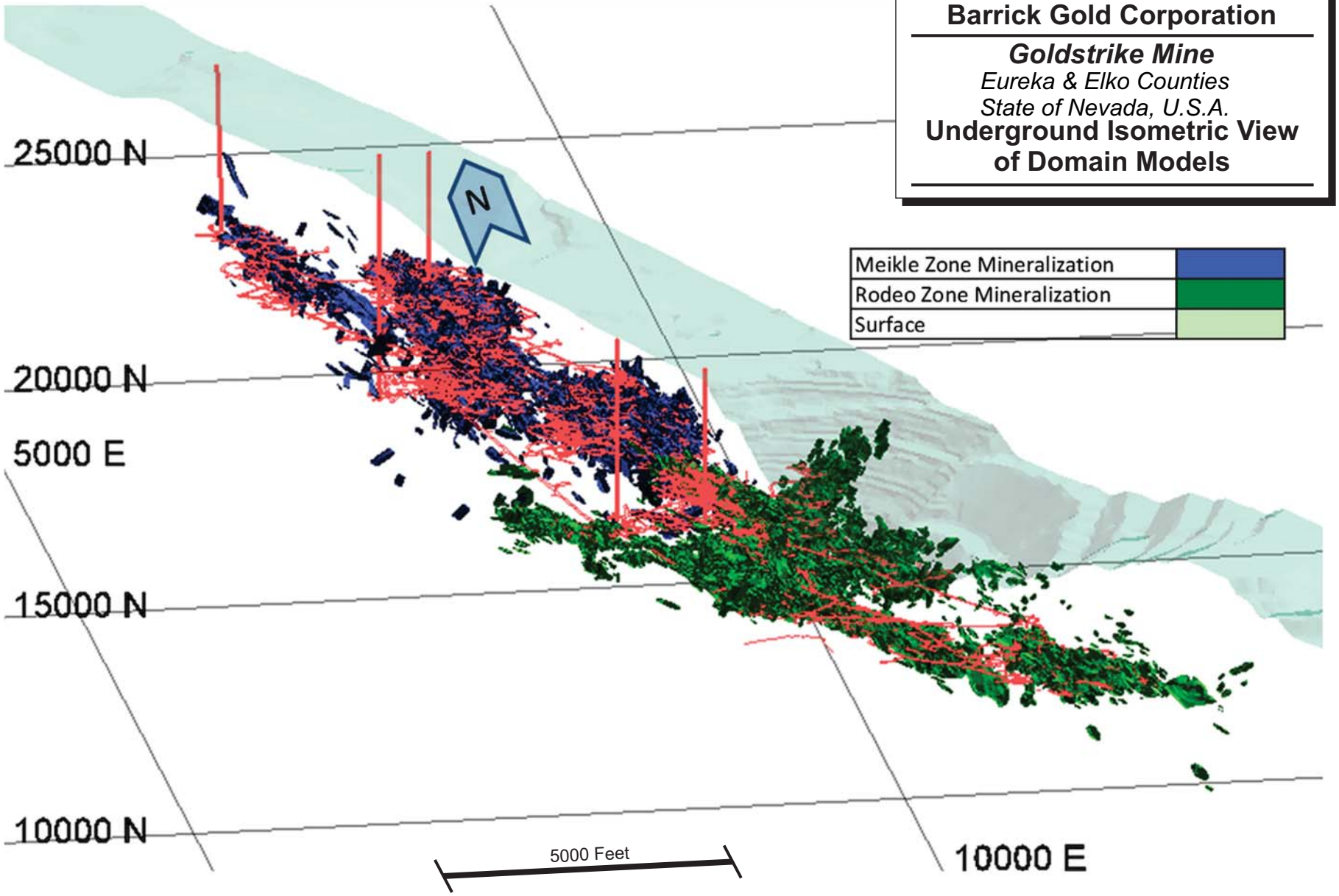
Barrick Gold Corporation

Goldstrike Mine

Eureka & Elko Counties

State of Nevada, U.S.A.

Underground Isometric View of Domain Models



March 2019

***Source:** Barrick, 2017.*

www.rpacan.com

GRADE CAPPING AND HIGH YIELD RESTRICTION

A combination of high yield restrictions (HYR) (for low-grade mineralized zones) and grade capping (applied to all mineralized zones) is used to reduce the influence of high grade assays. The capping method employs Barrick's in-house software, and is applied to the primary Mineral Resource assay database prior to compositing. Capping thresholds are determined from log-probability grade distributions for each domain. Outlier high grade populations are identified from discontinuities in grade distribution. The highest grade that is part of a smooth or continuous distribution is usually taken as the capping threshold. A separate capping grade is applied to the assays in each domain, and statistics are examined to ensure that the CV and/or GT lost % for the capped assays in each domain are less than approximately 2 and 10%, respectively. Capping and high yield restriction parameters used for the Mineral Resource estimate are provided in Table 14-14. The capped and raw assay statistics are provided in Table 14-15.

TABLE 14-14 UNDERGROUND SAMPLE STATISTICS – CAPPING AND HYR
Barrick Gold Corporation - Goldstrike Mine

Domain	Capping Level (oz/st Au)	GT lost%	CV Capped	High Yield Cap (oz/st Au)
Meikle Main Ore	7.500	1.72	1.73	
South Meikle ED	1.500	1.16	1.13	
South Meikle WD	9.500	0.51	1.66	
Meikle Extension	10.300	0.08	1.51	
Griffin Bx	3.000	0.02	1.13	
Griffin Bs	2.210	1.26	1.06	
Griffin La	1.370	0.31	0.90	
West Griffin ED	2.200	0.29	1.13	
West Griffin WD	2.150	0.01	0.89	
Rodeo WD (Jfault)	4.300	0.09	1.10	
Rodeo ED (Zappa)	2.400	0.36	1.04	
Rodeo ED (N300)	4.640	0.06	1.06	
North Post Main	1.400	0.09	0.70	
Banshee West	1.400	0.09	0.70	
Banshee East	2.400	0.260	1.210	
Mineralized Rodeo WD	0.900	0.013	1.100	0.100
Mineralized Rodeo ED	0.780	0.010	1.040	0.100
Mineralized North Post	0.460	0.005	0.680	0.100
Mineralized Banshee West	0.190	0.024	0.790	0.100
Mineralized Banshee East	0.200	0.029	0.880	0.100
Mineralized Main ED	1.150	0.054	1.530	0.100
Mineralized Main WD	0.580	0.058	1.120	0.100
Mineralized East ED	0.300	0.027	0.940	0.100
Mineralized East WD	0.430	0.012	0.960	0.100
Mineralized West ED	0.570	0.009	1.010	0.100
Mineralized West WD	0.670	0.025	0.990	0.100

TABLE 14-15 UNDERGROUND RAW AND CAPPED SAMPLE STATISTICS
Barrick Gold Corporation - Goldstrike Mine

	Mean (oz/st)		St. Dev. (oz/st)		Maximum (oz/st)		Coefficient of Variation	
Domain	Aucap	Au	Aucap	Au	Aucap	Au	Aucap	Au
Meikle Main Ore	0.504	0.513	0.894	0.993	7.500	30.948	1.772	1.935
Meikle Main WD Ore	0.216	0.218	0.247	0.261	1.500	4.678	1.146	1.196
South Meikle ED	0.447	0.450	0.751	0.793	9.500	16.582	1.681	1.764
South Meikle WD	0.406	0.406	0.611	0.616	10.300	12.496	1.505	1.517
Meikle Extension	0.344	0.345	0.395	0.396	3.000	3.383	1.147	1.148
Griffin Bx	0.213	0.215	0.232	0.215	2.210	4.301	1.088	1.193
Griffin Bs	0.222	0.223	0.196	0.223	1.370	3.502	0.882	0.912
Griffin La	0.332	0.333	0.358	0.333	2.200	2.713	1.081	1.088
West Griffin ED	0.257	0.257	0.232	0.232	2.150	2.291	0.902	0.902
West Griffin WD	0.290	0.290	0.294	0.295	2.200	2.680	1.012	1.018
Rodeo WD (Jfault)	0.255	0.256	0.284	0.291	4.300	12.724	1.114	1.139
Rodeo ED (Zappa)	0.241	0.242	0.253	0.264	2.400	7.556	1.048	1.091
Rodeo ED (N300)	0.217	0.217	0.233	0.236	4.640	8.277	1.072	1.086
North Post Main	0.192	0.192	0.135	0.136	1.400	2.190	0.701	0.710
Banshee West	0.286	0.287	0.354	0.359	2.400	3.524	1.237	1.252
Banshee East	0.256	0.257	0.325	0.330	2.450	3.890	1.271	1.288
Mineralized Rodeo WD	0.050	0.050	0.059	0.072	0.900	4.884	1.197	1.428
Mineralized Rodeo ED	0.043	0.044	0.051	0.064	0.780	3.775	1.187	1.453
Mineralized North Post	0.059	0.059	0.042	0.045	0.460	1.201	0.709	0.772
Mineralized Banshee West	0.032	0.032	0.029	0.038	0.190	1.013	0.928	1.181
Mineralized Banshee East	0.025	0.026	0.030	0.042	0.200	1.222	1.181	1.600
Mineralized Main ED	0.040	0.042	0.070	0.141	1.150	8.535	1.743	3.325
Mineralized Main WD	0.043	0.046	0.055	0.111	0.580	5.284	1.274	2.420
Mineralized East ED	0.034	0.035	0.036	0.048	0.300	1.435	1.066	1.381
Mineralized East WD	0.042	0.042	0.042	0.049	0.430	1.377	1.009	1.160
Mineralized West ED	0.039	0.040	0.043	0.050	0.570	1.817	1.108	1.273
Mineralized West WD	0.043	0.044	0.047	0.093	0.670	8.856	1.089	2.121

RPA has reviewed Barrick's capping strategy and software used at the Goldstrike Mine, and concurs that the work effectively limits the influence of anomalous high-grade assays and is in line with industry standards.

COMPOSITING

Drill results from diamond drill holes and RC drill holes are used for block model estimation. Barrick composited the drill samples to 10 ft lengths. Compositing is configured to start and stop at the boundary of domain models. Remnant composites at zone boundaries of less than

ten foot length are retained in the composite database. Length weighting is applied in the interpolation to account for shorter intervals.

Barrick performed visual checks on the Mineral Resource composites to confirm that they were properly generated. Barrick also performed comparative statistical analyses against the previous year's composites to guard against unreasonable changes. Composite statistics are provided in Table 14-16.

TABLE 14-16 UNDERGROUND GOLD COMPOSITE STATISTICS
Barrick Gold Corporation - Goldstrike Mine

Domain	Mean (oz/st)		St. Dev. (oz/st)		Maximum (oz/st)		Coefficient of Variation	
	Aucap	Au	Aucap	Au	Aucap	Au	Aucap	Au
Meikle Main Ore	0.489	0.497	0.809	0.894	7.500	17.351	1.655	1.797
Meikle Main WD Ore	0.210	0.212	0.219	0.232	1.500	1.959	1.043	1.092
South Meikle ED	0.424	0.426	0.633	0.653	8.856	10.245	1.491	1.532
South Meikle WD	0.394	0.395	0.542	0.546	7.598	7.884	1.375	1.383
Meikle Extension	0.333	0.333	0.360	0.360	2.666	2.858	1.081	1.081
Griffin Bx	0.209	0.212	0.212	0.236	2.210	3.380	1.013	1.112
Griffin Bs	0.218	0.219	0.175	0.181	1.370	1.864	0.804	0.828
Griffin La	0.322	0.322	0.316	0.318	2.069	2.166	0.983	0.988
West Griffin ED	0.250	0.250	0.207	0.207	2.150	2.291	0.827	0.828
West Griffin WD	0.282	0.283	0.270	0.272	2.172	2.412	0.957	0.962
Rodeo WD (Jfault)	0.252	0.252	0.259	0.264	4.300	7.526	1.030	1.047
Rodeo ED (Zappa)	0.237	0.237	0.227	0.236	2.400	4.561	0.961	0.993
Rodeo ED (N300)	0.214	0.214	0.206	0.208	4.230	4.424	0.964	0.972
North Post Main	0.190	0.190	0.119	0.121	1.400	2.094	0.630	0.638
Banshee West	0.276	0.277	0.319	0.323	2.400	2.675	1.155	1.167
Banshee East	0.250	0.251	0.298	0.302	2.450	2.792	1.191	1.202
Mineralized Rodeo WD	0.050	0.051	0.055	0.068	0.900	2.938	1.100	1.337
Mineralized Rodeo ED	0.043	0.044	0.046	0.056	0.780	2.709	1.058	1.274
Mineralized North Post	0.058	0.058	0.037	0.040	0.460	0.878	0.630	0.687
Mineralized Banshee West	0.031	0.032	0.026	0.035	0.190	0.744	0.849	1.098
Mineralized Banshee East	0.025	0.025	0.027	0.033	0.200	0.618	1.080	1.300
Mineralized Main ED	0.040	0.042	0.063	0.126	1.150	8.450	1.573	2.978
Mineralized Main WD	0.043	0.046	0.049	0.099	0.580	3.066	1.136	2.156
Mineralized East ED	0.034	0.035	0.033	0.045	0.300	1.197	0.973	1.270
Mineralized East WD	0.042	0.043	0.039	0.046	0.430	1.204	0.934	1.075
Mineralized West ED	0.039	0.040	0.039	0.047	0.570	1.817	0.996	1.182
Mineralized West WD	0.043	0.044	0.041	0.087	0.670	6.759	0.963	1.975

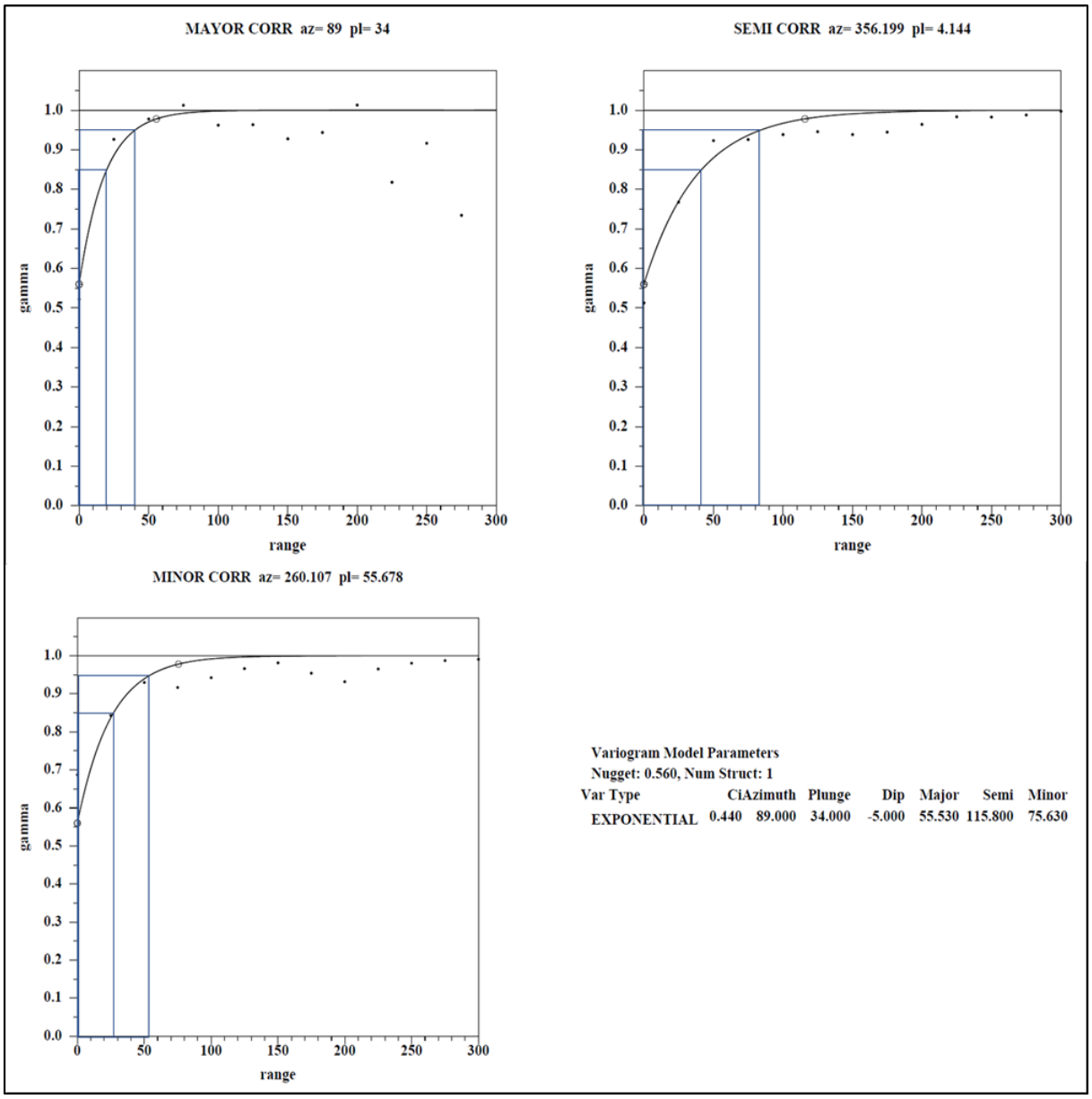
TREND ANALYSIS

VARIOGRAPHY

Barrick conducted geostatistical analyses on the composite data to confirm or refine the search parameters for each domain. The analyses were carried out using Vulcan and other software. Directional correlograms were generated for each of the domains, and then search orientations and ranges were interpreted from covariance models derived from these correlograms. The covariance models were then also used for classification of the Mineral Resources.

RPA checked the variography for selected individual domains (Main Zone Breccia, Griffin Bazza Sands, Rodeo West Dipping, North Post Main, and Banshee East) at the Goldstrike Mine. Variogram studies obtained ranges of 35 ft to 160 ft, depending on the domain. An example of a correlogram is shown in Figure 14-3 for the Banshee East Dipping Domain.

FIGURE 14-3 UNDERGROUND CORRELOGRAM FOR BANSHEE–EAST DIPPING DOMAIN



Source: Barrick, 2017

BLOCK MODELS AND PARAMETERS

There are two block models, Meikle and Rodeo, that contain the Mineral Resources underground at the Goldstrike Mine. These two block models encompass 12 individual mineralized zones. All block models comprise parent blocks measuring 50 ft by 50 ft by 50 ft, with sub-blocks measuring 10 ft by 10 ft by 10 ft, and down to 5 ft by 5 ft by 5 ft. The parent

(50 ft) blocks are used to assign a 0.0001 oz/st Au grade to the unmineralized and unestimated material, while the smaller blocks are used in the mineralized zones. The mineralized zones were further sub-blocked to 2.5 ft by 2.5 ft by 2.5 ft along the edges of mined out areas in order to reduce over-depletion. Origins and extents vary according to the zone being modelled. Models are rotated to reflect the overall geologic trend of the mineralized zones. Model construction parameters for Meikle and Rodeo models are shown in Table 14-17.

The principal economic component estimated into the blocks is gold. In addition, estimates of accessory components were made, which includes sulphur, carbonate, arsenic, and TCM. Royalty information is also coded into the model to allow appropriate factors to be calculated for royalty payments.

TABLE 14-17 UNDERGROUND BLOCK MODEL DEFINITIONS
Barrick Gold Corporation - Goldstrike Mine

	ORIGIN			EXTENTS	
	Rodeo	**Meikle**	**Model Axis**	**Rodeo(ft)**	**Meikle(ft)**
X Coordinate	10,125	9,716	East (X)	4,600	10,000
Y Coordinate	9,200	15,605	North (Y)	10,000	10,000
Z Coordinate	2,500	2,500	Elevation (Z)	3,500	3,500

ROTATION	**Degrees**		
	Rodeo	**Meikle**	
Bearing	60	30	(absolute bearing of X axis around Z axis)
Plunge	0	0	(absolute bearing of X axis around Y axis)
Dip	0	0	(absolute bearing of Y axis around X axis)

Rotation follows left hand rule
Local Mine Coordinate System

INTERPOLATION STRATEGY

Grades were estimated into the blocks using ID^5 methodology, with a search ellipse consistent with the correlogram and geological controls on mineralization in each domain. The estimation used six passes in each domain (Tables 14-18, 14-19, and 14-20).

The first pass comprised a box search of 5 ft x 5 ft x 5 ft, reflecting a block model cell which uses all composites data that were found within the block being evaluated. The second pass

estimated blocks at 85% of the sill range, with a minimum of two, a maximum of four samples and a maximum of one sample per drill hole. The third pass selected samples at half the 85% sill range and the minimum number of samples was reduced to one. This pass was run to fill blocks that did not meet the minimum two samples needed in the second pass and is referred to as a "donut" pass.

The fourth and fifth passes were similar to the third and fourth, but 95% of the sill range was used for the fourth pass and half the 95% range was used for the fifth pass. The sixth pass used search distances equal to the full range of the correlograms, a minimum of one, maximum of four samples and one sample per drill hole. The model cells estimated with the sixth pass were between 95% and 100% of the sill range and are therefore unclassified. The 0.100 oz/st Au and 0.050 oz/st Au domains represented hard boundaries, across which composites were restricted for both correlogram modelling and composite selection during estimation. The blocks in the mineralized domains were used to calculate external dilution.

TABLE 14-18 RODEO ZONE INTERPOLATION PARAMETERS
Barrick Gold Corporation - Goldstrike Mine

Domain	Pass #	Search Orientation			Search Distances (ft)			Description
		Bearing (Z)	Plunge (Y)	Dip (X)	Major	Semi Major	Minor	
Rodeo WD (Jfault)	1	360	0	0	5	5	5	Box Search
	2	59	44	-57	52	28	76	85% Sill
	3	59	44	-57	26	14	38	Fill in, half range
	4	59	44	-57	114	60	168	95% Sill
	5	59	44	-57	57	30	84	Fill in, half range
	6	59	44	-57	172	90	250	Filled, unclassified
Rodeo ED (Zappa)	1	360	0	0	5	5	5	Box Search
	2	-107	48	74	28	16	54	85% Sill
	3	-107	48	74	14	8	27	Fill in, half range
	4	-107	48	74	72	42	132	95% Sill
	5	-107	48	74	36	21	66	Fill in, half range
	6	-107	48	74	119	68	220	Filled, unclassified
Rodeo ED (N300)	1	360	0	0	5	5	5	Box Search
	2	-23	-1	-35	84	54	28	85% Sill
	3	-23	-1	-35	42	27	14	Fill in, half range
	4	-23	-1	-35	184	124	64	95% Sill
	5	-23	-1	-35	92	62	32	Fill in, half range
	6	-23	-1	-35	289	189	96	Filled, unclassified

Domain	Pass #	Search Orientation			Search Distances (ft)			Description
		Bearing (Z)	Plunge (Y)	Dip (X)	Major	Semi Major	Minor	
North Post Main	1	360	0	0	5	5	5	Box Search
	2	74	73	-41	42	74	64	85% Sill
	3	74	73	-41	21	37	32	Fill in, half range
	4	74	73	-41	66	116	102	95% Sill
	5	74	73	-41	33	58	51	Fill in, half range
	6	74	73	-41	95	171	148	Filled, unclassified

WD: West Dipping
ED: East Dipping

TABLE 14-19 MEIKLE ZONE INTERPOLATION PARAMETERS
Barrick Gold Corporation - Goldstrike Mine

Zone	Pass #	Search Orientation			Search Distances (ft)			Description
		Bearing (Z)	Plunge (Y)	Dip (X)	Major	Semi Major	Minor	
Meikle Main Ore ED	1	360	0	0	5	5	5	Box Search
	2	-25	33	14	54	40	66	85% Sill
	3	-25	33	14	27	20	33	Fill in, half range
	4	-25	33	14	106	80	132	95% Sill
	5	-25	33	14	53	40	66	Fill in, half range
	6	-25	33	14	152	113	187	Filled, unclassified
Meikle Main Ore WD	1	360	0	0	5	5	5	Box Search
	2	5	13	-33	42	32	22	85% Sill
	3	5	13	-33	21	16	11	Fill in, half range
	4	5	13	-33	82	64	44	95% Sill
	5	5	13	-33	41	32	22	Fill in, half range
	6	5	13	-33	101	45	167	Filled, unclassified
South Meikle WD	1	360	0	0	5	5	5	Box Search
	2	5	13	-33	42	32	22	85% Sill
	3	5	13	-33	21	16	11	Fill in, half range
	4	5	13	-33	82	64	44	95% Sill
	5	5	13	-33	41	32	22	Fill in, half range
	6	5	13	-33	101	45	167	Filled, unclassified
South Meikle ED	1	360	0	0	5	5	5	Box Search
	2	53	34	-12	18	44	26	85% Sill
	3	53	34	-12	9	22	13	Fill in, half range
	4	53	34	-12	38	92	56	95% Sill
	5	53	34	-12	19	46	28	Fill in, half range
	6	53	34	-12	57	134	80	Filled, unclassified

Zone	Pass #	Search Orientation			Search Distances (ft)			Description
		Bearing (Z)	Plunge (Y)	Dip (X)	Major	Semi Major	Minor	
Meikle Extension	1	360	0	0	5	5	5	Box Search
	2	-27	135	-28	34	18	44	85% Sill
	3	-27	135	-28	17	9	22	Fill in, half range
	4	-27	135	-28	64	32	80	95% Sill
	5	-27	135	-28	32	16	40	Fill in, half range
	6	-27	135	-28	81	41	104	Filled, unclassified
Griffin La WD	1	360	0	0	5	5	5	Box Search
	2	54	42	-54	46	28	70	85% Sill
	3	54	42	-54	23	14	35	Fill in, half range
	4	54	42	-54	98	58	150	95% Sill
	5	54	42	-54	49	29	75	Fill in, half range
	6	54	42	-54	143	83	224	Filled, unclassified
Griffin La ED	1	360	0	0	5	5	5	Box Search
	2	-27	5	-28	46	50	26	85% Sill
	3	-27	5	-28	23	25	13	Fill in, half range
	4	-27	5	-28	76	86	42	95% Sill
	5	-27	5	-28	38	43	21	Fill in, half range
	6	-27	5	-28	114	129	63	Filled, unclassified
West Griffin WD	1	360	0	0	5	5	5	Box Search
	2	9	15	-34	38	16	70	85% Sill
	3	9	15	-34	19	8	35	Fill in, half range
	4	9	15	-34	80	36	146	95% Sill
	5	9	15	-34	40	18	73	Fill in, half range
	6	9	15	-34	117	51	213	Filled, unclassified
Griffin Bx WD	1	360	0	0	5	5	5	Box Search
	2	54	42	-54	46	28	70	85% Sill
	3	54	42	-54	23	14	35	Fill in, half range
	4	54	42	-54	98	58	150	95% Sill
	5	54	42	-54	49	29	75	Fill in, half range
	6	54	42	-54	143	83	224	Filled, unclassified
Griffin Bx ED	1	360	0	0	5	5	5	Box Search
	2	-27	5	-28	46	50	26	85% Sill
	3	-27	5	-28	23	25	13	Fill in, half range
	4	-27	5	-28	76	86	42	95% Sill
	5	-27	5	-28	38	43	21	Fill in, half range
	6	-27	5	-28	114	129	63	Filled, unclassified

Zone	Pass #	Search Orientation			Search Distances (ft)			Description
		Bearing (Z)	Plunge (Y)	Dip (X)	Major	Semi Major	Minor	
Griffin Bs ED	1	360	0	0	5	5	5	Box Search
	2	-33	9	112	42	28	26	85% Sill
	3	-33	9	112	21	14	13	Fill in, half range
	4	-33	9	112	104	68	68	95% Sill
	5	-33	9	112	52	34	34	Fill in, half range
	6	-33	9	112	170	109	108	Filled, unclassified
Griffin Bs WD	1	360	0	0	5	5	5	Box Search
	2	-33	9	-150	42	26	28	85% Sill
	3	-33	9	-150	21	13	14	Fill in, half range
	4	-33	9	-150	104	68	68	95% Sill
	5	-33	9	-150	52	34	34	Fill in, half range
	6	-33	9	-150	170	108	109	Filled, unclassified
West Griffin ED	1	360	0	0	5	5	5	Box Search
	2	50	38	5	14	36	28	85% Sill
	3	50	38	5	7	18	14	Fill in, half range
	4	50	38	5	34	88	70	95% Sill
	5	50	38	5	17	44	35	Fill in, half range
	6	50	38	5	58	149	115	Filled, unclassified
Banshee WD	1	360	0	0	5	5	5	Box Search
	2	12	27	34	36	50	22	85% Sill
	3	12	27	34	18	25	11	Fill in, half range
	4	12	27	34	64	90	40	95% Sill
	5	12	27	34	32	45	20	Fill in, half range
	6	12	27	34	98	141	60	Filled, unclassified
Banshee ED	1	360	0	0	5	5	5	Box Search
	2	89	34	-5	20	42	28	85% Sill
	3	89	34	-5	10	21	14	Fill in, half range
	4	89	34	-5	40	84	56	95% Sill
	5	89	34	-5	20	42	28	Fill in, half range
	6	89	34	-5	56	116	76	Filled, unclassified

WD: West Dipping

ED: East Dipping

TABLE 14-20 LOW GRADE INTERPOLATION PARAMETERS
Barrick Gold Corporation - Goldstrike Mine

		Search Orientation			Search Distances (ft)			
		Bearing	Plunge	Dip		Semi		
Zone	Pass #	(Z)	(Y)	(X)	Major	Major	Minor	Description
Mineralized Rodeo WD	1	360	0	0	5	5	5	Box Search
	2	-19	71	9	36	40	68	85% Sill
	3	-19	71	9	18	20	34	Fill in, half range
	4	-19	71	9	68	78	130	95% Sill
	5	-19	71	9	34	39	65	Fill in, half range
	6	-19	71	9	92	104	175	Filled, unclassified
Mineralized Rodeo ED	1	360	0	0	5	5	5	Box Search
	2	66	48	-99	22	44	54	85% Sill
	3	66	48	-99	11	22	27	Fill in, half range
	4	66	48	-99	48	94	116	95% Sill
	5	66	48	-99	24	47	58	Fill in, half range
	6	66	48	-99	71	139	172	Filled, unclassified
Mineralized North Post	1	360	0	0	5	5	5	Box Search
	2	-97	112	-39	68	110	96	85% Sill
	3	-97	112	-39	34	55	48	Fill in, half range
	4	-97	112	-39	100	162	140	95% Sill
	5	-97	112	-39	50	81	70	Fill in, half range
	6	-97	112	-39	141	228	198	Filled, unclassified
Mineralized Banshee WD	1	360	0	0	5	5	5	Box Search
	2	-9	33	32	56	34	22	85% Sill
	3	-9	33	32	28	17	11	Fill in, half range
	4	-9	33	32	88	50	32	95% Sill
	5	-9	33	32	44	25	16	Fill in, half range
	6	-9	33	32	124	69	45	Filled, unclassified
Mineralized Banshee ED	1	360	0	0	5	5	5	Box Search
	2	-88	45	6	72	64	28	85% Sill
	3	-88	45	6	36	32	14	Fill in, half range
	4	-88	45	6	126	114	50	95% Sill
	5	-88	45	6	63	57	25	Fill in, half range
	6	-88	45	6	156	140	62	Filled, unclassified
Mineralized Main ED	1	360	0	0	5	5	5	Box Search
	2	-37	27	20	50	34	64	85% Sill
	3	-37	27	20	25	17	32	Fill in, half range
	4	-37	27	20	116	74	140	95% Sill
	5	-37	27	20	58	37	70	Fill in, half range
	6	-37	27	20	168	111	207	Filled, unclassified

Zone	Pass #	Search Orientation			Search Distances (ft)			Description
		Bearing (Z)	Plunge (Y)	Dip (X)	Major	Semi Major	Minor	
Mineralized Main WD	1	360	0	0	5	5	5	Box Search
	2	30	52	-48	22	8	22	85% Sill
	3	30	52	-48	11	4	11	Fill in, half range
	4	30	52	-48	50	18	52	95% Sill
	5	30	52	-48	25	9	26	Fill in, half range
	6	30	52	-48	78	26	80	Filled, unclassified
Mineralized East ED	1	360	0	0	5	5	5	Box Search
	2	-49	9	18	60	22	44	85% Sill
	3	-49	9	18	30	11	22	Fill in, half range
	4	-49	9	18	112	44	82	95% Sill
	5	-49	9	18	56	22	41	Fill in, half range
	6	-49	9	18	153	56	110	Filled, unclassified
Mineralized East WD	1	360	0	0	5	5	5	Box Search
	2	30	52	-48	22	8	22	85% Sill
	3	30	52	-48	11	4	11	Fill in, half range
	4	30	52	-48	50	18	52	95% Sill
	5	30	52	-48	25	9	26	Fill in, half range
	6	30	52	-48	78	26	80	Filled, unclassified
Mineralized West ED	1	360	0	0	5	5	5	Box Search
	2	80	139	-107	32	14	40	85% Sill
	3	80	139	-107	16	7	20	Fill in, half range
	4	80	139	-107	70	38	86	95% Sill
	5	80	139	-107	35	19	43	Fill in, half range
	6	80	139	-107	107	43	132	Filled, unclassified
Mineralized West WD	1	360	0	0	5	5	5	Box Search
	2	20	41	-44	28	18	48	85% Sill
	3	20	41	-44	14	9	24	Fill in, half range
	4	20	41	-44	58	38	104	95% Sill
	5	20	41	-44	29	19	52	Fill in, half range
	6	20	41	-44	87	56	157	Filled, unclassified

WD: West Dipping

ED: East Dipping

Mined-out blocks were flagged with solids generated from the 2.5 ft x 2.5 ft x 2.5 ft minimum-size block model, using longhole development and drift-and-fill surveys. Mined-out blocks were not allowed to contribute any material to the Mineral Resource. The combination of ID^5 weighting and the four-composite maximum per block is designed to reduce smoothing, and generate more accurate local grade estimates. This estimation approach has evolved with the benefit of production data over the production life of the mine to date.

RPA is of the opinion that the grade interpolation strategy is reasonable and conforms to industry standards.

BLOCK MODEL VALIDATION

The EOY2018 block models were validated by Goldstrike using the following methods:

- Comparisons of assay, composite, and block model statistics
- Visual comparisons between block and composite grades on plans and sections
- Visual inspections to confirm all block coding completed properly at each estimation step
- Comparison of estimated and nearest neighbor models in Vulcan and in-house software
- Comparison with previous model
- Comparison with production

RPA is of the opinion that the ID^5 weighting used shows good control of assay smoothing in areas of sparse drilling, and that densely sampled areas show similar distribution of gold grades. RPA recommends that Barrick review the inverse distance weighting power factor with every new estimate to ensure that models continue to appropriately represent grade distribution.

MINERAL RESOURCE CLASSIFICATION

Definitions for resource categories used in this report are consistent with CIM (2014) definitions and adopted by NI 43-101. In the CIM classification, a Mineral Resource is defined as “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”. Mineral Resources are classified into Measured, Indicated, and Inferred categories.

To establish a level of confidence for resource classification, Mineral Resource classification at Goldstrike was based on a combination of the estimation pass in which each block model cell received an estimate, the distance to the nearest mining area, the number of drill holes used in estimation, and the elevation of the estimation domain. Criteria for Measured, Indicated, and Inferred classifications are summarized in Table 14-21.

TABLE 14-21 UNDERGROUND CLASSIFICATION CRITERIA
Barrick Gold Corporation - Goldstrike Mine

Estimation Pass #	Classification	Number of Samples Min	Max	Per Hole	Classification Category	Remarks
1	Measured	1	99	99	1	Box Search
2	Indicated	2	4	1	2	Indicated, 85% Sill
3	Indicated	1	4	1	2	Indicated Fill in, half 85% range
4	Inferred	2	4	1	3	Inferred, 95% Sill
5	Inferred	1	4	1	3	Inferred Fill in, half 95% range
6	Unclassified	1	4	1	5	Filled beyond search ranges,100% Sill

For block model cells inside a high-grade domain, Measured Mineral Resource was defined as any model cell estimated within the first pass (Pass 1), or estimated within the second pass (Pass 2) with distance to a mining area less than or equal to 20 ft for South Meikle and West Griffin domains, and less than or equal to 35 ft for all other domains.

Indicated Mineral Resource was determined from correlogram ranges at 85% of the sill, estimated with Pass 2 or Pass 3.

Criteria for Inferred Mineral Resource were determined from correlogram ranges at 95% of the sill, estimated with Pass 4 or Pass 5.

For block model cells inside a low-grade domain, Indicated Mineral Resource was determined by all block model cells estimated with Pass 1, Pass 2, or Pass 3. Inferred Mineral Resource was determined by all block model cells estimated with Pass 4 or Pass 5.

The classification procedures are reasonable and appropriate. RPA notes that the classification process results in a small number of Inferred blocks that are scattered within Indicated areas that could be included as Indicated in the future.

CUT-OFF GRADE

Metal prices used for reserves are based on consensus, long term forecasts from banks, financial institutions, and other sources. For resources, metal prices used are slightly higher than those for reserves. Mineral Resources are estimated using a long-term gold price of US$1,500 per ounce. For Underground Mineral Resources, Barrick applied cut-off grades by

domain, between 0.126 oz/st Au and 0.155 oz/st Au. Incremental material at a cut-off grade of 0.100 oz/st Au was included if it was part of the mine sequence.

MINERAL RESOURCE REPORTING

Longhole and drift-and-fill designs are completed by ore zone, utilizing the 0.100 oz/st Au and 0.050 oz/st Au mineralized domain boundaries. Access and capital development were laid out within the 0.050 oz/st Au boundary or within waste. Mineral Resources are reported from mining designs created by engineering staff, using appropriate cut-off grades based on economics at a gold price of $1,200 per ounce. Material in designs that are not in reserves, but above a drift and fill cut-off grade (based on $1,500 per ounce gold price) for stoping or an incremental development cut-off grade for development designs (0.10 oz/st Au) are considered as resources. In addition, blocks proximal to the $1,200 per ounce designs which satisfy the $1,500 per ounce cut-off grade and meet resource classification criteria are also considered resources.

RPA has reviewed the procedures used to report the underground resources at the Goldstrike Mine, and concurs with Barrick's opinion that they are reasonable and conform to industry best practice.

COMMENTS AND RECOMMENDATIONS

RPA has reviewed Barrick's quality controls in workflow and grade estimation practices, and is of the opinion that the methods follow industry best practices and the EOY2018 Mineral Resource estimate is reasonable.

RPA recommends implementing minor procedural changes to improve on the production reconciliation results, through the use of a Mineral Resource classification clean-up script or designing classification wireframes to upgrade small isolated areas of Inferred blocks that are scattered within enveloping Indicated areas.

To augment communication of key modelling information and procedures, facilitate correct and up to date information transfer, and improve on the clarity of the information to third parties, RPA recommends the following:

- Add a tab to the master spreadsheet for each model which summarizes the contextual information usually included in Technical Reports e.g. database cut-off dates, software and version, cut-off grades for mineralized domain wireframes, reporting cut-off grades, etc.

- Add supporting documentation describing the Mineral Resource procedures, workflows, and checks in the master spreadsheets.

15 MINERAL RESERVE ESTIMATE

The Mineral Reserves for the Goldstrike Mine as of December 31, 2018 are shown in Table 15-1. These Mineral Reserves are a combination of the open pit and underground reserves, stockpiles, and inventory. Proven and Probable Mineral Reserves total 74.840 million tons grading 0.114 oz/st Au and contain 8.525 million ounces of gold.

In metric units (Table 15-2), the Proven and Probable Reserves for the Goldstrike Mine total 67.895 million tonnes grading 3.91 g/t Au and contain 8.525 million ounces of gold.

TABLE 15-1 MINERAL RESERVES - DECEMBER 31, 2018
Barrick Gold Corporation - Goldstrike Mine

	Proven Reserves			Probable Reserves			Proven and Probable Reserves		
	Tons (000)	Grade (oz/st Au)	Contained Gold (000 oz)	Tons (000)	Grade (oz/st Au)	Contained Gold (000 oz)	Tons (000)	Grade (oz/st Au)	Contained Gold (000 oz)
Open Pit	2,305	0.130	300	9,596	0.110	1,058	11,901	0.114	1,358
OP Stockpiles	53,119	0.080	4,269				53,119	0.080	4,269
Gold in Inventory			40						40
Subtotal OP	**55,424**	**0.083**	**4,608**	**9,596**	**0.110**	**1,058**	**65,021**	**0.087**	**5,667**
Underground	5,712	0.330	1,888	4,051	0.236	954	9,763	0.291	2,842
UG Stockpile	56	0.297	17				56	0.297	17
Subtotal UG	**5,768**	**0.330**	**1,904**	**4,051**	**0.236**	**954**	**9,819**	**0.291**	**2,859**
TOTAL	**61,192**	**0.106**	**6,513**	**13,647**	**0.147**	**2,012**	**74,840**	**0.114**	**8,525**

Notes:
1. CIM (2014) definitions were followed for Mineral Reserves.
2. Mineral Reserves are estimated using an average long-term gold price of US$1,200 per ounce.
3. Stockpiles include Autoclave, Roaster, and Distal.
4. Cut-off grades vary by processing type, mining method, and location.
5. Open pit autoclave (acid) cut-off grade is 0.060 oz/st Au, open pit autoclave (alkaline) cut-off grade is 0.070 oz/st Au, and the open pit roaster cut-off grade is 0.035 oz/st Au. The majority of the ore material in stockpile was generated at higher cut-off grades because of lower gold prices.
6. Underground cut-off grades are between 0.158 oz/st Au and 0.194 oz/st Au.
7. The Mineral Reserve estimate includes inventory.
8. Totals may not reconcile due to rounding.
9. North Post JV (Barrick 70% and Newmont 30%) reported at 70%.

TABLE 15-2 MINERAL RESERVES - DECEMBER 31, 2018 (METRIC UNITS)
Barrick Gold Corporation - Goldstrike Mine

	Proven Reserves			Probable Reserves			Proven and Probable Reserves		
	Tonnes (000)	Grade (g/t Au)	Contained Gold (000 oz)	Tonnes (000)	Grade (g/t Au)	Contained Gold (000 oz)	Tonnes (000)	Grade (g/t Au)	Contained Gold (000 oz)
Open Pit	2,091	4.46	300	8,706	3.78	1,058	10,797	3.91	1,358
OP Stockpiles	48,189	2.76	4,269				48,189	2.76	4,269
Gold in Inventory			40						40
Subtotal OP	50,281	2.85	4,609	8,706	3.78	1,058	58,987	2.99	5,667
Underground	5,182	11.33	1,888	3,675	8.08	954	8,857	9.98	2,842
UG Stockpile	51	10.19	17				51	10.19	17
Subtotal UG	5,233	11.32	1,904	3,675	8.07	954	8,908	9.98	2,858
TOTAL	55,514	3.65	6,513	12,381	5.05	2,012	67,895	3.91	8,525

Notes:
1. CIM (2014) definitions were followed for Mineral Reserves.
2. Mineral Reserves are estimated using an average long-term gold price of US$1,200 per ounce.
3. Stockpiles include Autoclave, Roaster, and Distal.
4. Cut-off grades vary by processing type, mining method, and location.
5. Open pit autoclave cut-off grade is 1.69 g/t Au to 1.98 g/t Au and the open pit roaster cut-off grade is 0.99 g/t Au. The majority of the ore material in stockpile was generated at higher cut-off grades because of lower gold prices.
6. Underground cut-off grades are between 4.46 g/t Au and 5.47 g/t Au.
7. The Mineral Reserve estimate includes inventory.
8. Totals may not reconcile due to rounding.
9. North Post JV (Barrick 70% and Newmont 30%) reported at 70%.

RPA is not aware of any mining, metallurgical, infrastructure, permitting, and other relevant factors which could materially affect the Mineral Reserve estimates.

OPEN PIT

MINERAL RESERVE ESTIMATE

The Mineral Resource estimates discussed in Section 14 were prepared using standard industry methods and appear to provide an acceptable representation of the deposits. RPA reviewed the reported resources, conversion to Mineral Reserves, production schedules, and cash flow analysis to determine if the resources meet the CIM (2014) definitions. Based on this review, it is RPA's assessment that the Measured and Indicated Mineral Resource within the final pit design at the Goldstrike Mine can be classified as Proven and Probable Mineral Reserves.

The EOY2018 Mineral Reserves for the open pit are summarized in Table 15-3.

TABLE 15-3 BETZE-POST OPEN PIT MINERAL RESERVES - DECEMBER 31, 2018
Barrick Gold Corporation - Goldstrike Mine

	Proven			Probable			Proven and Probable		
Pit Phase	Tonnes (000)	Grade (oz/st Au)	Contained Gold (000 oz)	Tonnes (000)	Grade (oz/st Au)	Contained Gold (000 oz)	Tonnes (000)	Grade (oz/st Au)	Contained Gold (000 oz)
3NW	59	0.108	6	349	0.094	33	408	0.096	39
4NW	879	0.140	123	4,791	0.117	561	5,670	0.121	685
West Barrel	263	0.144	38	1,462	0.116	170	1,724	0.121	208
5NW	1,105	0.120	132	2,994	0.098	294	4,099	0.104	426
Total OP	**2,305**	**0.130**	**300**	**9,596**	**0.110**	**1,058**	**11,901**	**0.114**	**1,358**

Notes:
1. CIM (2014) definitions were followed for Mineral Reserves.
2. Open pit autoclave (acid) cut-off grade is 0.060 oz/st Au, open pit autoclave (alkaline) cut-off grade is 0.070 oz/st Au, and the open pit roaster cut-off grade is 0.035 oz/st Au.
3. Mineral Reserves are estimated using an average long-term gold price of US$1,200 per ounce.
4. Totals may not reconcile due to rounding.

OPEN PIT CUT-OFF GRADES

The cut-off grade (COG) formula used by Goldstrike for the reserve reporting is as follows.

Cut-off Grade (oz/st) = [(Process Cost per Ore Ton) + (Tailings Sustainability Cost per Ore Ton) + (General and Administration Cost per Ore Ton)] / [((Gold Price per Ounce) – (Refining Cost per Ounce)) x (1 – Royalty %) x (Gold Recovery %)]

Individual cut-off grades are calculated for the roaster, TCM acid, and TCM alkaline processes. Table 15-4 is a summary of the internal cut-off grades calculated for the three process methods used at the Goldstrike operation.

TABLE 15-4 OPEN PIT CUT-OFF GRADE PARAMETERS
Barrick Gold Corporation - Goldstrike Mine

COG Inputs	Units	Roaster	TCM - Acid	TCM - Alk
Gold Price	US$/oz	1,200	1,200	1,200
Process Recoveries (from formula at COG)	%	68.28	69.57	45.93
Incremental Mining Cost, US$/st	US$/st moved	0.14	0.22	0.22
Process Cost	US$/st ore	20.56	42.19	30.94
G&A Cost	US$/st ore	2.95	4.79	4.79
Tailings Sustainability Cost	US$/st ore	0.65	0.65	0.65
Refining Cost	US$/oz	0.04	0.04	0.04
Royalty	%	3.89%	3.89%	3.89%
Resulting COG (US Customary Units)	**oz/st Au**	**0.035**	**0.060**	**0.070**
Resulting COG (Metric Units)	**g/t Au**	**0.99**	**1.69**	**1.98**

RPA notes that the calculated value for the Roaster COG is 0.031 oz/st Au – for estimation purposes, this COG has been rounded up, which will have the effect of increasing profitability.

For business planning purposes, a pit optimization check at US$1,000 per ounce was carried out. Little difference in pit shells that would be selected for design was observed.

Blocks in the Open Pit Block Model were sized to match the Selective Mining Unit (SMU) for the open pit. The reconciliation between the Open Pit mined tons and the model has been within the acceptable range.

Dilution and extraction are addressed by using whole blocks, without any further external factors.

OPEN PIT RECONCILIATION

Reconciliation of the Mineral Resource model to mill head grades was impractical due to the high percentage of ore directed to stockpiles. However, the reconciliation of tons and grade produced according to the grade control system compared well with that predicted by the mid-year 2018 Mineral Reserve estimate.

STOCKPILES

STOCKPILES AND ORE CONTROL

Goldstrike maintains a complex system of ore and low-grade stockpiles, which have been accumulating since the late 1980s. There are primarily three major stockpile categories that are listed below:

- Autoclave
- Roaster
- Distal

Table 15-5 summarizes the Open Pit Stockpile Mineral Reserves, located in 28 different stockpiles (as shown in Figure 15-1). The Open Pit Stockpile Mineral Reserves are estimated to be 53.12 million tons grading 0.080 oz/st Au, containing 4.27 million ounces of gold, effective December 31, 2018. RPA agrees with the ore control rationale for creating the stockpiles, and the accounting methods used to track the stockpile quantities and grades.

TABLE 15-5 OPEN PIT STOCKPILE MINERAL RESERVES - DECEMBER 31, 2018
Barrick Gold Corporation - Goldstrike Mine

	Proven			Probable			Proven and Probable		
	Tons (000)	Grade (oz/st Au)	Contained Gold (000 oz)	Tons (000)	Grade (oz/st Au)	Contained Gold (000 oz)	Tons (000)	Grade (oz/st Au)	Contained Gold (000 oz)
CaTS	6,661	0.088	583				6,661	0.088	583
Roaster	30,902	0.093	2,859				30,902	0.093	2,859
BRSO Stockpiles	15,557	0.053	826				15,557	0.053	826
Total	**53,119**	**0.080**	**4,269**				**53,119**	**0.080**	**4,269**

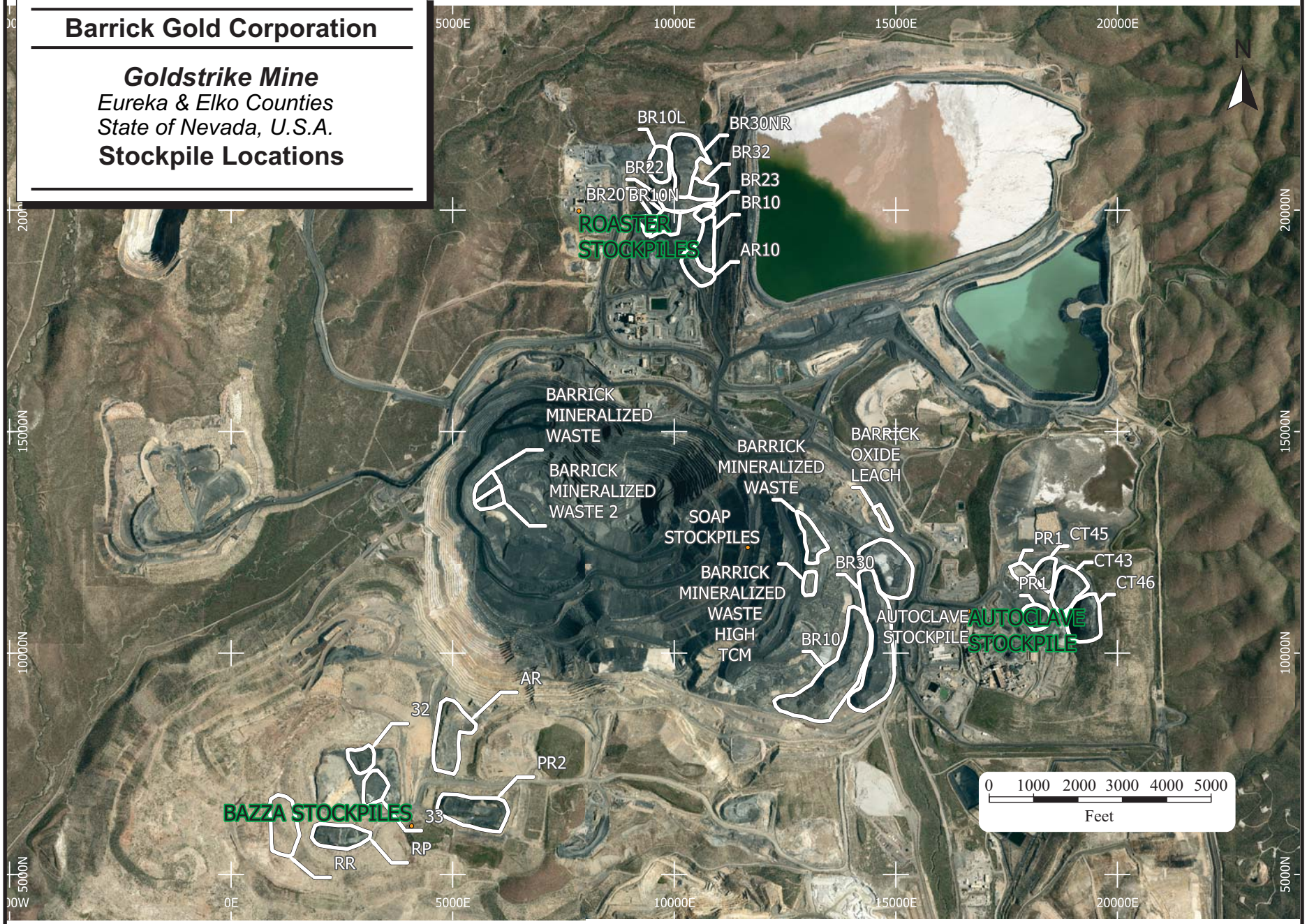
Notes:
1. CIM (2014) definitions were followed for Mineral Reserves.
2. Stockpiles include Autoclave, Roaster, and Distal.
3. In addition to the stockpiles noted in this table, there is a small stockpile of underground ore, included in the underground reserve table below.
4. The majority of the ore material in stockpile was generated over time at higher than current cut-off grades because of lower gold prices.
5. Totals may not reconcile due to rounding.

Figure 15-2 is a general process flow describing how the material mined is directed to a waste dump, a distal stockpile, autoclave stockpile, or roaster stockpile. Continuous review, sampling, and metallurgical testing of the Proven Reserve stockpiles need to be maintained.

Figure 15-1

Barrick Gold Corporation

Goldstrike Mine
Eureka & Elko Counties
State of Nevada, U.S.A.
Stockpile Locations



March 2019

Source: RPA, 2019.

www.rpacan.com

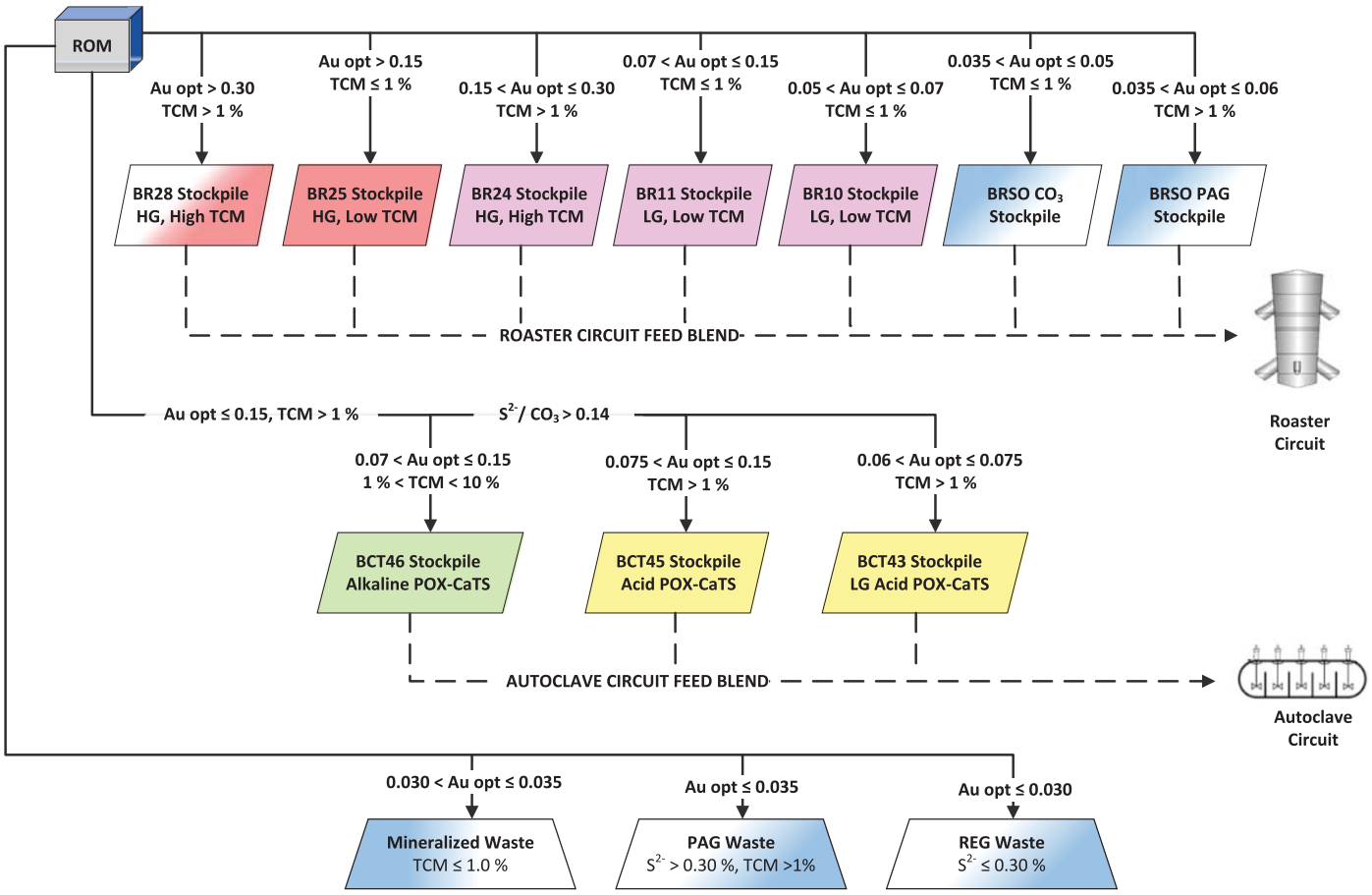


Figure 15-2

NOTE: Cut-off grades will vary with current economics, not with reserve or resource cut-off grades calculations.

Barrick Gold Corporation

Goldstrike Mine

Eureka & Elko Counties

State of Nevada, U.S.A.

Open Pit General Material Routing Flow Chart Example

March 2019

Source: Barrick, 2019.

RECONCILIATION

The Goldstrike Mine has a system in place for tracking and reconciling stockpile inventories. Reconciliation is completed at the end of each month and is shown for December 31, 2018 in Table 15-6. At the end of December 2018, it was estimated that the stockpiles contained 6.66 million tons of autoclave ore at an average grade of 0.088 oz/st Au and 46.51 million tons of roaster ore at an average grade of 0.080 oz/st Au. Nearly 4.3 million ounces of gold are held in inventory in the stockpiles. It should be noted that operational decisions can be made regarding the type of processing method and timing of the stockpile processing. For example, it may be economically advantageous to process some of the roaster stockpile ore with the CaTS process, even if it means that recoveries are lower and costs higher – earlier realization of the revenue may offset those downsides and improve utilization of both plants to full capacity.

Also, at month end, the process division completes an allocation procedure, as explained in Section 17. Adjustments are made to the tonnage of ore from the open pit mine, the ounces produced, the head grades, tail grades, and recovery based on the ounces of gold that are sold and the amount of material processed in the plants.

Two separate stockpile reports are maintained, one for the roaster and the other for the autoclaves. The amount of material processed from each stockpile is tracked throughout the month. At the end of the month, the tonnage of material processed from each stockpile is adjusted to reflect the total tons processed through the roaster and/or autoclave. In a similar fashion, the contained ounces are adjusted based on the production from each plant.

Barrick reconciled the amount of material contained in the stockpile by comparing the amount of material processed in the processing facilities with the Estimated Material Processed based on the change in inventory in the stockpiles and the amount of ore mined. That is:

Estimated Mined Material = Estimated Material Processed + Change in (Δ) Stockpile Inventory

The Estimated Mined Material is based on the Reported Polygon Tons and Ounces mined for the Betze-Post open pit. The change in the stockpile inventory is the difference between the Beginning Inventory and the Adjusted Ending Inventory. Using this methodology, the Estimated Material Processed is compared to the Actual Material Processed, which is reported by the process division each month using the allocation procedure. Table 15-6 compares the

Estimated Material Processed in both the autoclave and roaster operations with the Actual Material Processed.

TABLE 15-6 AUTOCLAVE AND ROASTER STOCKPILE ACCOUNTING SUMMARY AS OF DECEMBER 31, 2018
Barrick Gold Corporation - Goldstrike Mine

Goldstrike EOY2018	Autoclave Tons (000)	Autoclave Grade (oz/st Au)	Autoclave Ounces (000)	Roaster Tons (000)	Roaster Grade (oz/st Au)	Roaster Ounces (000)
Beginning Inventory	7,254	0.088	635	45,979	0.078	3,590
Actual Ending Inventory	6,661	0.088	583	46,458	0.079	3,685
Reported Ore Mined	1,671	0.090	150	3,417	0.119	407
Declared Ore Mined	1,700	0.077	131	3,595	0.122	439
Difference	98%		114%	95%		93%

Sonic drilling of specific stockpiles by Goldstrike shows a good correlation to the original ore control grade on a larger scale, with variation locally within the stockpiles.

In addition to gold grade, the stockpile reports track the sulphide, carbonate, and TCM. These components are important to the efficient operation of the processing plants.

Since much of the material stored in the stockpiles has been there over an extended period, and it is known that the sulphide material oxidizes over time changing sulphide to sulphate, it is anticipated that the sulphide concentration, and therefore, the fuel value will be lower than it was when the material was placed in the stockpile.

Goldstrike will continue the sampling and assaying program to determine the current grades of the stockpiles, particularly for those to be processed soon.

UNDERGROUND

MINERAL RESERVE ESTIMATE

The EOY2018 estimated Mineral Reserves for the underground were reported as shown in Table 15-7.

TABLE 15-7 RODEO/MEIKLE UNDERGROUND MINERAL RESERVES – DECEMBER 31, 2018
Barrick Gold Corporation – Goldstrike Mine

Zone	Proven			Probable			Proven and Probable		
	Tons (000)	Grade (oz/st Au)	Contained Gold (000 oz)	Tons (000)	Grade (oz/st Au)	Contained Gold (000 oz)	Tons (000)	Grade (oz/st Au)	Contained Gold (000 oz)
Banshee	451	0.368	166	298	0.260	77	749	0.325	243
Liberty	148	0.265	39	106	0.201	21	254	0.238	60
Main/East	1,051	0.435	457	374	0.167	62	1,425	0.364	519
South Meikle	196	0.402	79	56	0.204	11	252	0.358	90
Extension	149	0.462	69	234	0.353	82	383	0.395	151
Griffin	151	0.281	42	238	0.350	83	389	0.323	126
West Griffin	98	0.288	28	28	0.122	3	126	0.251	32
Rodeo – Upper	1,589	0.288	458	1,422	0.206	293	3,011	0.249	751
Rodeo – Lower	1,292	0.312	403	877	0.255	224	2,169	0.289	627
Barrel	235	0.255	60	150	0.226	34	386	0.244	94
North Post	285	0.245	70	153	0.197	30	439	0.228	100
North Post JV (70%)	66	0.243	16	114	0.272	31	180	0.261	47
UG Subtotal	**5,712**	**0.330**	**1,888**	**4,051**	**0.236**	**954**	**9,763**	**0.291**	**2,842**
UG Stockpiles	56	0.297	17	-	-	-	56	0.297	17
UG Total	**5,768**	**0.330**	**1,904**	**4,051**	**0.236**	**954**	**9,819**	**0.291**	**2,859**

Notes:
1. CIM (2014) definitions were followed for Mineral Reserves.
2. Mineral Reserves are estimated at cut-off grades of 0.158 oz/st to 0.194 oz/st Au.
3. Mineral Reserves are estimated using an average long-term gold price of US$1,200 per ounce.
4. A minimum mining width of 15 ft was used for Underground Mineral Reserves.
5. Bulk density varies by ore type.
6. Totals may not reconcile due to rounding.
7. North Post JV (Barrick 70% and Newmont 30%) reported at 70%.

RPA examined the EOY2018 Underground Mineral Reserves in detail and found them to meet or exceed industry standards.

In RPA's opinion, the Underground EOY2018 Mineral Reserve estimates are competently completed to industry standards using reasonable and appropriate parameters and conform to CIM (2014) definitions.

The Underground Mineral Reserves were generated based upon mine designs applied to the mid-year 2018 Mineral Resource model, and subsequently reported on the EOY2018 Mineral Resource model. The design methodology uses both the cut-off grade estimation and economic assessment to design and validate the Mineral Reserves. The following steps outline the general procedures used in the underground mine design:

- Assign mining method by area, based on the geometry, mining access, and geotechnical considerations.
- Create 3D wireframe ore mining shapes in the geological block model using stope optimization algorithms. Inputs include stope geometry and cut-off grades.
- Review resulting shapes and edit as required.
- Evaluate wireframes against the geological block model (estimate the tons, grade, and ounces of each stope).
- Design stope access and identify development requirements in ore and waste.
- Assess economics of mining individual stopes, incorporating access development, backfill, and rehabilitation requirements.
- Assess overall economics of mining areas or zones, incorporating all development (direct and allocated), backfill, and rehabilitation requirements. Stopes deemed uneconomic at this stage may be re-designed and re-evaluated.
- Summarize economic and uneconomic stopes and remove the uneconomic stopes from the short-range and/or LOM plan.

The economic assessments described above are separated into a short-range and long-range model. The short-range model is used to assess the economic value of individual stopes by including the direct access development, backfill, and rehabilitation costs required to mine that stope. The short-range model directly affects whether a given stope will be included in the short-range mine plan. The long-range model is used to assess the economic value of a mining zone by allocating development costs and rehabilitation costs on a per ton weight basis. The long-range model assesses the overall design of a mining zone and its associated development for the reserve and LOM plan.

UNDERGROUND CUT-OFF GRADE

The development of the COGs for underground operations is laid out in a comprehensive document on reserve cut-off grade calculation. The COG parameters are as follows:

- COGs are based on US$1,200 per ounce gold price.
- Mine production plan and costing structure are based on the latest LOM plan.
- No planned capital costs or sunk capital costs are included in the COG determination.
- Unit costs used in the COG determination are the weighted average unit costs of the 2017 LOM.

- Process recoveries are from roaster recovery curves, based on an initial assumption of what the cut-off grade will be.
- COG is estimated for each underground mining method (longhole stoping and drift and fill) and by specific mining areas (Meikle and Rodeo).
- An additional incremental COG is calculated for each mining area for use in evaluating development.
- Each ore ton included in the LOM plan incurs additional costs for processing, G&A, NSR, refining, and a silver credit, which total $50 per ton.

The breakeven and incremental cut-off grades estimated for the underground operation for EOY2018 are summarized in Table 15-8.

TABLE 15-8 UNDERGROUND CUT-OFF GRADE ESTIMATES
Barrick Gold Corporation – Goldstrike Mine

	Meikle Longhole BECOG	Meikle D&F BECOG	Meikle Incr Devel ICOG	Rodeo Longhole BECOG	Rodeo D&F BECOG	Rodeo Incr Devel BECOG
Mineral Reserve COG						
Mine Cost	126.40	158.10	2.58	119.53	145.65	2.58
Site Costs	50.08	50.08	50.08	50.08	50.08	50.08
Total Cost	176.48	208.18	52.66	169.61	195.73	52.66
Recovery	89.5%	89.5%	80.5%	87.4%	89.5%	80.5%
Gold Price	1,200	1,200	1,200	1,200	1,200	1,200
COG (oz/st)	0.164	0.194	0.055	0.158	0.182	0.055
COG (g/t)	4.63	5.47	1.55	4.46	5.14	1.55

Note: BECOG – breakeven cut-off grade, ICOG – incremental cut-off grade, D&F – drift and fill

RPA considers the operating costs estimate used in the Mineral Reserve COG calculation to be appropriate.

UNDERGROUND DILUTION AND EXTRACTION

Stopes are subject to dilution and extraction estimates which are based upon the operating experience at the mine. Dilution estimates are maintained for each of the mining zones and for the different types of mining that may be undertaken. Dilution grades are also estimated for each area as shown in Table 15-9 (not all areas have been included in the table).

TABLE 15-9 UNDERGROUND DILUTION AND EXTRACTION BY MINING TYPE EOY2018

Barrick Gold Corporation – Goldstrike Mine

Type of Underground Heading	Average Mine Dilution (%)	Average Diluting Grade (oz/st)	Average Mine Recovery (%)
Development	5.8%	0.041	95%
Drift & Fill	3.8%	0.096	97%
Stope	11.0%	0.100	95%
Grand Total	**8.1%**	**0.077**	**95%**

UNDERGROUND RECONCILIATION

The underground technical services group has developed a system for the reconciliation of the production to the Mineral Reserve designs. The evaluation also includes a stope performance index and stope powder factors. The evaluation uses the mine production data, the Mineral Reserve estimates, the grade control model, and the cavity monitoring system (CMS) surveys of the stope voids.

The reconciliation data for the underground mine is shown in Table 15-10 for the period January 2017 to December 2018.

TABLE 15-10 RECONCILIATION DATA FOR GOLDSTRIKE UNDERGROUND

Barrick Gold Corporation – Goldstrike Mine

Month	DOM			Grade Control			Ore Reserves		
	Tons	Grade (oz/st Au)	Ounces	Tons	Grade (oz/st Au)	Ounces	Tons	Grade (oz/st Au)	Ounces
Jan-17	115,772	0.284	32,834	113,752	0.266	30,246	112,390	0.269	30,186
Feb-17	89,359	0.221	19,756	84,092	0.239	20,106	82,958	0.242	20,058
Mar-17	132,539	0.262	34,710	124,400	0.247	30,768	122,739	0.250	30,651
Apr-17	118,971	0.274	32,558	110,599	0.245	27,147	109,159	0.248	27,079
May-17	121,257	0.265	32,106	118,717	0.237	28,181	116,172	0.241	27,993
Jun-17	134,828	0.257	34,617	106,709	0.281	30,017	105,489	0.283	29,814
Jul-17	99,139	0.269	26,685	93,382	0.286	26,686	91,455	0.290	26,564
Aug-17	110,602	0.301	33,318	87,393	0.250	21,830	85,449	0.254	21,718
Sep-17	116,670	0.261	30,507	109,635	0.243	26,680	107,340	0.247	26,560
Oct-17	93,356	0.235	21,983	89,934	0.199	17,865	85,280	0.205	17,503
Nov-17	109,390	0.236	25,799	103,622	0.230	23,791	101,887	0.233	23,704
Dec-17	128,990	0.230	29,680	112,269	0.224	25,120	108,994	0.229	24,957
YTD-17 Total	**1,370,873**	**0.259**	**354,553**	**1,254,503**	**0.246**	**308,438**	**1,229,311**	**0.250**	**306,788**

Month	DOM			Grade Control			Ore Reserves		
	Tons	Grade (oz/st Au)	Ounces	Tons	Grade (oz/st Au)	Ounces	Tons	Grade (oz/st Au)	Ounces
Jan-18	94,847	0.261	24,755	82,489	0.231	19,067	80,854	0.234	18,935
Feb-18	97,548	0.247	24,076	87,850	0.191	16,736	83,765	0.190	15,886
Mar-18	122,372	0.240	29,412	113,285	0.203	23,024	109,351	0.207	22,663
Apr-18	97,026	0.208	20,156	92,781	0.193	17,869	90,046	0.196	17,617
May-18	113,826	0.282	32,090	108,081	0.255	27,577	105,964	0.259	27,466
Jun-18	107,758	0.341	36,704	89,534	0.273	24,439	84,881	0.274	23,298
Jul-18	113,270	0.280	31,769	103,045	0.240	24,690	99,359	0.244	24,232
Aug-18	128,845	0.245	31,518	115,553	0.232	26,813	112,256	0.235	26,418
Sep-18	106,799	0.307	32,735	95,945	0.268	25,761	85,917	0.268	23,012
Oct-18	153,819	0.246	37,882	129,252	0.204	26,432	121,893	0.204	24,829
Nov-18	109,439	0.305	33,335	100,142	0.250	24,988	89,354	0.252	22,496
Dec-18	145,008	0.327	47,383	129,797	0.275	35,633	116,104	0.276	32,053
YTD-18Total	**1,390,557**	**0.275**	**381,814**	**1,247,754**	**0.235**	**293,027**	**1,179,745**	**0.236**	**278,906**

The comparison of the declared ore mined (DOM) to the Mineral Reserve estimate (as a percentage) is shown in Table 15-11. The data tables and graphs are prepared on a monthly basis together with an explanation of the discrepancies. The analysis includes a three-month moving average. RPA suggests that a rolling 12-month average be maintained in the analysis of the reconciliation.

TABLE 15-11 DOM COMPARED TO RESERVE MODEL
Barrick Gold Corporation – Goldstrike Mine

	DOM/Reserve Model		
Month	Tons	Grade	Ounces
Jan-17	3%	6%	9%
Feb-17	8%	-9%	-2%
Mar-17	8%	5%	13%
Apr-17	9%	10%	20%
May-17	4%	10%	15%
Jun-17	28%	-9%	16%
Jul-17	8%	-7%	0%
Aug-17	29%	19%	53%
Sep-05	9%	6%	15%
Oct-17	9%	15%	26%
Nov-17	7%	1%	9%
Dec-17	18%	0%	19%
YTD-17 Total	**+12%**	**+3%**	**+16%**

	DOM/Reserve Model		
Month	**Tons**	**Grade**	**Ounces**
Jan-18	17%	11%	31%
Feb-18	16%	30%	52%
Mar-18	12%	16%	30%
Apr-18	8%	6%	14%
May-18	7%	9%	17%
Jun-18	27%	24%	58%
Jul-18	14%	15%	31%
Aug-18	15%	4%	19%
Sep-18	24%	14%	42%
Oct-18	26%	21%	53%
Nov-18	22%	21%	48%
Dec-18	25%	18%	48%
YTD-18 Total	**+18%**	**+16%**	**+37%**

When stopes outside of reserves are defined with drilling during the year and mined, DOM figures will be higher than reserves. In some situations, this is due to lack of drilling platform, in others, it is due to the following of mineralization during mining. Historically, many stopes fell into this category. In 2017, relatively few stopes fell into this category, and reserve estimates show a much better match with DOM. 2018 data suggest that the number of stopes mined outside of reserves is on the rise again.

In addition to the reconciliation information, a stope record is maintained which compares the blast design, the final reported production, and the CMS model. Stope statistics and “stope performance” are also compiled. A September 2018 example comparison of blast designs and CMS models is shown in Table 15-12.

TABLE 15-12 RODEO STOPE STATISTICS SEPTEMBER 2018
Barrick Gold Corporation – Goldstrike Mine

Stope ID	Blast Design Tons	Blast Design Grade (oz/st Au)	Blast Design Contained Ounces	Final Reported Production Tons	Final Reported Production Grade (oz/st Au)	Final Reported Production Contained Ounces	CMS Model Tons	CMS Model Grade (oz/st Au)	CMS Model Contained Ounces
L369T145S1	3,698	0.330	1,220	3,615	0.293	1,059	3,257	0.347	1,131
L379T238P3	7,246	0.254	1,840	6,125	0.311	1908	6,245	0.260	1623
P402T090P1	2,309	0.230	531	2,425	0.191	462	2,255	0.205	463
P402T127S2	1,806	0.246	444	2,256	0.211	477	1,964	0.229	451
P408T062S1	1,791	0.220	394	2,214	0.215	476	1,964	0.224	441
U415T212P2	2,782	0.328	912	2,560	0.312	798	2,580	0.330	850
T416T720S1	2,357	0.220	519	2,583	0.234	604	2,028	0.178	361
T409T720S3	2,134	0.310	665	1,634	0.149	243	1,440	0.170	245
L372T240S1	3,957	0.310	1,227	5,482	0.363	1,992	6,094	0.257	1,564
Total	**28,080**	**0.276**	**7,752**	**28,894**	**0.278**	**8,020**	**27,828**	**0.256**	**7,129**

The “stope performance” is calculated as 100% minus percent dilution minus percent ore overbreak minus percent ore underbreak. Table 15-13 gives some examples of the stope performance analysis.

TABLE 15-13 RODEO STOPE PERFORMANCE
Barrick Gold Corporation – Goldstrike Mine

Stope ID	Powder Factors (lb/st) Planned Design	Planned Powder Actual CMS	Actual Powder Actual Tons	Stope Statistics Dilution (%)	Stope Performance Extraction (%)	Over-break (%)	Under-break (%)	Stope Performance (%)
L369T145S1	L369T145S1	2.17	5.03	5.4	82.5	4.1	18.3	76.3
L379T238P3	L379T238P3	2.31	3.98	0.0	85.7	1.2	15.1	84.0
P402T090P1	P402T090P1	2.14	2.19	0.2	106.9	12.4	4.5	95.3
P402T127S2	P402T127S2	0.92	1.74	4.9	99.0	13.3	10.5	84.6
P408T062S1	P408T062S1	2.58	3.33	0.4	103.9	14.3	9.9	89.7
U415T212P2	U415T212P2	1.96	2.67	0.0	90.8	6.1	11.2	85.6
T416T720S1	T416T720S1	2.53	1.54	2.9	82.7	6.1	22.3	74.8
T409T720S3	T409T720S3	2.47	2.41	0.4	63.7	2.1	35.2	64.4
L372T240S1	L372T240S1	2.54	3.01	7.0	138.0	41.4	1.3	91.7
Total		**2.23**	**3.19**	**2.3**	**95.0**	**10.8**	**13.8**	**83.3**

RPA considers the efforts put into the record keeping and reconciliation to be of good quality and in accordance with good industry practice. RPA recommends that the reconciliation results and the stope performance analysis be used to evaluate stope designs to determine where improvements in mine planning would be most advantageous.

RPA also recommends review of underground reconciliation of Mineral Reserves to production after first deducting areas mined from outside the Mineral Reserve estimate, for a direct comparison of estimate accuracy.

16 MINING METHODS

The Goldstrike Mine consists of operating open pit and underground mines. Both methods are described below.

OPEN PIT

The Betze-Post open pit is a truck and shovel operation. With completion of the 3rd NW phase targeted for March 2019, the open pit has three remaining phases (4th NW, West Barrel, and 5th NW). The ultimate pit will measure approximately two miles east to west, 1.5 miles north to south, and have an average depth of approximately 1,300 ft.

The Bazza Waste Dump is located to the southwest of the open pit. The Life of Mine (LOM) plan includes the Clydesdale Dump to the west and backfilling of the southwest and southeast portions of the open pit. Internal to the pit is the Betze Portal, which connects to the Rodeo underground mine; the North Post Portal, which connects to North Post and Rodeo underground; and the Betze Portal 2, which is used for ventilation.

Previously the Post Portal connected to Newmont's Deep Post underground mine, however, this area has since been backfilled.

MINE DESIGN

Ultimate pit limits were determined by generating Whittle pit shells based on the net cash generated and the pit slopes recommended by Piteau Associates Engineering Ltd. (Piteau, 2006). Based on these results, the engineering team designed the final pit with haul ramps and appropriate catch benches. Haul ramps were designed to be 130 ft to 140 ft wide, including a safety berm for double lane traffic accommodating the 320-ton class haul trucks, and have a maximum grade of 10%. Mining thickness is 40 ft in waste and 20 ft in ore to help minimize dilution. In ore, triple benching is utilized, creating 60 ft faces between catch benches. Barrick optimizes mining by using a multi-phased approach which maximizes stripping rates to keep an ore producing face available as much as possible. This multi-phase technique consists of a primary ore layback and a primary stripping layback. Historically, this

approach was put in place to maintain a consistent mill feed and keep mine production in the range of 14 to 15 benches per layback per year.

Mine models are developed using Maptek's Vulcan software, which is then converted to Deswik software for mine design or output to Whittle 4X that employs the Lerchs-Grossmann (LG) pit optimization algorithm. Whittle produces a series of pit shells based on multiple gold prices. The design of the phases is based on mining the most profitable pit shells first. The phase designs are completed using Deswik mine planning software. These are all well recognized software packages and are commonly used for open pit mine optimization.

The pit design is based on 40 ft benches in the waste and, where possible, 60 ft benches in the ore mined in 20 ft cuts. Slopes vary based on location. Table 16-1 summarizes the general pit design criteria, and Figure 16-1 illustrates the ultimate pit outline.

TABLE 16-1 OPEN PIT MINE DESIGN PARAMETERS
Barrick Gold Corporation - Goldstrike Mine

Haul Road Width	130 ft
Haul Road Grade	10%
Mining Bench Height - Waste	40 ft
Mining Bench Height - Ore	20 ft
Minimum Operating Width	150 ft
Design Operating Width	250 ft

RPA reviewed the pit designs and believes that they follow good engineering practice. All phases are designed with a minimum of 250 ft operating width, with some minor cuts at 150 ft. All haul roads are designed at a 10% maximum grade. There is sufficient room between phases to allow for operating room, and roads and ramps have been delineated.

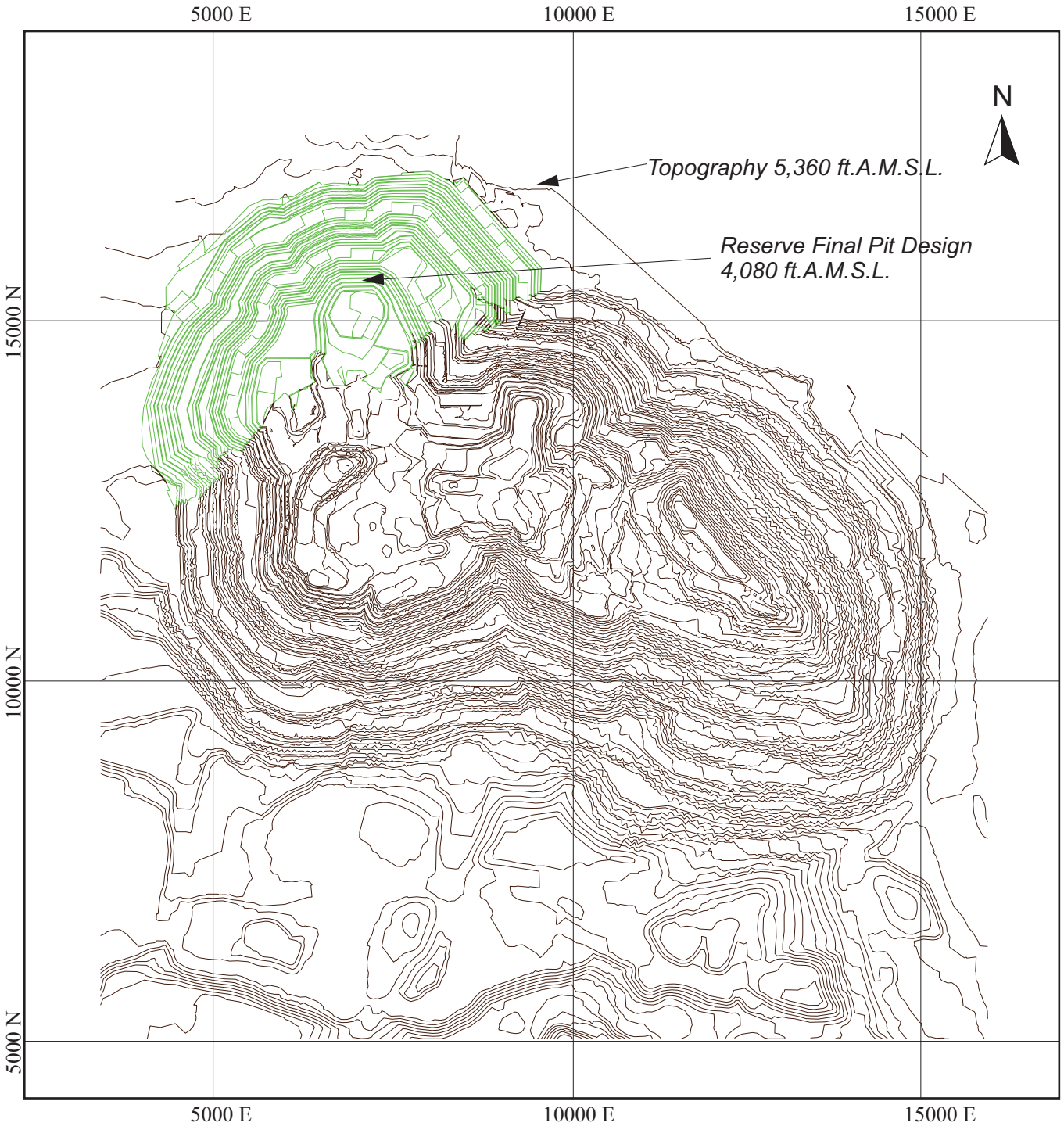


Figure 16-1

Barrick Gold Corporation

Goldstrike Mine
Eureka & Elko Counties
State of Nevada, U.S.A.
Ultimate Pit Design Outline

March 2019

Source: Barrick, 2019.

GEOMECHANICS

Goldstrike utilizes Piteau as the primary design consultant for recommendations on geotechnical controls for all open pit layback designs. The formulation of slope design criteria involves consideration of the predicted failure modes that could impact the slope at the bench, inter-ramp, and overall scales. The level of stability for each of these assumed failure modes is then assessed and compared with the acceptance criteria for that particular slope (typically, a design factor of safety of 1.2 for overall slopes).

ULTIMATE PIT

A formal review of slope design parameters for the north wall of the Ultimate Pit was performed by Piteau in 2006, based on the B24A16W Ultimate Mine design. Piteau has continued its reviews since 2006 and is currently analyzing the 5th NW phase (their report was pending at the time of writing). Recommended inter-ramp slope angles, taken from Piteau's review of the ultimate B24A16W slopes, are projected onto the current mine plan.

PIT PHASES

The 3rd NW Layback is targeted for completion in March 2019. The 4th NW layback is in progress and is scheduled for completion in 2020.

Pit slope ranges by mining phase are listed below:

- Phase 4NW – 35° to 41°
- Phase 5NW – 30° to 43°
- Phase West Barrel (WB) – 32° to 44°

Pit optimization indicated that a 5NW layback was viable, and a phase design was completed.

The West Barrel pit phase is scheduled for the end of the mine life because it mines through infrastructure required for underground mining.

MINE EQUIPMENT

The current mine equipment fleet will be used throughout the mine life (to 2023 in NW Laybacks, and at the end of the mine life for WB). The fleet is shared with Barrick's South Arturo Mine. The current fleet is shown in Table 16-2.

Mine mobile equipment production rates were reviewed with availability and utilization to see if mining production rates and costs are appropriate. Table 16-3 shows the current production

capacity of the fleet. It is RPA's opinion that there are sufficient trucks, loaders, and support equipment in the LOM plan to meet the production requirements.

TABLE 16-2 OPEN PIT MINE EQUIPMENT FLEET
Barrick Gold Corporation - Goldstrike Mine

Equipment	Manufacturer	Quantity	Fleet Availability (%)
930E Truck (290t)	Komatsu	27	88
CAT 785	Caterpillar	2	88
Komatsu HM400 Articulated Water Truck	Komatsu	1	75
685 Truck (water)	Komatsu	2	89
930E Water Truck	Komatsu	3	87
Drills	Atlas Copco	7	83
Electric Shovel (2800) 144	P&H	1	88
Electric Shovel (4100) 191	P&H	1	91
Electric Shovel (4100) 192	P&H	1	91
5500 Hydraulic Shovel 182	Hitachi	1	89
LeTourneau Loader	LeTourneau	1	73
CAT 6040 Trackhoe	Caterpillar	1	85
Cat 992 Loader	Caterpillar	2	86
Cat D10 & D11 Dozer	Caterpillar	6	86
Rubber Tire Dozer	Caterpillar	6	86
Graders (CAT 16 Class)	Caterpillar	7	86
Backhoes	Various	3	86
Cat 992 K Loader (Rehandle)	Caterpillar	3	89
Cat 777 G Haul Truck (Rehandle)	Caterpillar	4	89
Cat 777 G Water Truck (Rehandle)	Caterpillar	1	89
Cat D10 T Dozer (Rehandle)	Caterpillar	2	95
Cat D10 T Dozer (Landfill)	Caterpillar	1	86

TABLE 16-3 2019 OPEN PIT EQUIPMENT PRODUCTIVITY
Barrick Gold Corporation - Goldstrike Mine

Shovels	No.	Productivity (st/hr)	Availability (%)	Utilization (%)	Annual Hours per Unit	Annual Fleet Capacity (tons 000)
P&H 4100 XPC	2	5,300	91	85	6,148	65,169
Hitachi EX5500	1	2,800	88	45	3,021	8,459
P&H 2800 XPB	1	2,400	88	77	5,766	13,838
LeTourneau L-1850	1	1,200	73	32	671	805
Trucks						
Komatsu 930E	27	642	88	80	6,221	107,835

PRODUCTION SCHEDULE

The Goldstrike Mine operates on a general production schedule of 24 hours per day, seven days per week. Production blasts are scheduled for five days per week. In 2018, the fleet averaged a production rate of approximately 184,000 stpd (total ore and waste). The 2019 LOM plan is summarized in Table 16-4, which includes the 3NW, 4NW, 5NW, and West Barrel phases.

TABLE 16-4 OPEN PIT LIFE OF MINE PRODUCTION SUMMARY
Barrick Gold Corporation - Goldstrike Mine

Year	Ore Tons (000)	Grade, (oz/st Au)	Contained Gold (oz 000)	Waste Tons (000)	Stockpile Rehandle Ore Tons (000)	Total Tons Moved (000)	Strip Ratio
2019	2,443	0.111	272	24,379	9,067	35,889	10.0
2020	3,582	0.124	444	9,775	3,414	16,771	2.7
2021				23,371	7,352	30,723	
2022				32,858	7,514	40,372	
2023	4,110	0.104	427	11,965	5,021	21,096	2.9
2024					9,136	9,136	
2025					4,625	4,625	
2026					6,243	6,243	
2027					6,201	6,201	
2028					5,112	5,112	
2029					3,687	3,687	
2030					2,104	2,104	
2031					2,867	2,867	
2032					2,872	2,872	
2033	6	0.042	0	19,953	1,235	21,194	
2034	1,772	0.121	215	14,805	314	16,891	8.4
Totals	**11,913**	**0.114**	**1,358**	**137,105**	**76,766**	**225,784**	**11.5**

Notes:
1. LOM production includes reserves and a minor amount of resource material

The West Barrel phase, which mines through underground infrastructure, is scheduled to be mined once underground mining is complete. This date is currently projected to be 2028 based on Mineral Reserves, or 2033 when considering some conversion of Underground Inferred Resources. As drilling continues, the West Barrel phase is expected to move further into the future.

UNDERGROUND

Underground mine production comes from the Rodeo, Meikle, North Post, and Banshee areas. The underground mine consists of 11 separate production areas stretching over a length of 12,000 ft, and a vertical distance from approximately 600 ft to 2,000 ft below surface. At the southern end of the underground zones, the pit workings cut the underground zones. There are both shaft and ramp entries to the mine. The mine layout is shown in Figure 16-2. The underground operations commenced in 1996. The underground mine is a trackless operation.

Recent underground gold production is summarized in Table 16-5.

TABLE 16-5 UNDERGROUND 10 YEAR PRODUCTION HISTORY
Barrick Gold Corporation - Goldstrike Mine

Year	Tons Mined (000)	Grade (oz/st Au)	Contained Gold (000 oz)
2009	1,252	0.366	458
2010	978	0.307	300
2011	1,154	0.284	327
2012	1,312	0.277	364
2013	1,497	0.277	415
2014	1,766	0.258	455
2015	1,618	0.280	452
2016	1,604	0.287	461
2017	1,376	0.259	356
2018	1,411	0.274	387
Total	**13,968**	**0.285**	**3,975**

Figure 16-2

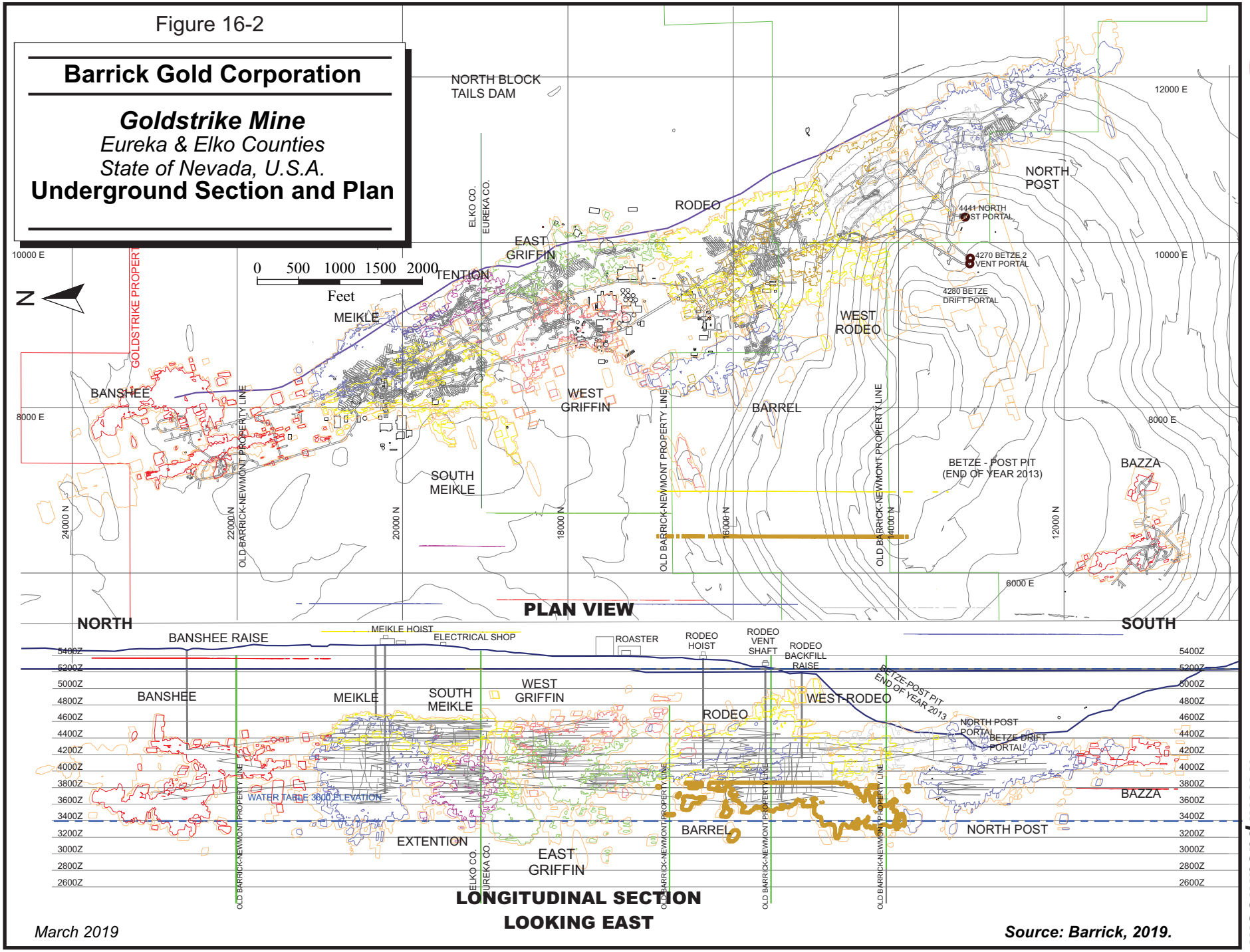
Barrick Gold Corporation

Goldstrike Mine

Eureka & Elko Counties

State of Nevada, U.S.A.

Underground Section and Plan



March 2019

Source: Barrick, 2019.

www.rpacan.com

ADDITIONAL INFORMATION

The paste fill plant was commissioned at Rodeo in 2013. The method utilizes tailings from the Roaster facility mixed with cement. This method replaced backfill from the Rodeo cemented rock fill plant in 2013 when the open pit mined through the plant's aggregate delivery raise. Paste fill is cheaper and more efficient than the cemented rock fill and offers another way to dispose of Roaster tailings.

MINE DESIGN

DESIGN CRITERIA

The Goldstrike deposits are all Carlin type deposits, with fine to very finely disseminated gold and arsenic bearing pyrite. The host rocks are generally sedimentary, mostly calcareous formations, frequently altered and decalcified. There is hydrothermal alteration and there are collapse structures which generated the breccias that host the deposits. The alteration and folding and faulting have led to poor rock quality in the deposits in generally and locally very poor ground conditions in the vicinity of the major faults.

The geometry of the deposits is variable from flat-lying to pipe-like, with irregular shapes due to the alteration. A summary of the deposit dimensions and characteristics is provided in Table 16-6.

TABLE 16-6 UNDERGROUND ZONE DIMENSIONS
Barrick Gold Corporation - Goldstrike Mine

Name	Length (ft)	Thickness (ft)	Elevation Range	Comment (Attitude, Mineralization Type, etc.)
Banshee	1,750	10 to 200	4550-3200	Fault and brecciated dykes
Liberty	1,500	10 to 150	4000-4350	Upper Mud and Wispy units, dykes and breccias along faults
Meikle (main)	1,600	10 to 380	4550-3050	Fault and breccia
South Meikle	2,000	10 to 70	4650-4350	Flat, faulted & brecciated dykes
Extension	1,030	10 to 70	4400-3200	Fault, brecciated dykes
Griffin	1,100	10 to 250	4500-3700	Fault, brecciated, dykes and Bazza Sand
Griffin Bx	1,080	10 to 150	4400-3200	Fault and brecciated
West Griffin	1,400	10 to 60	4700-4100	Bazza sand unit, Fault
Barrel	1,600	10 to 130	4300-3900	Upper Mud and Wispy units
Rodeo	2,350	10 to 200	4700-3300	Upper Mud and Wispy units, dykes and breccias along faults
North Post	2,400	10 to 140	4700-3500	Wispy subunit, dykes and breccias along faults
Bazza Underground	1,100	10 to 90	4400-4040	Mined out

While the deposits extend below the 3,400 ft elevation, the mine has only been dewatered to that level. Mineral Reserves are not included from any material that is below the 3,200 ft elevation (the projected extent of the current dewatering program). There is potential to increase the Mineral Reserves at depth if dewatering is extended further.

GROUND CONDITIONS/STABILITY

Rock mechanics advice and direction is generally provided by a rock mechanics engineer on the staff of the technical services department. A consultant, R. Langston, P.E., is engaged on an as-needed basis to provide guidance on specific ground control matters and reviewing of standards.

Ground conditions vary greatly in the different mining areas. Poor conditions in some areas are due to alteration of original structures. Oxidation affects rock strengths in some areas, and requires corrosion-resistant ground support.

The generally low-strength rock conditions are the key factor in the mine design and mining method selection.

MINING METHODS

Two main mining methods are used underground at the Goldstrike Mine, both of which rely on cemented backfill for support.

In relatively good to fair ground conditions, where longhole stoping methods are used, the wall and back instability is reduced by mining smaller, longhole sections and filling before mining the next section. In poor ground, the underhand drift and fill method provides a backfill roof for subsequent lifts in the mining cycle.

The underhand drift and fill method is utilized in areas of fair to poor ground conditions regardless of the width of the zone. The underhand drifts are nominally designed as 15 ft wide by 15 ft high. The minimum width is 15 ft (one drift). The primary drift is driven with increased ground support to hold the ground open, then backfilled with a high strength cemented rock fill at the Meikle mine, paste fill at the Rodeo and North Post mine. Where the ore width exceeds the nominal drift width, subsequent drifts are developed (parallel or at oblique angles to the primary drift) and then backfilled. This process continues until the entire ore shape at a given elevation has been excavated and filled. Successive lifts are taken beneath the primary

workings, utilizing the backfill as an engineered back. This method can provide a consistent production rate from a mining area given a sufficient number of headings to complete the full mining cycle.

Transverse longhole stopes are designed at various heights ranging from 35 ft to 100 ft, based on the existing and planned sill development levels used in the active mining areas. Stope widths are designed at 20 ft to 25 ft, based on the ground conditions. In secondary stopes, the width is dictated by the actual dimensions of the adjacent primary stopes. Development of the secondary sills may be reduced to 13 ft leaving a rock "skin" to account for poor quality backfill in the adjacent stopes. The overall stope length is based on the transverse dimension of the ore, however, individual stopes can be limited to 45 ft. Transverse longhole stopes are designed with at least 60^{o} hanging walls and with subvertical footwalls.

Transverse longhole stoping is used where the mineralized zone has a significant width. Footwall drifts are driven parallel to the strike of the ore to provide access for stoping. Mining with transverse stopes requires a primary, secondary, and sometimes tertiary extraction to completely mine out the area.

Longitudinal stopes are utilized in areas of the mine where the geometry and ground conditions allow. The stopes are accessed from a footwall drive and then driven parallel to the strike of ore. If the strike length of the ore is greater than 60 ft, the development is driven to the end and the stope is mined in a retreat fashion in sections no longer than 60 ft. Each section is mined and filled before the next section is mined. If ground conditions are poor, the longhole stope section length can be reduced.

Overhand drift and fill, back stoping, and benching are all used to a much lesser extent, based on ground conditions and the geometry of the ore zones.

RPA considers the selection of mining methods and the design practices to be appropriate for the deposits.

UNDERGROUND MINE DEVELOPMENT

The total 2018 development compared to plan and budget is shown in Table 16-7.

TABLE 16-7 UNDERGROUND DEVELOPMENT COMPARED TO PLAN
Barrick Gold Corporation - Goldstrike Mine

Type	2018 Actual (ft)	2018 Budget (ft)	% of Budget
Drift and Fill	13,039	16,602	79%
Primary Stope Development	14,551	14,331	102%
Secondary Stope Development	16,457	14,928	110%
Capital Development	9,656	10,600	91%
Exploration Development	1,119	0	n/a
Total	**54,823**	**56,461**	**97%**

GROUND SUPPORT

All headings are supported immediately after blasting, as stipulated in the ground control standards for Goldstrike underground based on the mining area, mining method, and surrounding material. Both coated and uncoated rock bolts are used depending on the use of the excavation. Generally, coated Swellex bolts are used in permanent excavations and acidic areas, while uncoated bolts are used in stope lines, drift and fill cuts, and temporary excavations. If headings are left unsupported, there is a high potential for failure of the back and ribs.

Where development is under cemented backfill, there is no support used if the backfill quality is good. There are issues with some of the older backfill which is of poor quality, and there can be failures of this fill either from failure of the back or runs of fill from the walls as a secondary stope is developed. Older areas are carefully assessed before mining.

There is a planned program of re-support of deteriorating roadways and headings (rehabilitation) based on observations and records. The costs are identified in the mine budget as a quantity per month. The exact areas where replacement of the ground support will be needed are identified on an on-going basis.

MINE EQUIPMENT

The current underground mobile equipment consists of load-haul-dump units, haul trucks, jumbos, longhole drills, and bolters. There are underground shops for maintenance and repair of underground equipment.

The mobile equipment fleet is summarized in Table 16-8.

TABLE 16-8 UNDERGROUND EQUIPMENT
Barrick Gold Corporation – Goldstrike Mine

General Name	Names (Typical)	Number
Bolter	Boltec	12
Crane	Getman A-64 (typ)	3
Dozer	CAT D4	1
Drill	Bench drills	2
Forklift	Varies	20
Grader	CAT 120 (typ)	2
Jumbo Drill	Single Boom and Double Boom	6
Loader	Wagner 3.5 yd3, CATR1600G, Tamrock 1400 (9 yd3), CAT 966	16
Lube Truck	Getman A-64 (typ)	3
Man Carriers	Gators (typ 6 x4), Kawasaki Mule (4x4)	40
Pipe Handlers	DUX	4
RoadHeader	Alpine MH630	1
Scissor Lift	Getman A-64 (typ)	8
Shotcreter	Spraymec	2
Tractor	CAT 414E (typ)	12
Transmixer	Norutimec	4
Truck	DUX 20t, 26t, and CAT 30t	12
Utility Equipment	Varies	25
Water Truck	DUX DT20	2

PRODUCTION SCHEDULE

Goldstrike prepares a LOM plan on an annual basis based upon the mid-year estimates. The LOM plan includes the Mineral Reserves plus the conversion of Mineral Resources. The Mineral Reserve only plan is shown in Table 16-9.

TABLE 16-9 UNDERGROUND PRODUCTION SCHEDULE – RESERVES ONLY
Barrick Gold Corporation – Goldstrike Mine

Year	Ore Tons (000)	Grade (oz/st Au)	Contained Gold (oz 000)
2019	1,363	0.272	371
2020	1,209	0.297	359
2021	1,103	0.302	333
2022	1,019	0.302	308
2023	950	0.309	293
2024	917	0.305	280
2025	858	0.300	258
2026	796	0.318	253
2027	816	0.282	230
2028	733	0.215	157
Stockpile	56	0.297	17
Total	**9,819**	**0.291**	**2,859**

Notes:
1. North Post JV included at 70% (Barrick 70% and Newmont 30%)
2. Totals may not reconcile due to rounding.

RPA is of the opinion that the LOM will be extended beyond that shown in Table 16-9, and that individual years will have higher production, through the conversion of Mineral Resources to Mineral Reserves, and the direct mining of Mineral Resources as they are encountered over the course of development and mining.

17 RECOVERY METHODS

MINERAL PROCESSING

Goldstrike process facilities provide the capability to treat single refractory ore (sulphidic) and double refractory ore (sulphidic and carbonaceous) through roasting or pressure oxidation. The roaster circuit accommodates Goldstrike open-pit and underground ore as well as Cortez Hills Open Pit (CHOP) and Cortez Hills Underground (CHUG) ore. A blended feed to the roaster is required to control the circuit heat balance. Pressure oxidation also receives a blended feed from stockpiles and operates as either alkaline or acid POX dependent upon feed carbonate/sulphide ratios. Pressure oxidation is followed by CaTS leaching, also referred to as the Thiosulphate Leach Conversion (TLC) with an RIL adsorption circuit for gold recovery. Respective facilities include:

1. An autoclave circuit consisting of:
    - Primary crushing
    - Two parallel SAG Mill-Ball Mill grinding circuits with pebble crushing
    - Five parallel autoclaves capable of alkaline or acid POX
    - Two parallel CaTS leaching circuits including RIL and electrowinning for gold recovery
    - A refinery producing doré bullion from both autoclave and roaster circuits
2. A roaster circuit consisting of:
    - Primary and secondary crushing
    - Two parallel dry grinding circuits
    - Two parallel dual stage fluid bed roasters
    - Roaster off-gas handling and mercury recovery systems
    - A slurry neutralization circuit
    - A CIL circuit with carbon stripping, carbon acid wash, carbon regeneration (ADR) and electrowinning for gold recovery
    - Cyanide destruction circuit

A simplified process flowsheet for POX-CaTS-RIL is depicted in Figure 17-1 including crushing and grinding, POX (autoclaves), neutralization, CaTS, and RIL, tailings deposition, resin elution, and gold refining. The conversion from POX-CIL to POX-CaTS-RIL was commissioned in 2014 to advance gold production and provide an alternative to roasting of double refractory material. The implementation of non-cyanide solution chemistry provides a process alternative to mitigate “preg-robbing” (losses of gold in solution) caused by organic carbon in autoclaved slurry.

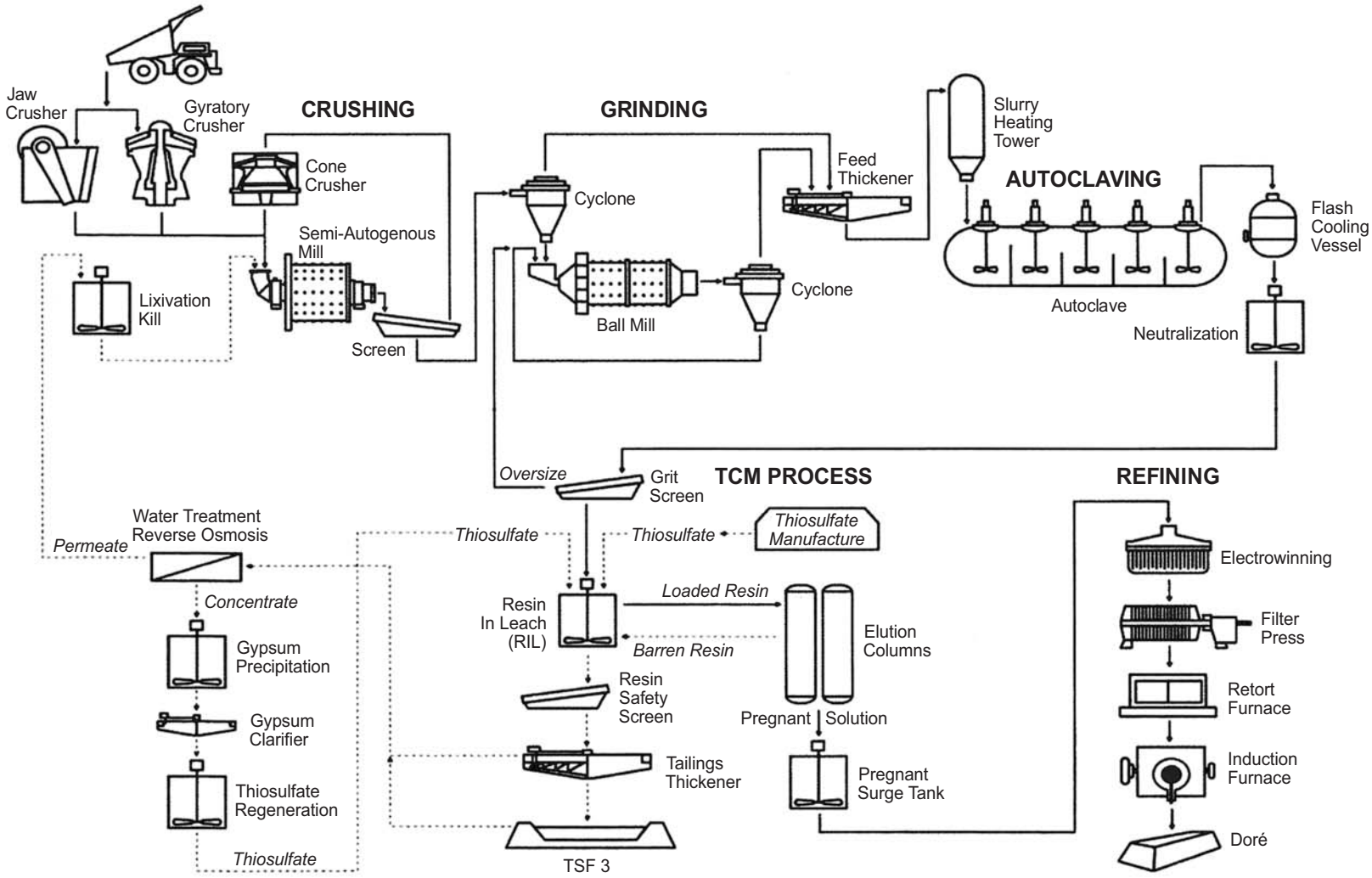


Figure 17-1

Barrick Gold Corporation

Goldstrike Mine
Eureka & Elko Counties
State of Nevada, U.S.A.
Process Flow Diagram

March 2019

Source: Barrick, 2019.

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Tailings impoundment and reclaim water from CIL versus RIL processing are kept separate with Roaster-CIL tailings stored in the North Block Tailings Dam Facility (NBTDF) and POX-CaTS-RIL tailings stored in Tailings Storage Facility 3 (TSF3).

PROCESS DESCRIPTION

ACID/ALKALINE POX CIRCUIT

The autoclave circuit receives a blended feed via a rubber-tired loader from ore stockpiles located adjacent to the primary crusher.

CRUSHING AND GRINDING CIRCUIT

The grinding circuit was constructed in two phases to accommodate increases in Goldstrike production rate over time. The total installed grinding circuit capacity is in the order of 17,500 stpd (dry).

The Phase I grinding circuit is fed by a 50 in. by 60 in. jaw crusher which in turn discharges to a primary crushed ore stockpile. Ore is withdrawn from the stockpile by reclaim feeders and fed to a 22 ft diameter SAG mill operating in closed circuit with a pebble crusher. The SAG mill discharge is pumped to secondary ball mills in closed circuit with a bank of six 20 in. diameter cyclones. There are two ball mills operating, one 12.5 ft diameter by 14 ft long and the other 12.5 ft diameter by 18 ft long. The overflow from the cyclones feed a tertiary 16 ft diameter by 23.5 ft long ball mill operating in closed circuit with a bank of six 30 in. diameter cyclones. (The third stage grinding circuit is not indicated in Figure 17-1.) Cyclone overflow feeds dewatering with one 100 ft diameter thickener and one 125 ft diameter thickener providing an ability to operate the grinding circuits separately on Alkaline or Acid POX feed blends. A third 100 ft diameter thickener is used to recycle grinding circuit process solution make-up water.

The Phase II grinding circuit is fed by a 42 in. by 65 in. gyratory crusher followed by a crushed ore stockpile. Ore is withdrawn from the stockpile and fed to a 24 ft diameter SAG mill operating in closed circuit with a pebble crusher. SAG mill discharge screen undersize is pumped along with ball mill discharge to a bank of twelve 20 in. diameter cyclones. The underflow from the cyclopak returns to a 16.5 ft diameter by 30.5 ft long ball mill.

ACIDULATION

Grinding circuit thickener underflow when treating an acid ore blend (carbonate to sulphide ratios below 7) is fed to a series of acidulation tanks where sulphuric acid is added if required to digest carbonate content. Removal of carbonate in advance of POX serves to limit carbon dioxide gas generation in the autoclaves which would otherwise decrease oxygen utilization efficiency and impact metallurgical performance.

ACID POX CIRCUIT

There are five autoclaves operating in parallel at Goldstrike, all of which are configured for acid POX, while three lines can also be configured for alkaline ore POX. Each line has similar unit operations with the exception of the alkaline autoclaves, which have an additional off-gas treatment system to capture potential mercury in the gas stream.

The milled, acidified slurry is fed to a series of preheaters where hot steam from the autoclave discharge flash tank is contacted with incoming feed to preheat the slurry and transfer available heat from the oxidation reactions. Pressure oxidation is carried out under elevated pressure and temperature using high purity oxygen in the autoclaves. The oxidation reaction is exothermic requiring the control of slurry temperature through either the addition of water for cooling or steam for heating. Autoclave discharge progresses through a series of flash vessels with additional cooling accomplished in tube and shell slurry heat exchangers. The autoclave discharge slurry is acidic due to the formation of sulphuric acid from sulphide oxidation reactions. Neutralization of autoclave discharge to pH 8.0 is accomplished with slaked lime prior to thiosulphate leaching.

ALKALINE POX CIRCUIT

As carbonate levels in a portion of the ores at Goldstrike have increased, three of the autoclaves (#4, #5, #6) have been converted such that they can operate under alkaline conditions. The grinding circuit product is fed to a thickener dedicated to alkaline POX operation. Thickener underflow is directed to the acidulation circuit for storage, but no acid is needed. The circuit is configured so that feed from the storage tank can be pumped to designated preheaters and processed through the autoclave. Due to the higher carbonate concentration, the autoclave reaction while still operated at elevated temperature and oxygen overpressure, does not generate excess acid.

The designated flash tank discharge reports through a series of slurry coolers to neutralization, where it is adjusted to pH 8.0 with slaked lime and then directed to thiosulphate leaching and RIL for gold recovery.

TCM PROCESS

The slurry from the alkaline and acid autoclave circuits is pumped to parallel CaTS-RIL circuits, each comprised of seven reactor tanks. Cyanide has been replaced with the on-site production of CaTS for gold dissolution. The resin is pumped counter-current to the slurry with a portion of new or recycled resin returned directly to the first RIL tank. From the first tank, loaded resin is transferred to elution and refining for the recovery of gold. The slurry exiting the final tank is sent to a tailings thickener and then pumped to a dedicated tailings storage facility (TSF3) to avoid comingling thiosulphate and cyanide solutions and to recycle a portion of the calcium thiosulphate reagent in process water.

ELUTION AND REFINING CIRCUIT

Gold bearing resin is processed in a multi-stage elution circuit. The complex chemistry includes copper elution, as well as elution of the gold using trithionate. Pregnant solution containing the gold is forwarded to dedicated electrowinning cells operated within the gold refinery. The stripped and regenerated resin is returned to the RIL circuit.

The electrowinning cells contain stainless steel anodes and cathodes. A low voltage electrical current is applied to the cell electrodes and soluble gold in the eluate deposits either onto the cathodes or forms sludge in the bottom of the EW cells. Periodically, the cathodes and EW cells are cleaned with high pressure water to remove the gold bearing sludge, which is then filtered and heated in a retort to remove and capture bi-product mercury. The retorted sludge is fluxed and smelted in an induction furnace to produce doré bullion which is shipped off site for further refining.

ROASTER OPERATION

Fluid bed roasters were constructed at site in 1999 to treat double refractory carbonaceous ores that could not be processed in the existing POX circuit due to elevated organic carbon content. The roasters use high purity (99.5% O_2) oxygen to burn-off the preg robbing organic carbon and oxidize sulphide sulphur prior to processing in a conventional CIL circuit. A simplified process flowsheet of the roaster circuit is depicted in Figure 17-2.

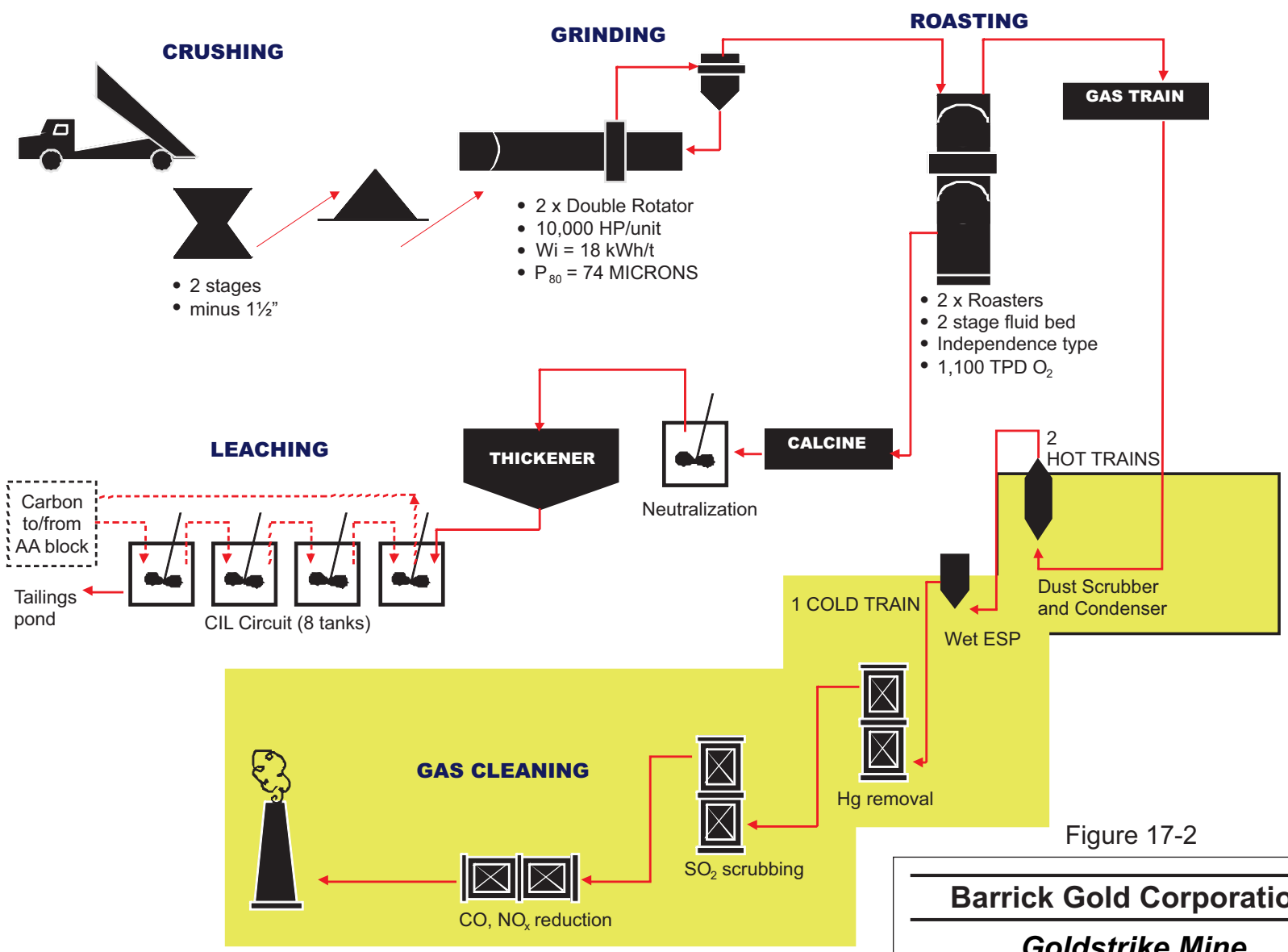


Figure 17-2

Barrick Gold Corporation

Goldstrike Mine

Eureka & Elko Counties

State of Nevada, U.S.A.

Roaster Process Flow Diagram

March 2019

Source: Barrick, 2019.

www.rpacan.com

The roaster facility includes primary and secondary crushing followed by two parallel dry grinding and dual stage roasters with combined calcine quenching, dust and gas handling, neutralization, and CIL circuits. The loaded carbon is acid washed, pressure stripped and regenerated at site to produce doré bullion which is shipped off site for further refining.

CRUSHING

Ore is reclaimed from one of the roaster stockpiles and goes through two stages of open circuit crushing including a gyratory crusher, scalping screen and cone crusher for screen oversize. The screen undersize and the cone crusher product are combined in a coarse ore stockpile.

DRY GRINDING

Ore is reclaimed from the coarse ore stockpile by apron feeders and conveyed to one of the two parallel dry grinding circuits. The ore is heated with natural gas and progresses toward the centre of the mill as it is being dried and ground where it is transported with air through screens, a static cyclone classifier and a dynamic classifier for size separation. Oversize is returned to the second stage of the grinding mill for further size reduction while undersize material is transferred to bag houses for further processing. Target grinding circuit product size to roasting is 80% passing 74 µm.

TWO STAGE ROASTING

Material from the roaster silo is fed to the top of the roaster by a bucket elevator and a fluidized feeder. The fluidized feeder distributes ore continuously to the first stage (upper) bed of the two parallel roasters. The exothermic chemical reaction provides the heat required to maintain the first stage temperature between 524°C and 593°C with the addition of coal and/or sulphur pellets as needed to maintain feed fuel value. Quench water is used to control internal roaster temperature as required.

Solids flow by gravity to the second stage of the roaster through an inter-stage solids transfer system where material bed temperature is maintained between 524°C to 561°C. Oxidation is essentially complete after the second stage achieving approximately 99% sulphide sulphur oxidation and greater than 90% organic carbon oxidation. Calcine from the second stage of the roaster discharges by gravity to the calcine quench system.

High purity oxygen is injected at the bottom of the second stage of the roasters and flows upward, fluidizing the material and supporting the rapid oxidation of carbon, sulphide sulphur and other fuels within the feed.

The exhaust gas from each stage is classified using dry cyclones. The coarse material recovered from the exhaust gas is returned to the roaster for further treatment while the fine material is forwarded to gas quenching and final dust scrubbing. The off-gas from the final dust scrubbers from both circuits are recombined for final off-gas cleaning.

OFF-GAS CLEANING

The final gas cleaning circuit combines the dust free off-gas from both roasters to capture mercury, sulphur dioxide, carbon monoxide, and nitrous oxides. Mercury removal is achieved through chlorine sparging to produce calomel which is shipped off site for further processing. Sulphur dioxide gases are neutralized with lime and carbon monoxide is oxidized to carbon dioxide through heating of the gases after SO_2 removal in a carbon monoxide incinerator. Nitrous oxides are removed by passing off-gases through a mist stream of ammonia in the presence of an iron oxide-titanium oxide catalyst and exit through a stack as nitrogen and water vapor to the atmosphere.

CALCINE QUENCHING/NEUTRALIZATION

The calcine product from the roaster is cooled rapidly with recycled process water in the quench tanks. The cooled quench tank discharge from both roasters is combined and the resulting slurry feeds two neutralization tanks where milk-of-lime is used to adjust slurry alkalinity to pH 10. Neutralization circuit slurry is dewatered in a thickener with excess water recycled for reuse in the quench tanks. The thickener underflow reports to the roaster CIL circuit.

ROASTER CIL

The slurry from neutralization thickener underflow is pumped to a CIL circuit, which has eight agitated tanks. Cyanide is typically added to the first tank, with the ability to add to the second, and/or third tanks. Slurry flows through the series of tanks, from tank 1 through tank 8. Activated carbon is transferred with recessed impeller pumps counter-current to slurry flow from the eighth tank to the first tank. When loaded carbon is transferred out of the first tank, it passes over a screen that separates the carbon from the slurry. The carbon is then transferred to a loaded carbon holding bin and into a truck that transports it for elution, acid washing and

regeneration in a carbon handling circuit located within the autoclave facility. The slurry exiting the final CIL tank is sent to a cyanide destruction reactor before being transferred for impoundment in the NBTDF.

18 PROJECT INFRASTRUCTURE

SITE

TRANSPORTATION

The Goldstrike Mine property is located in north central Nevada, approximately 25 mi north of the town of Carlin. Access to the property is provided by certain access agreements with Newmont that allow for the use of various roads in the area, and a right-of-way issued by the BLM. Such roads are accessed from Elko, Nevada, by travelling west on US Interstate 80 to Carlin, Nevada, and then by approximately 27 mi of local roads north of Carlin. The roads are well maintained, and most are paved. Commercial air service is available to Elko. Barrick provides bus and light vehicle transportation to all employees from Elko, Spring Creek, and Carlin to the mine site.

HOUSING

Employees reside in mainly Elko or Carlin and commute to site daily. There are no housing facilities at the operation.

COMMUNICATIONS

Normal communication channels through cell phone, satellite, and land-based facilities are available.

NATURAL GAS

Natural gas is delivered via a natural gas pipeline. The natural gas pipeline is a continuation of the NEP that is a lateral of the Ruby Pipe Line and extends to a metering station at the fence line of the Goldstrike Mine property. The new pipeline starts at the main metering station located at the southeast corner of the Goldstrike Mine property. The pipeline terminates at several locations where major pieces of equipment are located within the autoclave and roaster facilities.

An integral part of the work was the conversion of all major consumers from propane-fired to natural gas-fired service. Conversion includes burners, burner controls, and two sub metering flow/pressure regulation stations where gas parameters are adjusted to an operating range.

The entire four miles of pipeline has been constructed within the fence line of the Goldstrike Mine property.

POWER

Electrical power is transmitted to the mine by Sierra Pacific Power. Electrical facilities include multiple main substations (Mill, South Block, and Bazza), several smaller substations throughout the property, and transmission lines.

In October 2005, Barrick started up the Western 102 power plant that is located approximately 15 mi east of Reno, Nevada. It has the capacity to supply 115 MW of electricity to the Goldstrike Mine using 14 reciprocating gas-fired engines, and also has a 1 MW solar plant. The power plant provides the Goldstrike property with the flexibility to generate its own power or buy cheaper power from other producers, with the goals of minimizing the cost of power consumed and enhancing the reliability of electricity availability at its mine (PMEG, 2007).

WATER MANAGEMENT

Water management operations at the Goldstrike Mine include a system of dewatering wells, water gathering and conveyance facilities, water storage, water use, and various management options for discharge of excess water.

The major water management components are:

- Mine dewatering wells and water collection systems.
  - Betze Pit dewatering is accomplished through peripheral perimeter and in-pit wells, and water collection sumps in the pit bottom. Two new in-pit wells were installed in 2014 to replace wells that were mined out by the 3NW layback.
  - Water is conveyed by pipelines to various use areas (process water tanks, mill facilities, water trucks, sanitary uses) for both Barrick and Newmont's use.
  - Water not used for mining or milling is pumped to the TS Ranch Reservoir.
- TS Ranch Reservoir
  - The reservoir has a natural occurring permeable fracture in the floor of the reservoir to a rhyolite formation to which the water infiltrates.
  - Approximately 19,000 USgpm is discharged to the reservoir from the Barrick and Newmont operations.
- Springs & Sand Dune Canal
  - Water flowing to the rhyolite formation creates three new springs and is collected by the Sand Dune Canal and Pond.
  - Water can be diverted to irrigation, infiltration, or injection as required.

  - An arsenic treatment plant at the end of the canal is available to treat naturally occurring arsenic prior to infiltration or injection.

- Irrigation in Boulder Valley
  - Water is provided to two ranches during irrigation season (April-September) as required.
  - Available from Sand Dune Canal or TS Ranch Reservoir (if required).

- Infiltration
  - Two rapid infiltration basins (RIBs) are located in upper Boulder Valley and can be used when necessary.
  - The two RIBs have a combined capacity of 70,140 gpm.

- Injection
  - Barrick has five injection wells to inject water into the rhyolite formation in upper Boulder Valley.
  - Currently not being actively used.

- Sand Dune Drainage Embankments
  - Three temporary embankments constructed at down gradient of Sand Dune Canal.
  - Mostly dry except for excessive rain or snowfall events.

- Humboldt River Discharge Authorization
  - Barrick was permitted to discharge up to 70,000 USgpm to the river, but only discharged, after treatment, for a 16 month period from September 1997 to February 1999.
  - Presently Barrick is not operating the treatment plant or discharging to the river but maintains the facilities.

OPEN PIT

Open pit infrastructure includes:

- Waste Rock Facilities
  - Bazza Waste Rock Facility - The Bazza Waste Rock Facility is located west and southwest of the Betze-Post Pit. The Bazza Waste Rock Facility has an approximate plan surface area of 2,843 acres and a maximum height of approximately 700 ft above the ground surface. As of the end of 2010 the majority of the Bazza Waste Rock Facility has been reclaimed. This acreage has been re-graded, has had cover and growth media placed as described in the Bazza Waste Rock Management and Permanent Closure plans, and has been seeded with an approved mixture.
  - Clydesdale Waste Rock Facility – located approximately 3,500 ft west of the Betze-Post Pit with permitted height of 500 ft, the Clydesdale Waste Rock Facility is the active facility external of the pit.

- Haul Roads - Haul roads connect the Betze-Post Pit and the Meikle and Rodeo underground mines to the Waste Rock Facilities, the ore processing facilities, and the ore stockpiling areas.

- Ore Stockpiles – stockpiles are maintained at the Roaster Processing Facility, Autoclave/TCM Processing Facility, within pit disturbance on backfill and on the Bazza Waste Rock Facility.

- Heap Leach Facilities - The North Block Heap Leach Facility, which was located on the North Block, has been decommissioned. The spent leach material has been moved to the North Block Tailings Impoundment, and the facilities removed to facilitate development of the North Block Tailings Impoundment embankment and ore stockpiles in the area. The AA Heap Leach Facility has been decommissioned and reclaimed and is now undergoing closure.

- Ancillary Support Facilities
  - Truck Shop and Offices
  - Emergency Vehicle Storage
  - Heavy Equipment Fuel Bay
  - Tire Shop
  - Dispatch
  - Southwest Energy Shop and Silos
  - Explosives Magazines
  - Geotechnical and Survey Laydown areas
  - Geotechnical Monitoring Stations and Radar

UNDERGROUND

There is extensive infrastructure for the underground division. The entire infrastructure for the mine is operational and in place and, where necessary, there are plans to improve and augment the infrastructure as required for future operations.

SHAFTS

There are two access shafts for the mine - the Meikle shaft and the Rodeo shaft. Both are used for personnel and materials, while, ore is only hoisted via the Meikle shaft. The Meikle shaft is approximately 1,800 ft deep, extending to the 3,700 ft level, while the Rodeo shaft is 1,300 ft deep and extends to the 4,100 ft level.

Hoist operation in both shafts is automated with human oversight provided. There are ventilation shafts and boreholes for ventilation in both the Meikle and Rodeo mines.

RAMPS

There are three ramps to surface, all three are accessed through the open pit. The Betze No. 1 portal is a fresh air intake and used for both vehicular traffic and movement of ore to the pit. The Betze No. 2 portal is an emergency exit and a fresh air intake for the North Post. The third

access to surface, the North Post portal, is also used for vehicular and material supply traffic, and as air exhaust. Some ore from the underground is hauled by truck to a dump area in the pit and subsequently moved by open pit haulage trucks to the mill area.

MATERIAL HANDLING

Materials and supplies for the mine are moved into the mine via the two man-shafts or by the ramp, as necessary. Ore and waste are either hoisted up the Meikle shaft or hauled to surface via the portal in the open pit. All ore and waste to be hoisted at the Meikle shaft must be trammed to the ore dumps at the shaft. For ore from the Rodeo mine, this means a one mile haul using 30-ton underground trucks from the Rodeo mine upgrade to the dump at the Meikle shaft. At the Meikle shaft ore dumps, there are rock breakers and grizzlies to reduce the muck size being fed to the loading pocket in the shaft.

BACKFILL

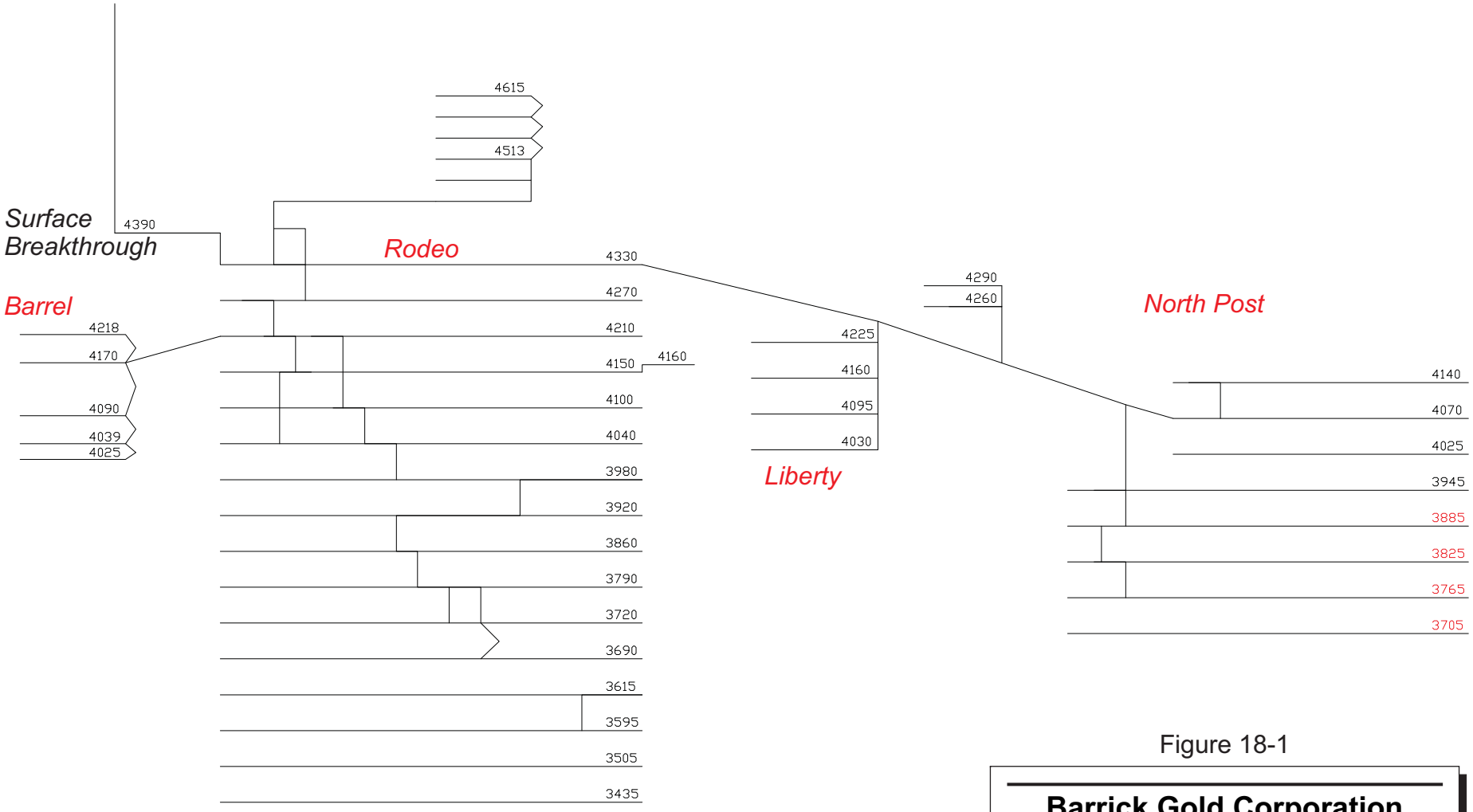
Backfill is used in all stoping methods at the Goldstrike Mine and the problems due to poor quality backfill from the past affect the short-term mine planning. At Meikle the backfill system consists of passes and underground aggregate storage. Rodeo utilizes a surface paste plant which delivers paste fill via a bore hole to mine levels. A schematic of the paste delivery system is illustrated in Figure 18-1.

MEIKLE

Aggregate comes from open pit waste which is crushed to three-inch minus by a contractor. The aggregate is delivered through a lined borehole from the surface to the 925 level bins at Meikle. The binder material is cement. Admixtures are used for stabilization and retardation as necessary. The Meikle backfill plant is located on the 1075 level and has a seven cubic yard batch mixer. Depending on the fill strength desired, the binder is varied from five to seven percent. The mixer combines water, aggregate, and powdered binder. Backfill is delivered to stopes via trucks.

RODEO

The paste fill plant was constructed in 2012 and it was commissioned in 2013. The paste fill plant takes tailings from the roaster and sizes material with cyclones. The tailings then go through a thickener tank and disc filters to get to 77.5% solids. At this point the material is mixed to have 8% cement and is then pumped down a borehole to the underground. Bulkheads are used while filling stopes to hold the material in place as it cures.



Not to Scale

Figure 18-1

Barrick Gold Corporation

Goldstrike Mine
Eureka & Elko Counties
State of Nevada, U.S.A.
Paste Pipeline Schematic

March 2019

Source: Barrick, 2019.

www.rpacan.com

VENTILATION

Mine ventilation is achieved using a system comprised of intake and exhaust fans. The Banshee raise uses one 700 hp axial fan to downcast 320,000 cfm of fresh air. The Meikle shaft uses four 250 hp axial fans to provide 510,000 cfm of fresh air. The Rodeo shaft uses four 250 hp axial fans to provide 550,000 cfm of fresh air. There are 1.1 million cfm being pulled through the Betze No. 1 and No. 2 portals from the pit.

Mine air is exhausted by two 700 hp centrifugal fans on the Meikle borehole, two 1750 centrifugal fans on the Meikle exhaust shaft, two 1500 hp axial fans on the Rodeo exhaust shaft and two 700 hp axial fans forcing air out the North Post portal. In addition, there are 175 auxiliary fans spread throughout the underground, installed to ventilate work places away from the main air stream.

There are mine air coolers on the mine air intakes as well as three spray chambers for mine air cooling and dust removal. The intake air is cooled through a surface refrigeration plant. An additional 10 MW cooling plant is in the process of being commissioned to increase cooling capacity as the mine extends at depth.

In order to comply with the Mine Safety and Health Administration's regulation related to diesel particulate matter (dpm), the Mine uses biofuels to reduce the dpm levels in the mine air.

A schematic of the ventilation system is provided in Figure 18-2.

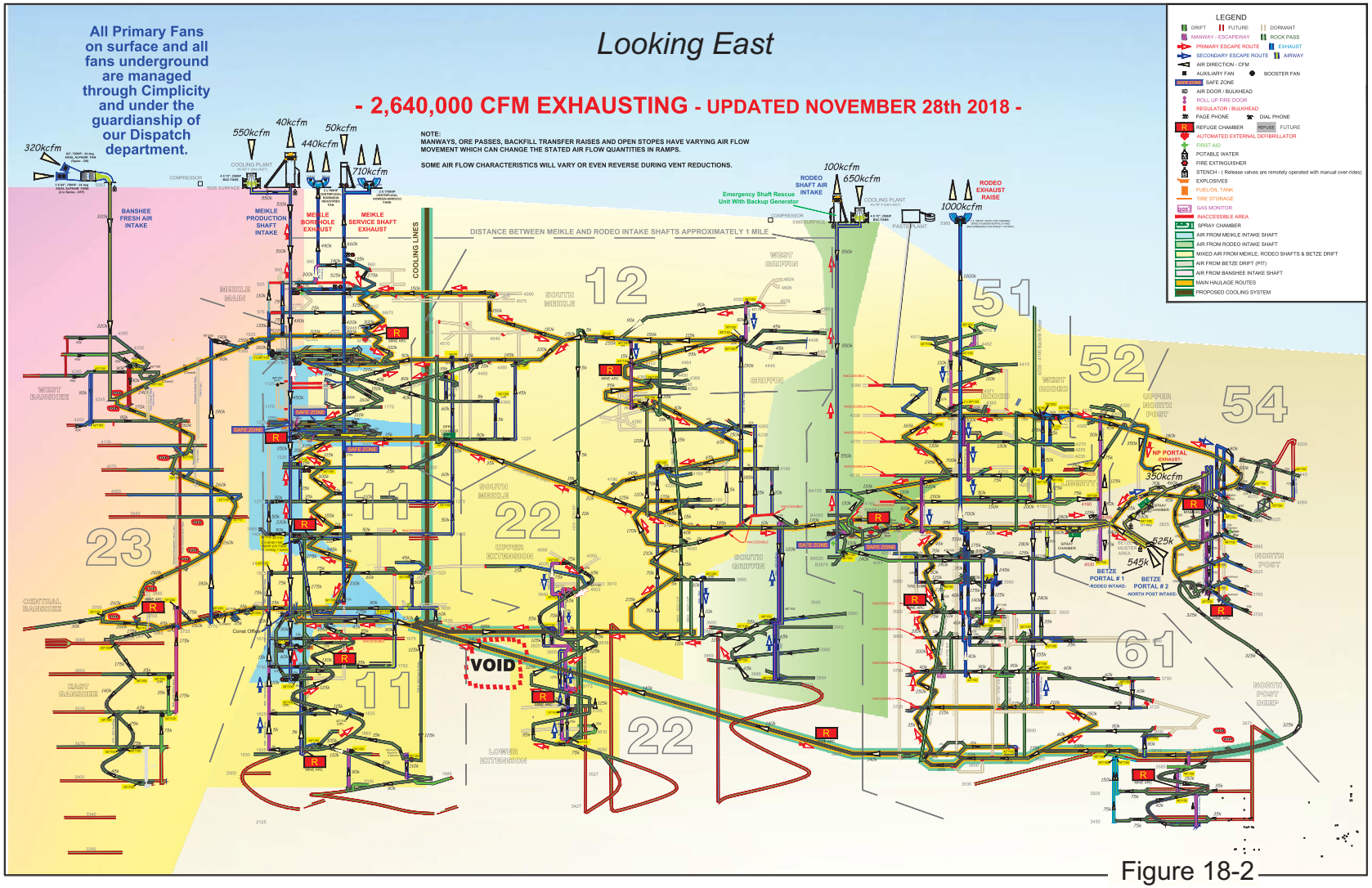


Figure 18-2

Legend:
- Exhaust
- Airway
- Air Direction

0 250 500 750 1000
Feet

Barrick Gold Corporation

Goldstrike Mine
Eureka & Elko Counties
State of Nevada, U.S.A.
Ventilation Schematic

March 2019

Source: Barrick, 2019.

www.rpacan.com

DEWATERING

Mine workings are dewatered by a system of pumps and wells operated by the Open Pit Department; however, all costs are attributed to the underground division. The underground workings are dewatered to the 3400 elevation, with planned dewatering to the 3200 elevation.

The underground workings are generally dry, however, there are areas of the mine where water is present and flowing. In such areas, the waters are strongly acidic, leading to rapid deterioration of unprotected ground support material and steel drain pipes.

MAINTENANCE, POWER, COMPRESSED AIR, COMMUNICATIONS

There are maintenance shops for underground mobile equipment.

Electrical power is sent to the mine at 120 kV and then distributed throughout the mine at 5 kV to load centres for use at 480 V as needed.

Compressed air is provided from surface and distributed by pipelines throughout the mine. There are telephones at a number of locations in the mine as well as a radio network for use in the mine.

19 MARKET STUDIES AND CONTRACTS

MARKETS

Gold is the principal commodity extracted at the Goldstrike Mine and is freely traded, at prices that are widely known, so that prospects for sale of any production are virtually assured. Prices are usually quoted in US dollars per troy ounce.

CONTRACTS

The Goldstrike Mine is a large modern operation and Barrick is a major international firm with policies and procedures for the letting of contracts. The contracts for smelting and refining are normal contracts for a large producer.

There are numerous contracts at the mine including a mine development contract to provide services to augment Company efforts.

There are no contracts relating to the Goldstrike Mine that are material to Barrick.

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

The Goldstrike Mine consists of operating open pit and underground mines and process plant facilities. Barrick has environmental groups and management systems to ensure that the necessary permits and licences are obtained and maintained. These groups also carry out the required monitoring and reporting. RPA reviewed the management system and discussed permitting and environmental matters with site management.

TAILINGS STORAGE FACILITIES

Tailings from the roaster operations are deposited in the NBTDF located immediately to the east of the roaster facility and the Meikle mine. The NBTDF operates as a zero-discharge facility under a Water Pollution Control Permit NEV091029 with the Nevada Division of Environment Protection (NDEP) and Jurisdictional Dam Permit J-699 with the Nevada Division of Water Resources. The NBTDF is expanded approximately every two years and is currently permitted through a Stage 12 expansion. Stage 12 will raise the dam height to 544 ft (crest to downstream toe) using rock fill with an average design slope of 2:1V (horizontal to vertical) and will provide for additional capacity of 112 million tons of tailings. Total tailings storage capacity Stages 1-12 is estimated at 307 million tons of tailings.

The NBTDF is lined with a composite liner system consisting of low permeability soil overlain by a geosynthetic clay liner (GCL) and a geo-synthetic liner (either high-density polyethylene (HDPE) or linear low-density polyethylene (LLDPE)). The facility includes a basin underdrain under a portion of the tailings as well as finger drains to promote consolidation of tailings. Tailings supernatant water currently flows from northeast to southwest and water is reclaimed for process use. The closure plan includes capping the tailings surface and draining the facility with a closure spillway constructed at the southwest corner.

Tailings from the TCM Leach operations are deposited in TSF3 located immediately south of the NBTDF. TSF3 operates as a zero-discharge facility under a Water Pollution Control Permit NEV091029 with the NDEP and Jurisdictional Dam Permit J-662 with the Nevada Division of Water Resources. TSF3 is expanded approximately every two years and is currently

constructed through Stage 3 and permitted through Stage 6. The current design provides approximately 110 million tons of tailings storage.

The TSF3 is lined with a composite liner system consisting of low permeability soil overlain by a GCL and a geomembrane liner (LLDPE). The facility includes an over-liner drain system which promotes consolidation of the tailings. Consolidation water from the tailings is collected by an overliner drain system consisting of a blanket drain and geocomposite strip drains which direct the water to collector pipes downgradient to a collection area located at the upstream toe of the TSF3 embankment and are ultimately pumped to the supernatant pond. TSF3 also contains an under-liner drain system which allows for a drainage pathway for shallow groundwater to be conveyed downstream the main embankment. The closure plan includes capping the tailings surface and draining the facility with a closure spillway constructed on the eastern portion of the impoundment.

An appropriate level of importance and due diligence is being given to the design, integrity and construction of site tailings facilities. Barrick completes regularly scheduled quarterly and bi-annual reviews of the facilities involving internal subject matter experts, the Engineer of Record (EoR) who is responsible for the design, as well as external third-party subject matter experts.

PROJECT PERMITTING

The BLM issued a Decision on the Amendment to the Plan of Operations for the 2017 Goldstrike Pit Expansion through the Determination of NEPA Adequacy process. The approval of this amendment ensured the continuance of mining and processing at the Goldstrike Mine. In summary, the Amendment to the Plan of Operations for the 2017 Pit Expansion is listed below:

- Expansion of the Betze Pit (referred to as the 2017 Pit Expansion);
- Inclusion of a yard area between the perimeter haul road and a utility corridor;
- Construction of a new pit perimeter haul road along the northwest side of the expanded Betze Pit; and
- Construction of two mule deer crossing ramps on the Clydesdale haul road.

On November 1, 2017, NDEP BMRR issued a Surety Decision Approval and Reclamation Permit for the 2017 Pit Expansion and Booster Pump Station Modifications. The approval of

this reclamation permit modification ensured the continuance of mining and processing for Goldstrike.

TABLE 20-1 GOLDSTRIKE MINE PERMITS
Barrick Gold Corporation - Goldstrike Mine

Permit Name	Permit Number
Agreement Regarding Treatment of Historic Properties	Historic Properties
WPC Permit NEV90060	NEV90060
Goldstrike Mining Operation Reclamation	0026
Meikle Mine	0030
Goldstrike Exploration	0179
Goldstrike Mine Exploration ROD	N16-98-002
NPDES - BV Water Treatment Facility & Convey System	NV0022675
WPC - Waste Water	NEV94002
Boulder Valley Earthen Embankments-Stormwater Mgmt. Plan	SWPPP
General Permit-Stormwater	NVR300000
Potable Water -Goldstrike AA	EU-5077-12NTNC
Arsenic Removal Treatment	EU-5077-TP 02-12NTNC
State Fire Marshal-Hazardous Materials Storage	CO#2726, Fac.#6954
Fire Marshal Hazmat Permit for Storm	21413/53182
Mining Storm Water General-Preble	NVR 300000
Water Pollution Control Permit (Closure)	840003
Open Burn	Open Burn
WPC Permit-North Block	NEV91029
Spill Prevention Control & Countermeasure Plan	SPCC
AA Goldstrike Tailings Dam	J-278
TS Ranch Reservoir	J-460
North Block Emergency Pond	J-507
North Block Tailings Dam	J-699
Phase 2 Mercury OPTC for System 61, Carbon Reactivation Kiln	AP1041-2221
Phase 1 Mercury OPTC for System 66, AC#1	AP1041-2221
Phase 1 Mercury OPTC for System 66, AC# 2 & 3	AP1041-2221
Phase 2 Mercury OPTC for System 66, AC#4	AP1041-2221
Phase 2 Mercury OPTC for System 66, AC#5 & 6	AP1041-2221
Phase 2 Mercury OPTC for System 67, Retorts # 1, 2 & 3	AP1041-2221
Phase 2 Mercury OPTC for System 68, E & W Melt Furnaces & Electrowinning Cells	AP1041-2221
Phase 1 Mercury OPTC for System 15 & 16	AP1041-2221
Phase 1 Mercury OPTC for System 70, Analytical Laboratory	AP1041-2221
Phase 1 Mercury OPTC for System 18	AP1041-2221
Phase 2 Mercury OPTC for System 128, Elution Circuit Process Tanks	AP1041-2221
Phase 2 Mercury OPTC for System 131. Resin in Leach (RIL) Electrowinning Circuit	AP1041-2221
Boulder Valley Embankments	J-450
Boulder Valley Centre Embankments	J-451

Permit Name	Permit Number
Boulder Valley South Embankments	J-452
TS Ranch Outlet Piping	J-466
Willow Creek Dam	J-506
Mill 4 Tails Dam 1	J-309
Tailings Storage Facility 3 Dam	J-662
Class I Air Quality Operating Permit (Title V)	AP1041-0739.04
Air Liquide	AP28139-0133.01
WPC Permit-Boulder Valley Infiltration	NEV89068
UIC - Injection Wells	NEV93209
Betze EIS Record of Decision	Betze EIS ROD
Betze SEIS Record of Decision	Betze EIS ROD
Boulder Valley Monitoring Plan	BVMP
Water Well Permit-Preble	5961-14s
Class III Landfill Waiver	SWMI-07-25
NDOW Industrial Artificial Pond-AA & NB Tailings	S-26590
Hazardous Materials Certification of Registration	HMCR
Jurisdictional Determination for Boulder, Bell, Brush and Rodeo Creeks	JD
Right of Way Occupancy	EO-47-1999

Notes:
ROD – Record of Decisions; WPC – Water Pollution Control; NPDES - National Pollutant Discharge Elimination System; OPTC – Operating Permit to Construct; UIC – Underground Injection Control; NDOW – Nevada Department of Wildlife; EIS – Environmental Impact Statement.

SURFACE DISTURBANCE

Total permitted surface disturbance for the Goldstrike Mine has been estimated to be 9,080.1 acres, or 14.2 mi^2 (Table 20-2). Approximately 1,198.8 acres of permitted disturbance is located on public land managed by the BLM.

SOCIAL OR COMMUNITY REQUIREMENTS

There are no specifically identified social or community requirements at the Goldstrike Mine, however, the Mine is a prominent local business and applies industry best practice social and community engagement standards at its operation.

MINE CLOSURE REQUIREMENTS

The complete site closure plan gives the details used in the compilation of the 2017 Financial Accounting Standards (FAS) 143 closure cost estimate for the Goldstrike Mine in accordance

with the requirements of the International Financial Reporting Standards (IFRS), specifically International Accounting Standard (IAS) 37, Provisions, Contingent Liabilities and Contingent Assets. The amount recognized as a provision is the best estimate of the expenditure needed to settle the present obligation arising. The liability reflects the condition of the assets, including the damage to the mine site at the respective period-end.

The costs include not only out-of-pocket expenditure but also internal costs that will be incurred that are essential to the closure. Factors to consider when determining the "best estimate" are:

- expected inflation;
- advances in technology;
- productivity improvements; and
- the particular circumstances faced by the operation or mine.

Management may only take changes in technology or in regulation/legislation into account if there is demonstrable evidence that those changes will occur.

In general, reclaimed mine sites must be left safe and stable at a minimum, with removal of all infrastructure and rehabilitation of all landforms. Groundwater quality around tailings storage facilities must meet licence conditions. The IFRS liability as of December 31, 2018, for the Goldstrike Mine was calculated to be US$122 million.

TABLE 20-2 BARRICK GOLDSTRIKE MINE DISTURBANCE ESTIMATE
Barrick Gold Corporation - Goldstrike Mine

	Existing Permitted Disturbance 2016 (acres)			Proposed Disturbance (acres)		Revised Disturbance Totals (acres)		
Facility	**Public**	**Private**	**Total**	**Public**	**Private**	**Public**	**Private**	**Total**
Betze-Post Open Pit	98.1	1,637.1	1,735.2	51.2	29.7	149.3	1,666.8	1,816.1
Roads (Haul Roads and Light Vehicle)	60.6	320.6	381.2	2.5	7.2	63.1	327.8	390.9
Waste Rock Facilities								
Bazza	263.2	2,008.7	2,271.9			263.2	2,008.7	2,271.9
Clydesdale	393.0	142.0	535.0			393.0	142.0	535.0
Tailings Facilities								
North Block Tailings Facility	92.4	1,174.4	1,266.8		(0.2)	92.4	1,174.4	1,266.6
AA Tailings Facility		206.4	206.4				206.4	206.4
Mill #4 Tailings Facility		99.6*	99.6				99.6	99.6
Tailings Storage Facility 3 (TSF3)	46.0	556.2	602.2			46.0	556.2	602.2
AA Leach Pad		227.5	227.5				227.5	227.5
Process Ponds		13.3	13.3				13.3	13.3
Surface Facilities with Foundations		62.3	62.3		0.2		62.5	62.5
Yards	191.9	892.2	1,084.1	(3.4)	(35.3)	188.5	856.9	1045.4
Ponds, Diversions, Canals	3.3	477.2	480.5			3.3	477.2	480.5
Landfill		24.0	24.0				24.0	24.0
Totals	**1,148.5**	**7,879.7**	**9,028.1**	**50.3**	**1.6**	**1,198.8**	**7,881.3**	**9,080.1**

Source: Reclamation Permit #0026 issued to Barrick Goldstrike Mines Inc. on November 1, 2017

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21 CAPITAL AND OPERATING COSTS

The Goldstrike Mine is an operating open pit and underground gold mine. There are new mine projects and sustaining capital requirements, however, there are no preproduction requirements.

The open pit and underground capital and operating costs are discussed below.

CAPITAL COSTS

Current LOM capital costs for the Goldstrike Mine are estimated to be $733 million. The major capital cost for the open pit will be capitalized waste stripping, which is estimated to be $163 million. Sustaining capital is estimated to be $337 million, which consists primarily of equipment replacement capital and tailings expansion. Underground mine development is projected to be $197 million.

The LOM capital cost estimate is shown in Table 21-1.

In RPA's opinion, the projected capital costs at the Goldstrike Mine are reasonable.

TABLE 21-1 2019 LIFE OF MINE CAPITAL COST ESTIMATE
Barrick Gold Corporation - Goldstrike Mine

Year	Sustaining Capital (US$ M)	Open Pit Stripping (US$ M)	Underground Development (US$ M)	Capitalized Exploration Drilling (US$ M)	Total Capital (US$ M)
2019	80.8	21.1	34.6	6.1	142.7
2020	44.0	6.4	26.0	5.0	81.4
2021	39.9	41.6	23.7	7.3	112.6
2022	37.9	57.4	21.9	6.8	124.0
2023	17.7	2.8	25.1	4.5	50.1
2024	11.2	-	19.0	0.5	30.6
2025	13.7	-	19.7	-	33.4
2026	15.5	-	6.3	-	21.8
2027	14.2	-	4.8	0.5	19.5
2028	12.9	-	4.5	0.6	18.0
2029	26.5	-	5.8	1.2	33.4
2030	8.1	-	1.5	1.4	11.1
2031	3.8	-	3.5	1.2	8.5

Year	Sustaining Capital (US$ M)	Open Pit Stripping (US$ M)	Underground Development (US$ M)	Capitalized Exploration Drilling (US$ M)	Total Capital (US$ M)
2032	4.5	-	0.5	0.2	5.3
2033	0.3	34.1	-	-	34.4
2034	0.2	-	-	-	0.2
2035	0.5	-	-	-	0.5
2036	2.4	-	-	-	2.4
2037	0.5	-	-	-	0.5
2038	2.4	-	-	-	2.4
Totals	**337.0**	**163.4**	**197.1**	**35.3**	**732.9**

Note: Does not include reclamation.

OPERATING COSTS

The total operating cost has been estimated by Goldstrike to be approximately $4.7 billion over the LOM plan (2019-2037). Over the same time period, the average open pit mining operating cost is estimated to be $1.85 per total ton mined (including a large component of stockpile rehandling). Underground mining cost will average $107.11 per ton mined. Processing costs will average $26.56 per ton ore processed.

Table 21-2 displays the actual reported operating costs for the open pit as of EOY2017 and EOY2018.

TABLE 21-2 ACTUAL REPORTED OPERATING COSTS – EOY 2017 AND 2018
Barrick Gold Corporation - Goldstrike Mine

Direct Operating Costs	Units	Actual 2017	Actual 2018
Open Pit Mining	US$/st mined	1.32	1.82
Underground Mining	US$/st mined	103.26	106.94
Open Pit Mining	US$ (000)	108,395	113,800
Underground Mining	US$ (000)	186,485	187,203
Dewatering	US$ (000)	6,415	9,602
Process	US$ (000)	299,050	282,484
General & Administration	US$ (000)	61,220	63,114
Capitalized Operating Costs	US$ (000)	(132,496)	(99,171)
Total Direct Operating Costs	US$ (000)	**543,048**	**567,303**

LOM OPERATING COSTS

Table 21-3 displays the average LOM plan operating costs.

TABLE 21-3 LOM UNIT OPERATING COSTS (2019-2037)
Barrick Gold Corporation - Goldstrike Mine

Years	Open Pit Mining ($/st mined)	Underground Mining ($/st mined)	Process ($/st milled)
2019	2.05	97.18	37.10
2020	2.02	101.97	29.09
2021	1.59	101.82	29.43
2022	1.56	101.16	27.44
2023	2.16	104.83	30.67
2024	-	112.74	27.12
2025	-	117.01	24.37
2026	-	120.87	21.29
2027	-	112.61	21.25
2028	-	109.94	21.63
2029	-	110.55	18.26
2030	-	110.13	20.66
2031	-	110.83	21.57
2032	-	110.15	23.62
2033	1.54	110.36	22.25
2034	1.55	-	26.96
2035	-	-	21.60
2036	-	-	19.41
2037	-	-	21.28
Totals	**1.85**	**107.11**	**26.56**

The LOM plan annual operating costs have been prepared by Goldstrike based upon management's LOM plan.

RPA considers the operating cost estimates in the LOM plans to be reasonable and consistent with historical performance.

WORKFORCE

The 2019 projected planned manpower within the 2019 LOM plan is shown in Table 21-4.

TABLE 21-4 PROJECTED 2019 WORKFORCE
Barrick Gold Corporation – Goldstrike Mine

2019 Workforce	Hourly	Salary	Totals
OP Operations	258	20	278
OP Maintenance	118	22	139
OP Engineering	10	14	24
OP Geology	0	7	7
OP Operations Dewatering	20	1	21
OP Subtotal	**406**	**64**	**470**
Underground (UG) Management	0	6	6
UG Operations	279	36	315
UG Maintenance	190	26	216
UG Engineering	6	20	26
UG Geology	3	14	17
UG Subtotal	**478**	**102**	**580**
Process Management	9	19	28
Autoclave Operations	119	25	144
Autoclave Facility Maintenance	73	18	91
Roaster Operations	54	11	65
Roaster Facility Maintenance	47	9	56
Laboratory Facility	59	13	72
Laboratory Facility Maintenance	5	1	6
Process Subtotal	**366**	**96**	**462**
General Site Administration	14	23	37
Development Projects	5	27	32
Finance	0	5	5
Information Systems	12	13	25
Safety	5	20	25
Human Resources	1	4	5
Procurement and Warehousing	29	20	49
Environmental Compliance	2	15	17
G&A Subtotal	**68**	**127**	**195**
Totals	**1,318**	**389**	**1,707**

Note. OP – Open Pit, UG - Underground

22 ECONOMIC ANALYSIS

Under NI 43-101 rules, producing issuers may exclude the information required for Section 22 Economic Analysis on properties currently in production, unless the technical report includes a material expansion of current production. Barrick is a producing issuer, the Goldstrike Mine is currently in production, and a material expansion is not being planned. RPA has performed an economic analysis of the Goldstrike Mine using the estimates presented in this report and confirms that the outcome is a positive cash flow that supports the statement of Mineral Reserves.

23 ADJACENT PROPERTIES

There are no properties adjacent to the Goldstrike Mine that are relevant to this report.

24 OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is necessary to make this Technical Report understandable and not misleading.

25 INTERPRETATION AND CONCLUSIONS

Based on the site visit and subsequent review, RPA offers the following conclusions.

GEOLOGY AND MINERAL RESOURCE ESTIMATION

GENERAL

- Mineral Resource estimates have been prepared utilizing acceptable estimation methodologies. The classification of Measured, Indicated, and Inferred Resources conforms to CIM (2014) definitions.

- The sampling, sample preparation, and analyses are appropriate for the style of mineralization and Mineral Resource estimation. The current drill hole database is reasonable for supporting the Mineral Resource and Mineral Reserve estimates.

- Drilling, sampling, and data warehousing are all conducted according to industry best practice.
- With minor local exceptions, visual inspection of block and composite grades across all of the models shows relatively tight and conservative grade extrapolation which falls in general accord with very closely drilled areas.

- The EOY2018 open pit and underground resource block models are reasonable for supporting the Mineral Resource and Mineral Reserve estimates.

- The Mineral Resource modelling steps and results are comprehensively recorded in the master spreadsheets as the workflow is executed.

- Goldstrike geological personnel have conducted high quality geological and resource modelling work that meets or exceeds industry standard practice.

- Site geological staff are using the aggregate data mined at the deposits to develop further geological understanding of regional mineralized trends.

- Mineral Resources are reported exclusive of Mineral Reserves and are estimated effective December 31, 2018 (EOY2018).

- Measured and Indicated Mineral Resources total 9.0 million tons grading 0.181 oz/st Au, containing 1.63 million ounces of gold. In addition, Inferred Mineral Resources total 2.0 million tons grading 0.237 oz/st Au, containing 474 thousand ounces of gold.

- *In metric units, the Measured and Indicated Mineral Resources total 8.164 million tonnes grading 6.21 g/t Au, containing 1.632 million ounces of gold. In addition, Inferred Mineral Resources total 1.817 million tonnes grading 8.11 g/t Au, containing 474,000 ounces of gold.*

OPEN PIT

- Open Pit Measured and Indicated Mineral Resources included in the Mineral Resource total 3.32 million tons grading 0.035 oz/st Au, containing 115,200 ounces of gold. In addition, Inferred Mineral Resources total 236,100 tons grading 0.063 oz/st Au, containing 15,000 ounces of gold. The Open Pit Measured Resources include 0.97 million tons averaging 0.045 oz/st Au from the BMW and BMW2 stockpiles, containing 43,900 ounces of gold.

- On-going work to update lithology and fault models should improve future open pit resource models.

UNDERGROUND

- Barrick staff understands the deposit well, and utilize modern industry standard techniques to control development and record geological information.

- Underground Measured and Indicated Mineral Resources included in the Mineral Resource total 5.68 million tons grading 0.267 oz/st Au, containing 1.52 million ounces of gold. Underground Inferred Mineral Resources are estimated to be 1.77 million tons grading 0.260 oz/st Au, containing 459,000 ounces of gold.

MINING AND MINERAL RESERVES

GENERAL

- The Mineral Reserve estimates have been prepared utilizing acceptable estimation methodologies and the classification of Proven and Probable Mineral Reserves conforms to CIM (2014) definitions.

- Mine planning for the Goldstrike Mine follows industry standards.

- RPA considers the selection of mining methods and the design practices to be appropriate for the deposits.

- Equipment purchases scheduled for the current LOM plan are reasonable.

- The workforce is well trained and capable of achieving the necessary production targets established by the Engineering Department in a safe manner.

- The EOY2018 Proven and Probable Mineral Reserves for the open pit, underground, stockpiles, and inventory total 74.840 million tons grading 0.114 oz/st Au and contain 8.525 million ounces of gold.

- *In metric units, the Proven and Probable Reserves for the Goldstrike Mine total 67.895 million tonnes grading 3.91 g/t Au and contain 8.525 million ounces of gold.*

- The LOM plan is in place and is based upon current operating experience. Recovery and cost estimates are based upon actual operating data and engineering to support a Mineral Reserve statement. Economic analysis using these estimates generates a positive cash flow, which supports a statement of Mineral Reserves.

OPEN PIT AND STOCKPILES

- Open Pit Proven and Probable Mineral Reserves total 11.90 million tons grading 0.114 oz/st Au, containing 1.36 million ounces of gold.

- Ore control procedures and results for the Goldstrike open pit are well documented. All records have been kept in good condition and are readily accessible.

- The EOY2018 Proven Mineral Reserves located in 28 different open pit stockpiles are estimated to be 53.1 million tons grading 0.080 oz/st Au, containing 4.27 million ounces of gold. The accounting methods used to track the stockpile tonnages and grades are reasonable.

- The stockpiles represent approximately 50% of the Mineral Reserve gold ounces and 87% of the Mineral Reserve tons.

- Reconciliation of open pit estimates to production is difficult to evaluate, because most mined ore goes to stockpiles. Reconciliation to grade control models results in a good match.

UNDERGROUND AND STOCKPILES

- Underground Proven and Probable Mineral Reserves are estimated to be 9.76 million tons grading 0.291 oz/st Au, containing 2.84 million ounces of gold.

- The reconciliation between production and Mineral Reserves is completed in a comprehensive manner on a monthly basis. Results indicate significant gains over Mineral Reserve estimates, due to mining of material classified as Inferred or unclassified at the time of the estimate. This material is generally upgraded by infill drilling between the time of the estimate and mining.

- There is potential to extend Mineral Reserves at depth, given further dewatering to depress the water table.

- The EOY2018 Proven Mineral Reserves located in the underground stockpiles are estimated to be 56,000 tons grading 0.297 oz/st Au, containing 16,734 ounces of gold. The estimation methods used to track the stockpile tonnages and grades are reasonable.

- Reconciliation of previous underground estimates to production shows positive results, due to material outside of Mineral Reserves being mined during 2018.

PROCESSING

- Based on an evaluation of the methodology, data analysis and procedures associated with accounting and reconciliation, RPA is of the opinion that head grade estimation and adjustments, recovery calculations, and gold production accounting are acceptable and aligned with industry practices.

- While procedures used to estimate gold recovery meet industry standards, they are backwards-looking, based on recent operating performance. A more forward-looking, predictive model may provide better estimates.

- Planning the process feed is a well-coordinated and complex operation to ensure ore going to the processing operation provides optimum results. The milling operations are well run, safe, and environmentally sound and meet industry standards.

- The roaster operation was running well during the site visit.

- The adjustments made to the process production data and mill head grades based on actual gold production conform to industry standards.

ENVIRONMENTAL CONSIDERATIONS

- Goldstrike has an experienced staff of professionals who are diligent in the maintenance of their permits.

- Reclamation estimates are realistic, in RPA's opinion.

RISKS

RPA has not identified any significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information, the Mineral Resource and Mineral Reserve estimates, or associated projected economic outcomes.

26 RECOMMENDATIONS

Based on the site visits and review of available data, RPA presents the following recommendations.

GEOLOGY AND MINERAL RESOURCE ESTIMATION

GENERAL

- Add a tab to the master spreadsheet for each model which summarizes the information usually included in Technical Reports.
- Create Mineral Resource workflow documents explaining the workflows encapsulated in the master spreadsheets.

OPEN PIT

- Review/update the composite weighting scheme with more recent reconciliation data.
- Include the underground and blast hole data in future variography studies.
- Investigate using the blast hole, drill hole, and mapping data to build high grade wireframes for structurally controlled mineralization.

UNDERGROUND

- Use a resource classification clean-up script or classification wireframes to upgrade a small amount of Inferred Mineral Resource blocks that are scattered within the Indicated Mineral Resource areas.
- Additional density test work is warranted in some areas.

MINING AND MINERAL RESERVES

- Use reconciliation results and stope performance analysis to evaluate stope designs to determine where improvements in mine planning would be most advantageous.
- Review reconciliation of Underground Mineral Reserves to production after first deducting areas mined from outside the Mineral Reserve estimate.
- Continue to evaluate an extension of the dewatering program to access mineralization at depth.
- Continue the stockpile sampling program to confirm the grades, especially stockpiles that will be processed within the short term.

- Continue to sample, test, and review the metallurgical characteristics of the ore stockpiles on a periodic basis to ascertain how they may affect the process and impact recovery and costs.

- Develop a comprehensive mine planning procedure manual.

PROCESSING

- Carry out a structured geometallurgical program involving the bench-scale testing of discrete interval geological samples, which will ideally provide a predictive model of expected metallurgical performance for feed blends that differ from recent production.

- Review roaster feed belt sampling. Improved definition of head grade may serve to improve process feed blending practices and mine to process reconciliation.

- Real-time analysis of moisture in roaster feed would also be beneficial. The same microwave technology as is currently applied on the Cortez underground mine transfer conveyor could be used at Goldstrike.

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Roscoe Postle Associates Inc. (2017): Technical Report on the Goldstrike Mine, Eureka & Elko Counties, State of Nevada, U.S.A., NI 43-101 report prepared by Evans, L., Collins, S.E., Cox, J.J., and Krutzelmann, H., for Barrick Gold Corporation (April 25, 2017; filed on SEDAR April 25, 2017).

28 DATE AND SIGNATURE PAGE

This report titled “Technical Report on the Goldstrike Mine, Eureka and Elko Counties, State of Nevada, USA” and dated March 22, 2019, was prepared and signed by the following authors:

(Signed and Sealed) *“Jason J. Cox”*

Dated at Toronto, ON
March 22, 2019

Jason J. Cox, P.Eng.
Principal Mining Engineer

(Signed and Sealed) *“Philip Geusebroek”*

Dated at Toronto, ON
March 22, 2019

Philip Geusebroek, P.Geo.
Senior Geologist

(Signed and Sealed) *“Wayne W. Valliant”*

Dated at Toronto, ON
March 22, 2019

Wayne W. Valliant, P.Geo.
Principal Geologist

(Signed and Sealed) *“Steve Haggarty”*

Dated at Toronto, ON
March 22, 2019

Steve Haggarty, P.Geo.
Associate Principal Metallurgist

29 CERTIFICATE OF QUALIFIED PERSON

JASON J. COX

I, Jason J. Cox, P.Eng., as an author of this report entitled “Technical Report on the Goldstrike Mine, Eureka and Elko Counties, State of Nevada, USA” prepared for Barrick Gold Corporation and dated March 22, 2019, do hereby certify that:

1. I am a Principal Mining Engineer and Executive Vice President, Mine Engineering, with Roscoe Postle Associates Inc. of Suite 501, 55 University Ave Toronto, ON, M5J 2H7.

2. I am a graduate of the Queen’s University, Kingston, Ontario, Canada, in 1996 with a Bachelor of Science degree in Mining Engineering.

3. I am registered as a Professional Engineer in the Province of Ontario (Reg. #90487158). I have worked as a Mining Engineer for a total of more than 20 years since my graduation. My relevant experience for the purpose of the Technical Report is:
   - Review and report as a consultant on many mining operations and projects around the world for due diligence and regulatory requirements
   - Feasibility Study project work on several mining projects, including five North American mines
   - Operational experience as Planning Engineer and Senior Mine Engineer at three North American mines
   - Contract Co-ordinator for underground construction at an American mine

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (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.

5. I most recently visited the Goldstrike Mine from December 3 to 5, 2018.

6. I am responsible for overall preparation of the Technical Report and, in particular, for Sections 15, 16, 18, 19, 21, 22, and 24 and relevant disclosure in Sections 1, 25, 26, and 27 of the Technical Report.

7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.

8. I have prepared a previous Technical Report of the Goldstrike Mine dated April 25, 2017.

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

10. At 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.

Dated this 22nd day of March, 2019

(Signed and Sealed) *"Jason J. Cox"*

Jason J. Cox, P.Eng.

PHILIP GEUSEBROEK

I, Philip Geusebroek, P.Geo., as an author of this report entitled "Technical Report on the Goldstrike Mine, Eureka and Elko Counties, State of Nevada, USA" prepared for Barrick Gold Corporation and dated March 22, 2019, do hereby certify that:

1. I am Senior Geologist with Roscoe Postle Associates Inc. of Suite 501, 55 University Ave Toronto, ON, M5J 2H7.

2. I am a graduate of the University of Alberta, Canada in 1995 with a B.Sc. degree in Geology, and the University of Western Ontario in 2008 with a M.Sc. in Economic Geology.

3. I am registered as a Professional Geologist in the Province of Ontario (Reg. #1938). I have worked as a geologist for a total of 23 years since my graduation. My relevant experience for the purpose of the Technical Report is:
   - Resource estimation, geological modelling, and QA/QC experience.
   - Review and report as a consultant on numerous exploration, development, and production mining projects around the world for due diligence and regulatory requirements
   - Exploration and mine geologist with Echo Bay Mines Ltd., Kinross Gold Corporation, Western Mining Company, etc.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (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.

5. I visited the Goldstrike Mine from December 3 to 5, 2018.

6. I am responsible for Sections 12 and 14 and relevant disclosure in Sections 1, 25, 26, and 27 of the Technical Report.

7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.

8. I have had no prior involvement with the property that is the subject of the Technical Report.

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

10. At 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.

Dated this 22nd day of March, 2019

(Signed and Sealed) *"Philip Geusebroek"*

Philip Geusebroek, P.Geo.

WAYNE W. VALLIANT

I, Wayne W. Valliant, P.Geo., as an author of this report entitled "Technical Report on the Goldstrike Mine, Eureka and Elko Counties, State of Nevada, USA" prepared for Barrick Gold Corporation and dated March 22, 2019, do hereby certify that:

1. I am Principal Geologist with Roscoe Postle Associates Inc. of Suite 501, 55 University Ave Toronto, ON, M5J 2H7.

2. I am a graduate of Carleton University, Ottawa, Ontario, Canada in 1973 with a Bachelor of Science degree in Geology.

3. I am registered as a Geologist in the Province of Ontario (Reg. #1175). I have worked as a geologist for a total of 45 years since my graduation. My relevant experience for the purpose of the Technical Report is:
   - Review and report as a consultant on more than fifty mining operations and projects around the world for due diligence and resource/reserve estimation
   - General Manager of Technical Services for corporation with operations and mine development projects in Canada and Latin America
   - Superintendent of Technical Services at three mines in Canada and Mexico
   - Chief Geologist at three Canadian mines, including two gold mines

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (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.

5. I most recently visited the Goldstrike Mine from December 3 to 5, 2018.

6. I am responsible for Sections 2 through 11 and 23 and relevant disclosure in Sections 1, 25, 26, and 27 of the Technical Report.

7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.

8. I have prepared a previous Technical Report of the Goldstrike Mine dated March 16, 2012.

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

10. At 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.

Dated this 22nd day of March, 2019

(Signed and Sealed) *"Wayne W. Valliant"*

Wayne W. Valliant, P.Geo.

STEVE HAGGARTY

I, Steve Haggarty, P.Eng., as an author of this report entitled "Technical Report on the Goldstrike Mine, Eureka and Elko Counties, State of Nevada, USA" prepared for Barrick Gold Corporation and dated March 22, 2019, do hereby certify that:

1. I am an Associate Principal Metallurgist with Roscoe Postle Associates Inc. of Suite 501, 55 University Ave Toronto, ON M5J 2H7.

2. I am a graduate of McGill University in 1980 with bachelor's degree in Metallurgical Engineering.

3. I am registered as a Professional Engineers Ontario (Reg.# 100177647). I have worked as a metallurgical engineer for a total of 38 years since my graduation. My relevant experience for the purpose of the Technical Report is:
    - Reviews and reports as a metallurgical consultant on a number of mining operations and projects for due diligence and financial monitoring requirements
    - Management and operational experience at several Canadian and U.S. gold treatment operations.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (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.

5. I most recently visited the Goldstrike Mine from December 3 to 5, 2018.

6. I am responsible for Sections 13, 17, 20, and relevant disclosure in Sections 1, 25, 26, and 27 of the Technical Report.

7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.

8. Prior to becoming an independent consultant in June 2018, I visited the property on a regular basis in my role as Senior Director, Metallurgy for Barrick.

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

10. At 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.

Dated this 22nd day of March, 2019

(Signed and Sealed) ***"Steve Haggarty"***

Steve Haggarty, P.Eng.