CULLATON LAKE GOLD MINES LTD.

WATER LICENCE 1BR-CUL1828

ANNUAL WATER LICENCE REPORT 2020

PREPARED on behalf of:

BARRICK GOLD INC.

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EXECUTIVE SUMMARY

The Cullaton Lake Gold mine is a recognized closed mine site located in the southern part of the Kivalliq Region in the Nunavut Territory. The property is 645 km north of Thompson, Manitoba and 250 km west of Arviat, Nunavut.

The 2020 site activities consisted of one site visit from September 10th to September 14th, 2020, to conduct the biennial license monitoring obligations, perform a general site inspection and continue airstrip maintenance.

Summarized, the results of the site inspection indicate that:

- The site remains in good condition.
- The tailings storage facility continues to remain stable. The water level in the pond remains low but has recovered noticeably compared to 2019.
- Site water quality results indicate that all Tailings Management Area concentrations remain within the limits set out in the license.
- The damaged thermistor casings found in 2019 were repaired during the site visit and permafrost was found between 2.1m and 2.9m below ground surface on September 12th, 2020.

In 2021 a maintenance site visit will be performed in early September to continue airstrip brush removal and to make repairs to the airstrip survival shelter, along with general site maintenance.

1.0 SITE BACKGROUND / LOCATION

Cullaton Lake Gold Mines Ltd. is a wholly owned subsidiary of Barrick Gold Inc. (Barrick) which in turn is a wholly owned subsidiary of Barrick Gold Corporation.

The Cullaton Lake Gold mine is a recognized closed mine site located in the south central part of the Kivalliq Region in the Nunavut Territory. The property is 250 km west of Arviat, Nunavut, 400 km northwest of Churchill, Manitoba, and 645 km north of Thompson, Manitoba (see Figure 1). The mine was in operation for four years from 1981 to 1985. Following operation, the mine was in a care and maintenance mode from 1985 to 1991.

1.1 CLOSURE AND POST CLOSURE MAINTENANCE HISTORY

Decommissioning was initiated in 1991 with the rehabilitation of Tailings Pond No. 1, which included construction of a spillway in the dam and the covering of exposed tailings with water or till/mine rock. In addition, the water level in Tailings Pond No. 2 (the polishing pond) was lowered by partial removal of the dam (see Figures 2 and 3 for site features and historic monitoring locations).

Between 1991 and 1993, the fresh water intake, pump house and pipelines at the old diamond drill camp on the Kognak River were dismantled and removed. In 1995 and 1996 the mill buildings were dismantled. Some of the inert, non-salvageable material was crushed and placed in the quarry pit. In 1997, additional cover material was placed over the tailings area and the area was seeded and fertilized with a special arctic seed mix, as was the former mill site. During the winter of 1998/99 some salvageable equipment and material was removed from the property.

During the summer of 2001, all remaining inert material was placed in the former quarry pit and covered with till. All waste oils and hydraulic fluids, as well as tires and batteries were removed from equipment prior to burial and subsequently airlifted to Thompson, Manitoba for proper disposal. In addition, low grade waste rock at the Shear Lake Portal area that had been determined to be acid generating was collected and encapsulated in till adjacent to the portal.

During the 2005 annual inspection, minor maintenance items identified during the 2004 inspection were corrected. These included a second application of seed and fertilizer on the Encapsulated Waste Rock (EWR) cover at Shear Lake and erosion repairs to the EWR cover, Tailings Pond No. 1 spillway and the quarry pit landfill cover.

During the 2006 annual inspection, a small above-water exposed section of rubber liner on the upstream side of the tailings dam south of the No.1 Spillway was removed.

In response to a request from Barrick in 2006 to return the property to the crown, Indian and Northern Affairs Canada (now Crown – Indigenous Relations and Northern Affairs Canada (CIRNAC)) initiated a review to assess closure conditions. CIRNAC visited the site in Sept 2006 and commissioned BGC Consulting Ltd. (BGC) to conduct a desk top review of the closure history and monitoring results.

The BGC report indicated for a variety of reasons that CIRNAC should not accept return of the property. In response, CIRNAC, BGC, Barrick and Trow Consulting personnel met

on the site during the 2007 annual inspection on July 5, to discuss the report findings and confirm a newly identified pH issue at Shear Lake. In addition Barrick volunteered to complete an Ecological Risk Assessment (ERA) to determine a) whether the mitigation efforts at Cullaton Lake have adequately addressed the requirements of the approved 1996 Abandonment and Reclamation Plan, and b) whether the new ARD issue at Shear Lake is having any significant ecological effects.

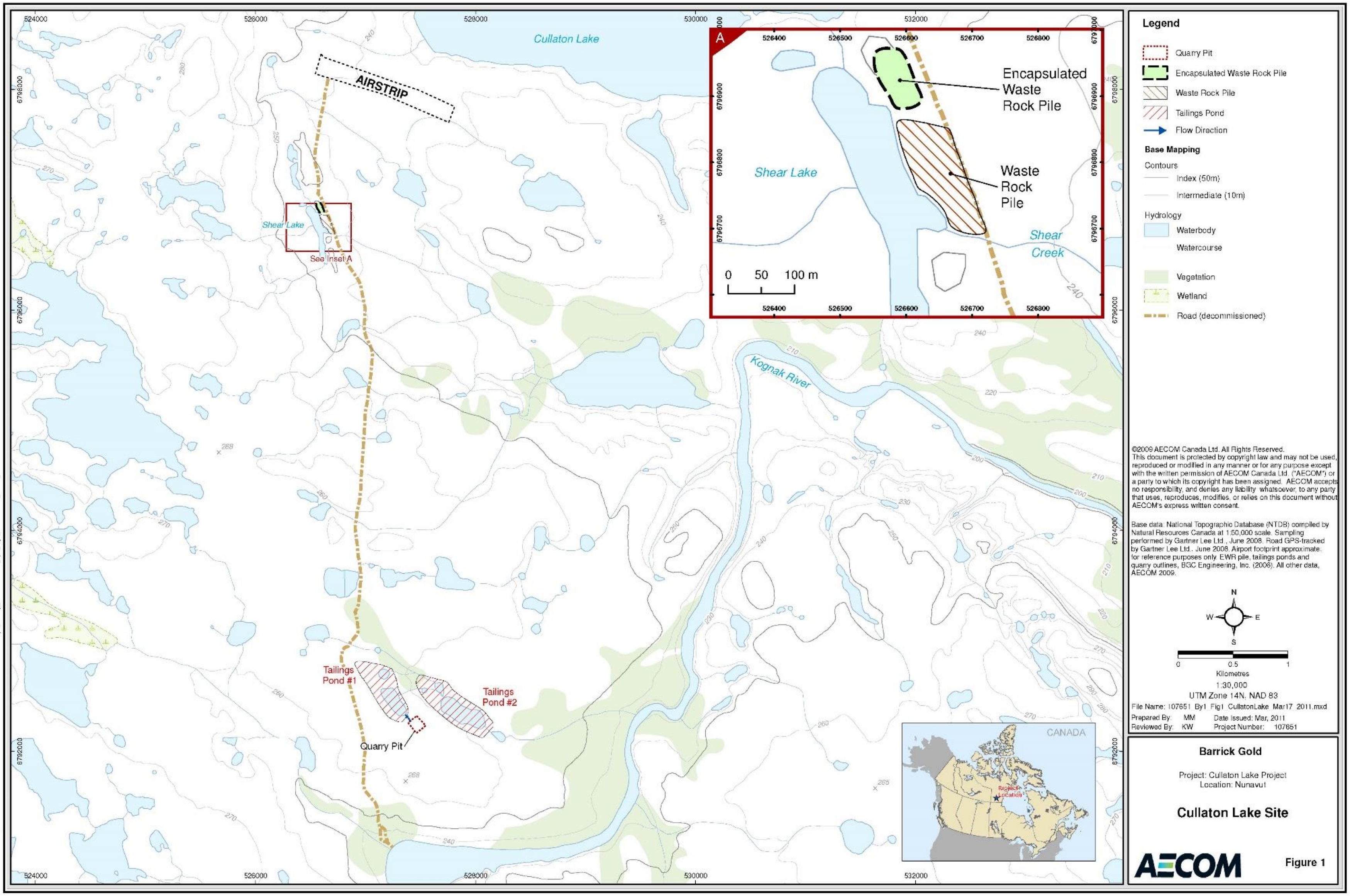
In 2008 Barrick and Gartner Lee personnel visited the site on 4 occasions to collect field data for completing the ERA. During the August trip, a minor amount of scrap metal was also retrieved from the north bank of the Kognak river and from the former bunkhouse area.

The ERA was finalized and submitted to CIRNAC in August 2009. The report indicated that the surface waters at the site were not significantly impacted by the former mine operation or existing conditions. The findings were not acknowledged by CIRNAC. In April 2014, CIRNAC issued a response letter to Barrick's request to return the property to the Crown, re-stating recommendations outlined by BGC in their March 2007 report. Following a subsequent meeting between the Nunavut Water Board, CIRNAC and Barrick in Iqaluit in April 2015, Barrick proposed by letter dated June 11, 2015 (the June 2015 Letter) to undertake several of the recommendations in the April 2014 letter, including the completion of a Dam Safety Review, a financial assurance review and regular airstrip maintenance; and proposed to initiate an adaptive monitoring plan involving additional water quality and benthic /sediment monitoring aimed at producing additional support for the ERA. Barrick also indicated in the June 2015 letter that it will not be seeking to relinquish the property to the government for the immediate future.

The Dam Safety Review was completed by Thurber Engineering and submitted to CIRNAC and the NWB in August 2016. Airstrip maintenance was initiated in 2015. Additional biological field work to support the adaptive monitoring plan was completed in 2016.

In 2017 a drone aerial survey was conducted to gather additional data for generating up-to-date site plans and remote historic refuse identified proximate to the site by CIRNAC was collected and stored at the airstrip for removal in 2018.

A new Closure and Reclamation Plan (C&R Plan) was developed and submitted on June 30th, 2017 pursuant to the action plan outlined in the 2016 CIRNAC water license inspection report and based on the adaptive monitoring plan proposed by Barrick in 2015. Following several discussions between Barrick and CIRNAC throughout 2018, principally on the amount of Financial Assurance required to implement the plan, the new C&R Plan was accepted and renewal Water License 1BR-CUL1828 was issued on October 15th, 2018. Site monitoring and maintenance as outlined in the water license has continue since then.


Cullaton Lake
AIRSTRIP
Shear Lake
See Inset A
Kognak River
Tailings Pond #1
Tailings Pond #2
Quarry Pit
A
Encapsulated Waste Rock Pile
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CANADA
Legend
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Waste Rock Pile
Tailings Pond
Flow Direction
Base Mapping
Contours
Index (50m)
Intermediate (10m)
Hydrology
Waterbody
Watercourse
Vegetation
Wetland
Road (decommissioned)
©2009 AECOM Canada Ltd. All Rights Reserved.
Base data: National Topographic Database (NTDB) compiled by Natural Resources Canada at 1:50,000 scale. Sampling performed by Gartner Lee Ltd., June 2008. Road GPS-tracked by Gartner Lee Ltd., June 2008. Airport footprint approximate for reference purposes only. EWR pile, tailings ponds and quarry outlines, BGC Engineering, Inc. (2006). All other data, AECOM 2009.
Kilometres
1:30,000
UTM Zone 14N, NAD 83
Barrick Gold
Project: Cullaton Lake Project
Location: Nunavut
Cullaton Lake Site
AECOM
Figure 1

Figure 2: Cullaton Lake Shear Lake site showing features and surface water monitoring location.

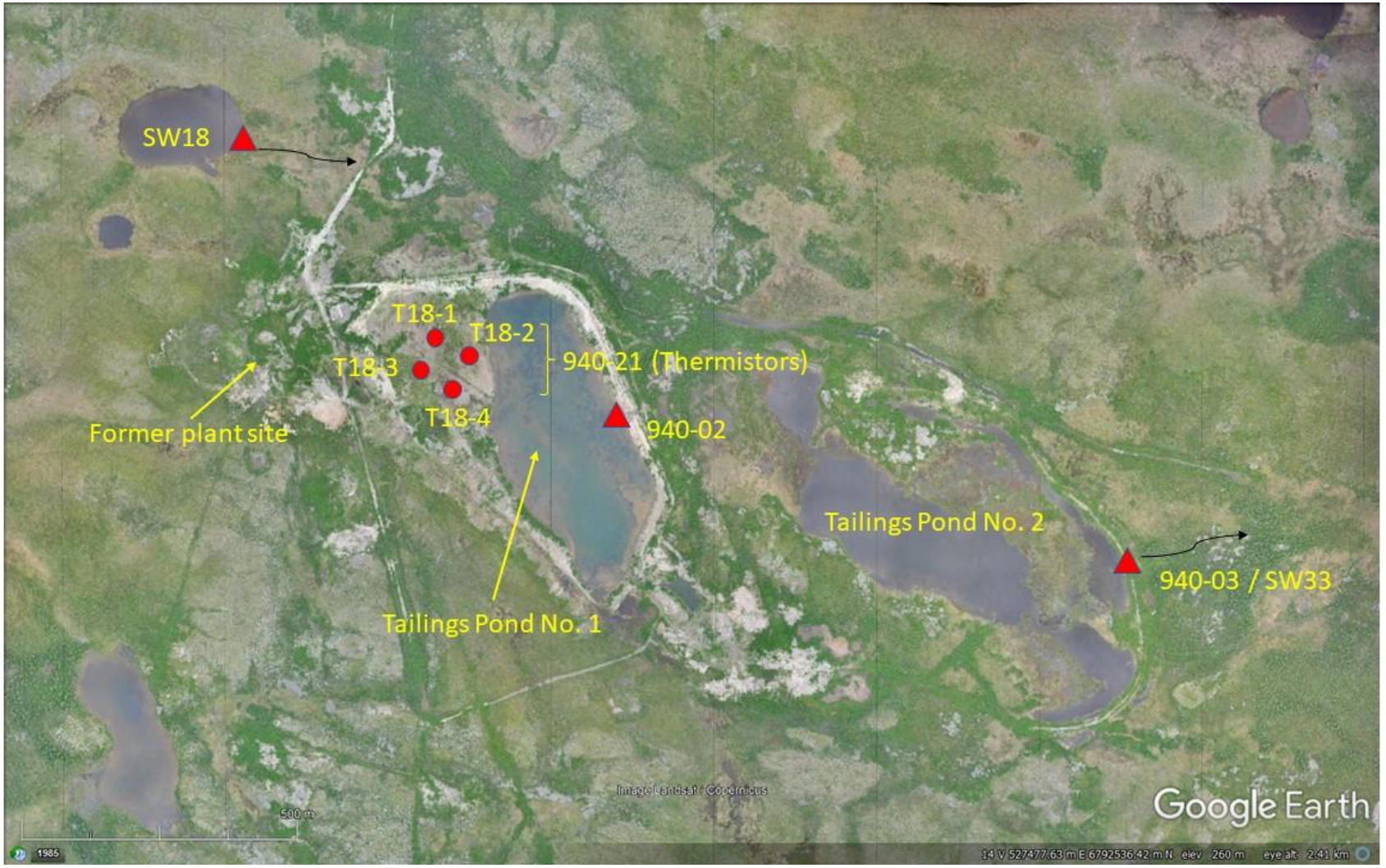

Figure 3: Cullaton Lake main site showing features, water sampling and thermistor stations.

2.0 WATER LICENCE SUPPLEMENTAL CONDITIONS AND NOTES

Management of Cullaton Lake was conducted in 2020 pursuant to Water Licence 1BR-CUL1828, which was issued on October 15th, 2018 to renew previously issued license number 1BR-CUL1118. The following provides a historic summary of supplemental conditions and notes pursuant to previous licences:

Name Change:

On November 13, 2003, application was made to the Nunavut Water Board to change the name on Licence NWB1CUL0207 from Homestake Canada Inc. to Barrick Gold Inc. to reflect changes resulting from the 2001 merger of Barrick Gold Corporation and Homestake Mining Company.

Amendment for Encapsulated Waste Rock at Shear Lake:

Part F, Item 5 of Licence NWB1CUL0207 required submission of an application for amendment to the approved Abandonment and Restoration Plan by January 1, 2003 (subsequently extended to March 31, 2003) for the new waste rock disposal area on the shores of Shear Lake. The application for amendment with supporting documentation was submitted to the Nunavut Water Board on March 31, 2003. The amendment was granted on June 6, 2005. In addition, station 940-25 was removed from the monitoring program and replaced with station 940-27, intended to monitor any seepage from the encapsulated waste rock down-gradient to Shear Lake Creek.

The amendment required that suitable as-built drawings for the encapsulated waste rock be submitted within 6 months of the date of the amendment. Drawings were submitted on Dec 5, 2005.

The amendment also required that Section 4.4 of the Approved Abandonment and Restoration Plan be revised to incorporate the latest information with respect to the closure of the Shear Lake Waste Rock disposal area. The revision was submitted concurrent with the 2005 Annual Report.

Contingency Plan to Address Seepage Issues at the Encapsulated Waste Rock

Part F, Item 6, Amendment No. 1 of Licence NWB1CUL0207 required the submission of a Contingency Plan to address the potential of the permafrost not to re-aggrade into the waste rock pile / cover as anticipated, the clogging of the passive treatment system due to the relatively flat terrain and the remediation or mitigation of sediments contaminated with levels of metals in excess of CCME guidelines due to seepage from the encapsulated waste rock pile. The contingency plan for clogging of the passive treatment system and contamination remediation was submitted concurrent with the 2005 Annual Report and under separate cover. In the same document Barrick requested that the requirement for a Contingency Plan to address the possibility of permafrost not re-aggrading into the waste rock be deleted from the Licence since this condition was identified as an “added benefit” and not a design parameter as specified by URS [1].

[1] Assessment of Closure Options and Impacts, Shear Lake Zone Waste Rock Dump, Cullaton Lake Mine Nunavut, March 2003, URS Norecol, Dames & Moore Inc.

Amendment for Encapsulated Waste Rock Thermistors:

Water Licence NWB1CUL0207 required the installation of thermistors in the encapsulated waste rock at Shear Lake. An unsuccessful attempt to install the thermistors was made in July 2003. A report detailing this attempt was submitted to the Nunavut Water Board on November 25, 2003 and requested that this requirement be removed from the Licence. The request was granted on June 6, 2005 and station 940-26 was removed from the monitoring program.

Site Map:

Part G, Item 4a of Licence NWB1CUL0207 required submission to the Board of a Site Map of the Project Environmental Impact Area with active Surveillance Network Program (SNP) Stations within 60 days of issuance of the Licence. The required site map was submitted to the Nunavut Water Board on December 16, 2002.

GPS Coordinates:

Part G, Item 4b of Licence NWB1CUL0207 required submission of GPS coordinates of all surface and subsurface sampling points. The required GPS coordinates were submitted to the Nunavut Water Board on August 29, 2003.

Miscellaneous:

The NWB noted the following in their October 10, 2006 review of the 2005 Annual Water Licence report:

1. While the 2004 reported detection limit for nickel had been lowered as previously requested, the detection limit for arsenic was now higher than previously reported (1μg/l compared to 0.1 μg/l). To clarify the issue the NWB requested that detection limits proposed for the 2007 monitoring be included in the 2006 annual report.

ALS Environmental has been engaged since 2014 and detection limits have been adjusted slightly to reflect their standard. The new detection limits are:

Licence Parameter	Method Detection Limit
Total Suspended Solids	3 mg/l
Total Cyanide	0.002 mg/l
Total Arsenic	1 μg/l
Total Copper	1 μg/l
Total Lead	1 μg/l
Total Mercury	0.000005 mg/l
Total Nickel	2 μg/l
Total Zinc	3 μg/l

2. The NWB commented on the 2005 anomalous zinc value from the Quarry Pit water cover station 940-23 (.065 mg/l). Follow-up annual monitoring for the period 2005 to 2018 indicated zinc values ranged from a low of 0.006mg/l to 0.065 mg/l with a 14-year average of 0.022mg/l. The CCME objective of 0.030 mg/l was exceeded twice during the 14-year period: the original exceedance of 0.065 mg/l in 2005 and a second exceedance of 0.0504 in 2012. Elevated zinc levels are attributed to the presence of the solid metal waste buried in the quarry pit landfill. The quarry pit water cover does not discharge.

3. The NWB requested that the Spill Response Plan contact number for the INAC Water Resources Inspector be changed.

   The required change was made to the 2006 and subsequent versions.

   On review of the 2008 annual report, the NWB requested that the NT-NU spill report form be included with the spill contingency plan. The form was included with the 2009 plan and subsequent plans.

4. The NWB requested that water quality and thermistor data be also provided in Excel format, in order to allow for easier data analysis.

   The 2006 data was provided in Excel format via e-mail on October 12, 2006. Subsequent results in Excel format are provided concurrent with the annual reports for years in which monitoring takes place.

Water Licence 1BR-CUL1118 included a recommendation by Environment Canada and INAC to replace the non-functioning tailings cover thermistors. The 4 thermistors on the tailings cover were replaced in September 2018.

Part C, Item 1 of Water Licence 1BR-CUL1828 required the submission of security in the amount of $3,702,660 by November 15th, 2018. The security was submitted to the NWB and CIRNAC as a bond on November 15th, but with subsequent revisions requested by CIRNAC, it was approved as an amendment to the original Standby Letter of Credit on June 20th, 2019.

3.0 2020 ACTIVITIES

The 2020 site visit was conducted from September 10th to September 14th, 2020. Personnel attending the site during this trip included:

> Paul J. Brugger, P. Eng., Closed Properties Manager, Eastern Canada, Barrick Gold Inc.
>
> Renata Klassen, M.Sc. P.Eng. Geotechnical Engineer, EXP Services Inc.
>
> Kelson Evans and Tristan Desjarlais - 2 Labourers provided by McCreedy Campground, Thompson, Manitoba

Access during the trip was by provided by a Wings over Kississing Cessna Grand Caravan chartered from Thompson Manitoba. During this campaign the following activities were performed:

- Mr. Brugger performed a general site inspection, collected surface water samples, recorded thermistor readings at the Tailings Pond No 1 till cover and installed identification signs at the current surface water quality monitoring stations.
- Ms. Klassen performed a geotechnical inspection of the Tailings Pond No 1 area and the Shear Lake Encapsulated Waste Rock (EWR).
- McCreedy Campground personnel continued removing brush from the airstrip.

Ms. Klassen attended for the day on September 10th and left that evening. Mr. Brugger and McCreedy support labour remained until September 14th to work on clearing shrub vegetation from the airstrip and general site maintenance.

3.1 SITE INSPECTION GENERAL FINDINGS

The site inspection was performed on September 11th and 12th, 2020 and indicated that the site remains undisturbed, stable and generally in good condition. The following findings were noted:

The Tailings Pond No. 1 water level has risen noticeably compared to 2019 (See Photos 13 and 14 in Appendix 1). The small fringe areas of exposed tailings beaches on the northwest side of the pond are now once again submerged.

The minor subsidence found on the B-Zone fresh air raise in 2018 and subsequently filled in 2019 remains unchanged. (See Photos 17 and 18 in Appendix 1). The affected area will be monitored during future inspections until stability is confirmed.

The minor subsidence areas on the quarry pit landfill remain largely unchanged. Most of the affected areas are occupied by arctic ground squirrels (See Photo 21 in Appendix 1).

The remaining 2018 installed thermistors were found with casings either cracked or snapped off at ground level. The cause appears to be the muskox herd seen frequenting the area (seen rubbing against the casings). Several of the thermistor nodes also appear damaged but the strings still provide sufficient information to determine permafrost levels at each location. All thermistor casings were repaired during this trip and recording was initiated (See Photos 22 to 26 in Appendix 1).

The survival shed once again suffered considerable bear damage and was patched for current use (See Photo 28 in Appendix 1).

The site access road continues to be difficult to negotiate as shrub vegetation continues to fill in the trail.

Additional select photos are included in Appendix 1.

3.2 WATER QUALITY MONITORING

Pursuant to Part E, Item 7 of Water License 1BR-CUL1828, effluent discharging from the tailings containment area was found within the limits set out in Item 7 as described below.

Parameter	Maximum Concentration of any Grab Sample (mg/l)	940-02 TP No. 1 at spillway Sept 14th, 2020	940-03 TP No. 2 at spillway Sept 14th, 2020
Total Arsenic	0.30	0.0038	0.0024
Total Copper	0.20	0.0012	0.0014
Total Cyanide	0.80	<0.0046	<0.0035
Total Lead	0.20	<0.001	<0.001
Total Nickel	0.30	<0.002	0.0024
Total Zinc	0.30	<0.003	<0.003
Total Suspended Solids	25	<3.0	<3.0
Oil and Grease	No visible sheen	None present	None present
pH	Between 6.0 and 9.5	7.85	8.12

Table 3.1: September 14th, 2020 water quality results for license parameters.

Notes: Total cyanide was inadvertently not analyzed as it is not included in the parameters listed in Part K, Item 10 but is listed in Part E, Item 7. The 5 year past averages are shown for reference. Clarification for inclusion will be obtained from the NWB and CIRNAC prior to the next campaign.

Pursuant to the parameters outlined in Part K, Item 10, duplicate water sampling was completed on September 14th, 2020 at the 4 stations identified in Part K, Item 8 (see Figures 2 and 3 for locations). Complete results for the parameters outlined are provided in Appendix 2. The following is a brief description of the sampling activities and results:

Station 940-2 (Tailings Pond No. 1 at discharge to Tailings Pond No. 2) – Duplicate water samples labelled 940-02A and 940-02B were collected on September 14th, 2020. Results indicated that all parameters were below the limits prescribed in the Water Licence

as indicated in Table 3.1 above and also below Canadian Council of Ministers of the Environment (CCME) guidelines.

Station 940-3 / SW33 (Tailings Pond No. 2) – Duplicate water samples labelled 940-03 / SW33A and 940-03 /SW33B were collected on September 14th, 2020. Results indicated that all parameters were below the limits prescribed in the Water Licence as indicated in Table 3.1 above and also below CCME guidelines**.**

Station SW18 (Background station) – Duplicate water samples labelled SW18A and SW18B were collected on September 14th, 2020. Results indicated that all parameters were below CCME guidelines**.**

Station SW9 (Shear Creek downstream of Shear Lake site) – Duplicate water samples labelled SW9A and SW9B were collected on September 14th, 2020. Results indicated that all parameters were below CCME guidelines with the exception of copper and iron. The concentration of copper was 0.0033 mg/l as compared to the CCME guideline of 0.002 mg/l for the Hardness indicated and the iron concentration was 0.525 mg/l as compared to the CCME guideline of 0.3 mg/l.

3.3 THERMISTOR MONITORING

Pursuant to Part K, Item 8, thermistor readings were recorded after all casings were repaired. Permafrost depth in the tailings cover ranged from 2.1m below surface in T18-1 to 2.9m in T18-2 on September 12th, 2020. Thermistor results are provided in tabular form in Appendix 3.

3.4 GEOTECHNICAL INSPECTION

Pursuant to Part E, Article 6c and 6d of Water Licence 1BR-CUL1828, Renata Klassen, M.SC., P. Eng. (EXP Services Inc.) performed a geotechnical inspection of the tailings dam and the Shear Lake EWR on September 10th, 2020. A copy of the inspection report was submitted to the NWB on October 30th, 2020, with a copy to INAC.

In summary, the report indicates that:

- The tailings dam remains stable and is continuing to serve its function of retaining the Tailings Pond No 1 tailings and water cover.

- Vegetation continues to take hold on the EWR and is helping to reduce erosion.

4.0 IMPLEMENTATION OF SPILL RESPONSE PLAN

Pursuant to Part I, Article 1 of Water Licence 1BR- CUL1828, the 2020 Spill Response Plan has been reviewed and will remain implemented for 2021. The current Spill Response Plan is included as Appendix 4.

5.0 REVIEW OF ABANDONMENT AND RESTORATION PLAN

Pursuant to Part J, Article 2 of the Water Licence, a review of the Closure and Restoration Plan (CRP) was performed in March 2021. There was no Progressive Rehabilitation conducted during the year and there are no current changes to the CRP.

6.0 IMPLEMENTATION OF QUALITY ASSURANCE / QUALTY CONTROL

Pursuant to Part K, Article 2 of the Water License, the Cullaton Lake Water Quality Monitoring QA/QC Plan dated March 25, 2011 remains implemented.

A review of the approved quality assurance / quality control plan (QA/QC) was conducted with reference to the document “Quality Assurance (QA) and Quality Control (QC) Guidelines for use by Class B Licensees in Collecting Representative Water Samples in the Field and for Submission of a QA/QC Plan, July 1996. There were no changes made to the plan. Lab QC results for the 2020 samples are included in Appendix 2.

7.0 2021 PROPOSED PROGRAM

A 5-day site visit is planned for late summer to continue maintenance on the airstrip and access road. Maintenance for general site stability including an inspection of the vent raise cover will also be completed.

Appendix 1
Cullaton Lake September 10th to 14th, 2020 Site Photos

Photo 1: Cullaton Lake main site, looking southeast on September 10th, 2020.

Photo 2: Shear Lake site, looking southeast on September 10th, 2020.

Photo 3: Access road to Shear lake with Encapsulated Waste Rock in distance.

Photo 4: Former Shear Lake Portal.

Photo 5: Encapsulated Waste Rock cover top looking north.

Photo 6: Shear Lake low pH pool area.

Photo 7: Healthy vegetation downstream of low pH pool.

Photo 8: Shear Creek at access road crossing.

Photo 9: Tailings Pond No 1 cover vegetation, looking southeast.

Photo 10: Tailings Pond No 1 water cover looking southeast.

Photo 11: Tailings Pond No. 1 spillway (dry) looking downstream.

Photo 12: Tailings Pond No .1 reference for water level at spillway.

Photo 13: Exposed tailings beach on west side of pond in September 2019.

Photo 14: West side beach in September 2020. Tailings beaches re-submerged.

Photo 15: Tailings Pond No. 2 outlet.

Photo 16: Tailings Pond No. 2 looking northwest.

Photo 17: Small area of subsidence at B-zone Vent Raise in 2019 after filling.

Photo 18: Filled area in 2020.

Photo 19: B-Zone Portal looking west.

Photo 20: B-Zone raise looking west

Photo 21: Quarry Pit main subsidence area – no change from previous years.

Photo 22: Thermistor T-1 example of casing damage.

Photo 23: T1 repaired and 4-inch casing added.

Photo 24: Thermistor T2 repaired with joiner at ground level.

Photo 25: Thermistor T3 repaired with joiner at ground level.

Photo 26: Thermistor T4 repaired and support with t-bar.

Photo 27: Airstrip west approach looking east.

Photo 28: Cabin bear damage.

Appendix 2
September 14, 2020
Water Quality Monitoring Results

Cullaton Lake 2020 Water Quality

Client Sample ID					Background		Tailings Pond No. 1		Tailings Pond No. 2		Shear Creek	
					SW18A	**SW18B**	**940-02A**	**940-02B**	**940-03/SW33A**	**940-03/SW33B**	**SW9A**	**SW9B**
Date Sampled					14-Sep-2020	14-Sep-2020	14-Sep-2020	14-Sep-2020	14-Sep-2020	14-Sep-2020	14-Sep-2020	14-Sep-2020
Time Sampled					11:45	11:45	13:15	13:15	12:30	12:30	14:00	14:00
ALS Sample ID					L2504259-7	L2504259-8	L2504259-1	L2504259-2	L2504259-3	L2504259-4	L2504259-5	L2504259-6
Parameter	Lowest Detection Limit	Units	Water License Limit	CCME guidelines	Water	Water	Water	Water	Water	Water	Water	Water
Physical Tests (Water)												
Conductivity (EC)	1.0	uS/cm			71.5	71.9	264	264	401	401	42.6	42.7
Hardness (as CaCO3)	0.51	mg/L			38	39.4	103	104	169	167	18.6	18.3
pH	0.10	pH	6.0 to 9.5	6.5 to 9.0	7.55	7.55	7.85	7.84	8.12	8.14	6.97	6.98
Total Suspended Solids	3.0	mg/L	25		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	10	mg/L			68	58	151	153	246	243	38	31
Anions and Nutrients (Water)												
Acceptable % Difference		-			PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Acidity (as CaCO3)	2.0	mg/L			2.4	2.1	<2.0	<2.0	<2.0	<2.0	2.6	2.6
Alkalinity, Bicarbonate (as CaCO3)	2.0	mg/L			39.3	37.2	59.3	61.2	138	141	10.9	11.3
Alkalinity, Carbonate (as CaCO3)	2.0	mg/L			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Alkalinity, Hydroxide (as CaCO3)	2.0	mg/L			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Alkalinity, Total (as CaCO3)	2.0	mg/L			39.3	37.2	59.3	61.2	138	141	10.9	11.3
Chloride (Cl)	0.10	mg/L			0.33	0.39	1.04	1.03	2.40	2.31	0.36	0.20
Sulfate (SO4)	0.30	mg/L			1.61	1.63	70.3	71.7	81.8	80.9	7.40	7.31
Anion Sum		meq/L			0.83	0.79	2.68	2.75	4.52	4.56	0.38	0.38
Cation Sum		meq/L			0.83	0.86	2.47	2.48	4.12	4.09	0.48	0.47
Cation - Anion Balance		%			0.3	4.6	-4	-5	-4.7	-5.4	11.1	10
Organic / Inorganic Carbon (Water)												
Total Organic Carbon	0.50	mg/L			27.7	24.9	<5.0	<5.0	15.5	20.9	11.3	13.8
Total Metals (Water)												
Aluminum (Al)-Total	0.0030	mg/L		0.1 (1)	0.0393	0.0403	0.0068	0.0043	0.0089	0.0092	0.189	0.184
Antimony (Sb)-Total	0.00010	mg/L			<0.00010	<0.00010	0.00011	0.00012	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	0.0010	mg/L	0.30	0.005	0.0019	0.0019	0.0038	0.0037	0.0024	0.0023	<0.0010	<0.0010
Cadmium (Cd)-Total	0.0000050	mg/L		(2)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000173	0.0000132
Calcium (Ca)-Total	0.20	mg/L			10.0	10.4	26.6	26.8	39.4	38.6	5.04	4.97
Chromium (Cr)-Total	0.00010	mg/L		0.89	0.00031	0.00034	0.00025	0.00019	0.00020	0.00030	0.00060	0.00064
Cobalt (Co)-Total	0.00010	mg/L			<0.00010	<0.00010	0.00190	0.00187	0.00051	0.00049	0.00107	0.00107
Copper (Cu)-Total	0.0010	mg/L	0.20	(2)	0.0011	0.0011	0.0012	0.0012	0.0016	0.0016	**0.0033**	**0.0032**
Iron (Fe)-Total	0.020	mg/L		0.3	0.138	0.141	0.103	0.099	0.083	0.083	**0.525**	**0.502**
Lead (Pb)-Total	0.0010	mg/L	0.20	0.002	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lithium (Li)-Total	0.0010	mg/L		(2)	<0.0010	0.0010	<0.0010	<0.0010	0.0016	0.0016	0.0010	0.0011
Magnesium (Mg)-Total	0.020	mg/L			3.14	3.25	8.88	8.86	17.0	17.3	1.45	1.42
Manganese (Mn)-Total	0.00010	mg/L		(3)	0.00573	0.00559	0.00896	0.00880	0.00815	0.00804	0.0302	0.0299
Mercury (Hg)-Total	0.0000050	mg/L		0.000026	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	0.000050	mg/L		0.073	0.000056	0.000058	0.000824	0.000814	0.000358	0.000361	<0.000050	<0.000050
Nickel (Ni)-Total	0.0020	mg/L	0.30	0.025	0.0021	0.0021	<0.0020	<0.0020	0.0026	0.0025	0.0038	0.0038
Potassium (K)-Total	0.050	mg/L			0.793	0.805	1.90	1.88	2.15	2.14	0.671	0.665
Selenium (Se)-Total	0.000050	mg/L		0.001	0.000056	0.000082	0.000101	0.000102	0.000076	0.000067	0.000051	0.000053
Sodium (Na)-Total	0.050	mg/L			0.980	0.993	8.23	8.31	15.9	15.8	0.892	0.868
Thorium (Th)-Total	0.00010	mg/L			<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	0.000010	mg/L		0.015	0.000074	0.000077	0.000262	0.000265	0.00129	0.00124	0.000133	0.000136
Vanadium (V)-Total	0.00050	mg/L			0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00062	0.00060
Zinc (Zn)-Total	0.0030	mg/L	0.30	(2)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Notes
(1) for pH > 6.5
(2) calculation, depending on Hardness level
(3) variable based on pH and Hardness
Bold values indicate CCME exceedence

Cullaton Lake
Water Quality Monitoring
September 14, 2020
Water Analysis Certificate and Quality Control Report

Barrick Gold of North America.
ATTN: Paul Brugger
Attention: Allison Brown Closure Group
2270 Corporate Circle, Suite 100
Henderson NV 89074

Date Received: 17-SEP-20
Report Date: 05-OCT-20 15:03 (MT)
Version: FINAL

Client Phone: --

Certificate of Analysis

Lab Work Order #: L2504259

Project P.O. #: NOT SUBMITTED
Job Reference: CULLATON LAKE
C of C Numbers:
Legal Site Desc:

Christine Paradis
Project Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L2504259-1 Surface Water 14-SEP-20 13:15 940-02A	L2504259-2 Surface Water 14-SEP-20 13:15 940-02B	L2504259-3 Surface Water 14-SEP-20 12:30 940-03/SW33A	L2504259-4 Surface Water 14-SEP-20 12:30 940-03/SW33B	L2504259-5 Surface Water 14-SEP-20 14:00 SW9A
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	264	264	401	401	42.6
	Hardness (as CaCO3) (mg/L)	103 HTC	104 HTC	169 HTC	167 HTC	18.6 HTC
	pH (pH)	7.85	7.84	8.12	8.14	6.97
	Total Suspended Solids (mg/L)	<3.0	<3.0	<3.0	<3.0	<3.0
	Total Dissolved Solids (mg/L)	151	153	246	243	38
Anions and Nutrients	Acceptable % Difference	PASS	PASS	PASS	PASS	PASS
	Acidity (as CaCO3) (mg/L)	<2.0	<2.0	<2.0	<2.0	2.6
	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	59.3	61.2	138	141	10.9
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0
	Alkalinity, Total (as CaCO3) (mg/L)	59.3	61.2	138	141	10.9
	Chloride (Cl) (mg/L)	1.04	1.03	2.40	2.31	0.36
	Sulfate (SO4) (mg/L)	70.3	71.7	81.8	80.9	7.40
	Anion Sum (meq/L)	2.68	2.75	4.52	4.56	0.38
	Cation Sum (meq/L)	2.47	2.48	4.12	4.09	0.48
	Cation - Anion Balance (%)	-4.0	-5.0	-4.7	-5.4	11.1
Organic / Inorganic Carbon	Total Organic Carbon (mg/L)	<5.0 DLM	<5.0 DLM	15.5 DLM	20.9 DLM	11.3 DLM
Total Metals	Aluminum (Al)-Total (mg/L)	0.0068	0.0043	0.0089	0.0092	0.189
	Antimony (Sb)-Total (mg/L)	0.00011	0.00012	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.0038	0.0037	0.0024	0.0023	<0.0010
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000173
	Calcium (Ca)-Total (mg/L)	26.6	26.8	39.4	38.6	5.04
	Chromium (Cr)-Total (mg/L)	0.00025	0.00019	0.00020	0.00030	0.00060
	Cobalt (Co)-Total (mg/L)	0.00190	0.00187	0.00051	0.00049	0.00107
	Copper (Cu)-Total (mg/L)	0.0012	0.0012	0.0016	0.0016	0.0033
	Iron (Fe)-Total (mg/L)	0.103	0.099	0.083	0.083	0.525
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Total (mg/L)	<0.0010	<0.0010	0.0016	0.0016	0.0010
	Magnesium (Mg)-Total (mg/L)	8.88	8.86	17.0	17.3	1.45
	Manganese (Mn)-Total (mg/L)	0.00896	0.00880	0.00815	0.00804	0.0302
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Molybdenum (Mo)-Total (mg/L)	0.000824	0.000814	0.000358	0.000361	<0.000050
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	0.0026	0.0025	0.0038
	Potassium (K)-Total (mg/L)	1.90	1.88	2.15	2.14	0.671
	Selenium (Se)-Total (mg/L)	0.000101	0.000102	0.000076	0.000067	0.000051
	Sodium (Na)-Total (mg/L)	8.23	8.31	15.9	15.8	0.892

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L2504259-6 Surface Water 14-SEP-20 14:00 SW9B	L2504259-7 Surface Water 14-SEP-20 11:45 SW18A	L2504259-8 Surface Water 14-SEP-20 11:45 SW18B	L2504259-9 Surface Water 14-SEP-20 13:15 FIELD BLANK 1	L2504259-10 Surface Water 14-SEP-20 14:00 FIELD BLANK 2
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	42.7	71.5	71.9	1.6	1.7
	Hardness (as CaCO3) (mg/L)	18.3 HTC	38.0 HTC	39.4 HTC	<0.51 HTC	<0.51 HTC
	pH (pH)	6.98	7.55	7.55	5.83	5.92
	Total Suspended Solids (mg/L)	<3.0	<3.0	<3.0	<3.0	<3.0
	Total Dissolved Solids (mg/L)	31	68	58	<10	<10
Anions and Nutrients	Acceptable % Difference	PASS	PASS	PASS	PASS	PASS
	Acidity (as CaCO3) (mg/L)	2.6	2.4	2.1	<2.0	<2.0
	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	11.3	39.3	37.2	<2.0	<2.0
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0
	Alkalinity, Total (as CaCO3) (mg/L)	11.3	39.3	37.2	<2.0	<2.0
	Chloride (Cl) (mg/L)	0.20	0.33	0.39	<0.10	<0.10
	Sulfate (SO4) (mg/L)	7.31	1.61	1.63	<0.30	<0.30
	Anion Sum (meq/L)	0.38	0.83	0.79	<0.10	<0.10
	Cation Sum (meq/L)	0.47	0.83	0.86	<0.10	<0.10
	Cation - Anion Balance (%)	10.0	0.3	4.6	0.0	0.0
Organic / Inorganic Carbon	Total Organic Carbon (mg/L)	13.8 DLM	27.7 DLM	24.9 DLM	<0.50	<0.50
Total Metals	Aluminum (Al)-Total (mg/L)	0.184	0.0393	0.0403	<0.0030	<0.0030
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	<0.0010	0.0019	0.0019	<0.0010	<0.0010
	Cadmium (Cd)-Total (mg/L)	0.0000132	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Calcium (Ca)-Total (mg/L)	4.97	10.0	10.4	<0.20	<0.20
	Chromium (Cr)-Total (mg/L)	0.00064	0.00031	0.00034	0.00014 RRV	0.00011 RRV
	Cobalt (Co)-Total (mg/L)	0.00107	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)	0.0032	0.0011	0.0011	<0.0010	<0.0010
	Iron (Fe)-Total (mg/L)	0.502	0.138	0.141	<0.020	<0.020
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Total (mg/L)	0.0011	<0.0010	0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Total (mg/L)	1.42	3.14	3.25	<0.020	<0.020
	Manganese (Mn)-Total (mg/L)	0.0299	0.00573	0.00559	0.00012 RRV	0.00011 RRV
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Molybdenum (Mo)-Total (mg/L)	<0.000050	0.000056	0.000058	<0.000050	<0.000050
	Nickel (Ni)-Total (mg/L)	0.0038	0.0021	0.0021	<0.0020	<0.0020
	Potassium (K)-Total (mg/L)	0.665	0.793	0.805	<0.050	<0.050
	Selenium (Se)-Total (mg/L)	0.000053	0.000056	0.000082	<0.000050	<0.000050
	Sodium (Na)-Total (mg/L)	0.868	0.980	0.993	0.167 RRV	0.238 RRV

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L2504259-1	L2504259-2	L2504259-3	L2504259-4	L2504259-5
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	14-SEP-20	14-SEP-20	14-SEP-20	14-SEP-20	14-SEP-20
	Sampled Time	13:15	13:15	12:30	12:30	14:00
	Client ID	940-02A	940-02B	940-03/SW33A	940-03/SW33B	SW9A
Grouping	**Analyte**					
WATER						
Total Metals	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Total (mg/L)	0.000262	0.000265	0.00129	0.00124	0.000133
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	0.00062
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L2504259-6	L2504259-7	L2504259-8	L2504259-9	L2504259-10
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	14-SEP-20	14-SEP-20	14-SEP-20	14-SEP-20	14-SEP-20
	Sampled Time	14:00	11:45	11:45	13:15	14:00
	Client ID	SW9B	SW18A	SW18B	FIELD BLANK 1	FIELD BLANK 2
Grouping	**Analyte**					
WATER						
Total Metals	Thorium (Th)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Uranium (U)-Total (mg/L)	0.000136	0.000074	0.000077	<0.000010	<0.000010
	Vanadium (V)-Total (mg/L)	0.00060	0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Calcium (Ca)-Total	MS-B	L2504259-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L2504259-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2504259-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2504259-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L2504259-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L2504259-1, -10, -2, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
HTC	Hardness was calculated from Total Ca and/or Mg concentrations and may be biased high (dissolved Ca/Mg results unavailable).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACY-TITR-TB	Water	Acidity	APHA 2310 B modified

This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.

ALK-CO3-TITR-CALC-TB	Water	Alkalinity, Carbonate (as CaCO3)	CALCULATION
ALK-HCO3TITR-CALC-TB	Water	Alkalinity, Bicarbonate (as CaCO3)	CALCULATION
ALK-OH-TITR-CALC-TB	Water	Alkalinity, Hydroxide (as CaCO3)	CALCULATION
ALK-TITR-TB	Water	Alkalinity	APHA 2320B modified

This analysis is carried out using procedures adapted from APHA Method 2320 "Alkalinity". Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.

CL-L-IC-N-TB	Water	Chloride in Water by IC (Low Level)	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

EC-TITR-TB	Water	Conductivity	APHA 2510 B

This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.

HARDNESS-CALC-TB	Water	Hardness (as CaCO3)	CALCULATION
HG-T-CVAA-WT	Water	Total Mercury in Water by CVAAS	EPA 1631E (mod)

Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

IONBALANCE-TB	Water	Ion Balance Calculation	APHA 1030 E - CALCULATION

Cation Sum, Anion Sum, and Ion Balance (as % difference) are calculated based on guidance from APHA Standard Methods (1030E Checking Correctness of Analysis). Because all aqueous solutions are electrically neutral, the calculated ion balance (% difference of cations minus anions) should be near-zero.

Cation and Anion Sums are the total meq/L concentration of major cations and anions. Dissolved species are used where available. Minor ions are included where data is present. Ion Balance is calculated as:

Ion Balance (%) = [Cation Sum-Anion Sum] / [Cation Sum+Anion Sum]

MET-T-CCMS-TB	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020B (mod)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

PH-TITR-TB	Water	pH	APHA 4500-H

Reference Information

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

SO4-IC-N-TB	Water	Sulfate in Water by IC	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

TDS-TB	Water	Total Dissolved Solids	APHA 2540 C (modified)

Aqueous matrices are analyzed using gravimetry and evaporation

TOC-WT	Water	Total Organic Carbon	APHA 5310B

Sample is injected into a heated reaction chamber which is packed with an oxidative catalyst. The water is vaporized and the organic cabon is oxidized to carbon dioxide. The carbon dioxide is transported in a carrier gas and is measured by a non-dispersive infrared detector.

TSS-TB	Water	Total Suspended Solids	APHA 2540 D (modified)

Aqueous matrices are analyzed using gravimetry

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.
mg/kg - milligrams per kilogram based on dry weight of sample.
mg/kg wwt - milligrams per kilogram based on wet weight of sample.
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.
mg/L - milligrams per litre.
< - Less than.
D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L2504259 Report Date: 16-MAR-21

Client: Barrick Gold of North America.
Attention: Allison Brown Closure Group 2270 Corporate Circle, Suite 100
Henderson NV 89074

Contact: Paul Brugger

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACY-TITR-TB	**Water**							
Batch R5231130								
WG3406916-3 DUP		**L2504259-7**						
Acidity (as CaCO3)		2.4	2.4		mg/L	0.8	20	19-SEP-20
WG3406916-2 LCS								
Acidity (as CaCO3)			99.9		%		85-115	19-SEP-20
WG3406916-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		4	19-SEP-20
ALK-TITR-TB	**Water**							
Batch R5230813								
WG3406900-3 DUP		**L2504386-1**						
Alkalinity, Total (as CaCO3)		77.5	79.6		mg/L	2.7	20	18-SEP-20
WG3406900-2 LCS								
Alkalinity, Total (as CaCO3)			112.7		%		85-115	18-SEP-20
WG3406900-1 MB								
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	18-SEP-20
CL-L-IC-N-TB	**Water**							
Batch R5230812								
WG3406937-5 DUP		**L2503686-2**						
Chloride (Cl)		140	142		mg/L	1.5	20	18-SEP-20
WG3406937-2 LCS								
Chloride (Cl)			95.1		%		90-110	18-SEP-20
WG3406937-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	18-SEP-20
WG3406937-6 MS		**L2504185-2**						
Chloride (Cl)			102.3		%		75-125	18-SEP-20
EC-TITR-TB	**Water**							
Batch R5230813								
WG3406900-3 DUP		**L2504386-1**						
Conductivity (EC)		168	168		uS/cm	0.1	10	18-SEP-20
WG3406900-2 LCS								
Conductivity (EC)			100.7		%		90-110	18-SEP-20
WG3406900-1 MB								
Conductivity (EC)			1.1		uS/cm		2	18-SEP-20
HG-T-CVAA-WT	**Water**							
Batch R5231528								
WG3408759-3 DUP		**L2503878-19**						
Mercury (Hg)-Total		<0.0000050	<0.000005(	RPD-NA	mg/L	N/A	20	21-SEP-20
WG3408759-2 LCS								

Quality Control Report

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Henderson NV 89074
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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-CVAA-WT	**Water**							
Batch R5231528								
WG3408759-2 LCS								
Mercury (Hg)-Total			88.5		%		80-120	21-SEP-20
WG3408759-1 MB								
Mercury (Hg)-Total			<0.000005(		mg/L		0.000005	21-SEP-20
WG3408759-4 MS		**L2503878-20**						
Mercury (Hg)-Total			88.6		%		70-130	21-SEP-20
Batch R5232103								
WG3408763-3 DUP		**L2504259-4**						
Mercury (Hg)-Total		<0.0000050	<0.000005(	RPD-NA	mg/L	N/A	20	22-SEP-20
WG3408763-2 LCS								
Mercury (Hg)-Total			98.6		%		80-120	22-SEP-20
WG3408763-1 MB								
Mercury (Hg)-Total			<0.000005(		mg/L		0.000005	22-SEP-20
WG3408763-4 MS		**L2504259-5**						
Mercury (Hg)-Total			93.1		%		70-130	22-SEP-20
MET-T-CCMS-TB	**Water**							
Batch R5231596								
WG3407352-3 DUP		**L2504173-2**						
Aluminum (Al)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	18-SEP-20
Antimony (Sb)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	18-SEP-20
Arsenic (As)-Total		0.00013	0.00013		mg/L	0.1	20	18-SEP-20
Cadmium (Cd)-Total		<0.0000050	<0.000005(	RPD-NA	mg/L	N/A	20	18-SEP-20
Calcium (Ca)-Total		3.79	3.80		mg/L	0.2	20	18-SEP-20
Chromium (Cr)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	18-SEP-20
Cobalt (Co)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	18-SEP-20
Copper (Cu)-Total		0.00059	0.00064		mg/L	8.6	20	18-SEP-20
Iron (Fe)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	18-SEP-20
Lead (Pb)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	18-SEP-20
Lithium (Li)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	18-SEP-20
Magnesium (Mg)-Total		0.925	1.01		mg/L	8.9	20	18-SEP-20
Manganese (Mn)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	18-SEP-20
Molybdenum (Mo)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	18-SEP-20
Nickel (Ni)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	18-SEP-20
Potassium (K)-Total		0.274	0.301		mg/L	9.5	20	18-SEP-20
Selenium (Se)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	18-SEP-20

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-TB	**Water**							
Batch R5231596								
WG3407352-3 DUP		**L2504173-2**						
Sodium (Na)-Total		1.87	1.96		mg/L	4.6	20	18-SEP-20
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	18-SEP-20
Uranium (U)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	18-SEP-20
Vanadium (V)-Total		0.00050	<0.00050	RPD-NA	mg/L	N/A	20	18-SEP-20
Zinc (Zn)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	18-SEP-20
WG3407352-7 DUP		**L2504396-4**						
Aluminum (Al)-Total		0.0040	0.0041		mg/L	3.1	20	18-SEP-20
Antimony (Sb)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	18-SEP-20
Arsenic (As)-Total		0.00027	0.00028		mg/L	4.3	20	18-SEP-20
Cadmium (Cd)-Total		<0.0000050	0.0000051	RPD-NA	mg/L	N/A	20	18-SEP-20
Calcium (Ca)-Total		226	228		mg/L	0.9	20	18-SEP-20
Chromium (Cr)-Total		0.00015	0.00014		mg/L	2.1	20	18-SEP-20
Cobalt (Co)-Total		0.00014	0.00014		mg/L	0.1	20	18-SEP-20
Copper (Cu)-Total		0.00076	0.00077		mg/L	1.2	20	18-SEP-20
Iron (Fe)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	18-SEP-20
Lead (Pb)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	18-SEP-20
Lithium (Li)-Total		0.0042	0.0041		mg/L	1.5	20	18-SEP-20
Magnesium (Mg)-Total		37.8	37.9		mg/L	0.3	20	18-SEP-20
Manganese (Mn)-Total		0.0137	0.0135		mg/L	1.5	20	18-SEP-20
Molybdenum (Mo)-Total		0.000112	0.000110		mg/L	1.9	20	18-SEP-20
Nickel (Ni)-Total		0.00214	0.00215		mg/L	0.6	20	18-SEP-20
Potassium (K)-Total		1.34	1.35		mg/L	0.7	20	18-SEP-20
Selenium (Se)-Total		0.00570	0.00573		mg/L	0.7	20	18-SEP-20
Sodium (Na)-Total		0.551	0.552		mg/L	0.2	20	18-SEP-20
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	18-SEP-20
Uranium (U)-Total		0.000128	0.000115		mg/L	10	20	18-SEP-20
Vanadium (V)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	18-SEP-20
Zinc (Zn)-Total		0.0041	0.0041		mg/L	1.1	20	18-SEP-20
WG3407352-2 LCS								
Aluminum (Al)-Total			103.2		%		80-120	18-SEP-20
Antimony (Sb)-Total			108.5		%		80-120	18-SEP-20
Arsenic (As)-Total			105.5		%		80-120	18-SEP-20
Cadmium (Cd)-Total			100.1		%		80-120	18-SEP-20

Quality Control Report

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Henderson NV 89074
Contact: Paul Brugger

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-TB	**Water**							
Batch R5231596								
WG3407352-2 LCS								
Calcium (Ca)-Total			107.1		%		80-120	18-SEP-20
Chromium (Cr)-Total			102.5		%		80-120	18-SEP-20
Cobalt (Co)-Total			101.5		%		80-120	18-SEP-20
Copper (Cu)-Total			99.8		%		80-120	18-SEP-20
Iron (Fe)-Total			116.8		%		80-120	18-SEP-20
Lead (Pb)-Total			110.6		%		80-120	18-SEP-20
Lithium (Li)-Total			112.8		%		80-120	18-SEP-20
Magnesium (Mg)-Total			109.2		%		80-120	18-SEP-20
Manganese (Mn)-Total			103.6		%		80-120	18-SEP-20
Molybdenum (Mo)-Total			108.9		%		80-120	18-SEP-20
Nickel (Ni)-Total			101.4		%		80-120	18-SEP-20
Potassium (K)-Total			107.6		%		80-120	18-SEP-20
Selenium (Se)-Total			104.9		%		80-120	18-SEP-20
Sodium (Na)-Total			107.3		%		80-120	18-SEP-20
Thorium (Th)-Total			112.0		%		80-120	18-SEP-20
Uranium (U)-Total			104.9		%		80-120	18-SEP-20
Vanadium (V)-Total			102.0		%		80-120	18-SEP-20
Zinc (Zn)-Total			102.6		%		80-120	18-SEP-20
WG3407352-6 LCS								
Aluminum (Al)-Total			103.8		%		80-120	18-SEP-20
Antimony (Sb)-Total			96.0		%		80-120	18-SEP-20
Arsenic (As)-Total			104.1		%		80-120	18-SEP-20
Cadmium (Cd)-Total			98.2		%		80-120	18-SEP-20
Calcium (Ca)-Total			99.6		%		80-120	18-SEP-20
Chromium (Cr)-Total			100.8		%		80-120	18-SEP-20
Cobalt (Co)-Total			99.4		%		80-120	18-SEP-20
Copper (Cu)-Total			97.0		%		80-120	18-SEP-20
Iron (Fe)-Total			116.1		%		80-120	18-SEP-20
Lead (Pb)-Total			102.4		%		80-120	18-SEP-20
Lithium (Li)-Total			108.9		%		80-120	18-SEP-20
Magnesium (Mg)-Total			109.6		%		80-120	18-SEP-20
Manganese (Mn)-Total			102.2		%		80-120	18-SEP-20
Molybdenum (Mo)-Total			101.2		%		80-120	18-SEP-20
Nickel (Ni)-Total			99.4		%		80-120	18-SEP-20

Quality Control Report

Client: Barrick Gold of North America.
Attention: Allison Brown Closure Group 2270 Corporate Circle, Suite 100
Henderson NV 89074
Contact: Paul Brugger

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-TB	**Water**							
Batch R5231596								
WG3407352-6 LCS								
Potassium (K)-Total			106.4		%		80-120	18-SEP-20
Selenium (Se)-Total			98.5		%		80-120	18-SEP-20
Sodium (Na)-Total			107.6		%		80-120	18-SEP-20
Thorium (Th)-Total			103.8		%		80-120	18-SEP-20
Uranium (U)-Total			98.2		%		80-120	18-SEP-20
Vanadium (V)-Total			103.3		%		80-120	18-SEP-20
Zinc (Zn)-Total			98.3		%		80-120	18-SEP-20
WG3407352-1 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	18-SEP-20
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	18-SEP-20
Arsenic (As)-Total			<0.00010		mg/L		0.0001	18-SEP-20
Cadmium (Cd)-Total			<0.000005(		mg/L		0.000005	18-SEP-20
Calcium (Ca)-Total			<0.050		mg/L		0.05	18-SEP-20
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	18-SEP-20
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	18-SEP-20
Copper (Cu)-Total			<0.00050		mg/L		0.0005	18-SEP-20
Iron (Fe)-Total			<0.010		mg/L		0.01	18-SEP-20
Lead (Pb)-Total			<0.000050		mg/L		0.00005	18-SEP-20
Lithium (Li)-Total			<0.0010		mg/L		0.001	18-SEP-20
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	18-SEP-20
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	18-SEP-20
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	18-SEP-20
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	18-SEP-20
Potassium (K)-Total			<0.050		mg/L		0.05	18-SEP-20
Selenium (Se)-Total			<0.000050		mg/L		0.00005	18-SEP-20
Sodium (Na)-Total			<0.050		mg/L		0.05	18-SEP-20
Thorium (Th)-Total			<0.00010		mg/L		0.0001	18-SEP-20
Uranium (U)-Total			<0.000010		mg/L		0.00001	18-SEP-20
Vanadium (V)-Total			<0.00050		mg/L		0.0005	18-SEP-20
Zinc (Zn)-Total			<0.0030		mg/L		0.003	18-SEP-20
WG3407352-5 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	18-SEP-20
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	18-SEP-20
Arsenic (As)-Total			<0.00010		mg/L		0.0001	18-SEP-20

Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-TB	**Water**							
Batch R5231596								
WG3407352-5 MB								
Cadmium (Cd)-Total			<0.000005(		mg/L		0.000005	18-SEP-20
Calcium (Ca)-Total			<0.050		mg/L		0.05	18-SEP-20
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	18-SEP-20
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	18-SEP-20
Copper (Cu)-Total			<0.00050		mg/L		0.0005	18-SEP-20
Iron (Fe)-Total			<0.010		mg/L		0.01	18-SEP-20
Lead (Pb)-Total			<0.000050		mg/L		0.00005	18-SEP-20
Lithium (Li)-Total			<0.0010		mg/L		0.001	18-SEP-20
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	18-SEP-20
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	18-SEP-20
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	18-SEP-20
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	18-SEP-20
Potassium (K)-Total			<0.050		mg/L		0.05	18-SEP-20
Selenium (Se)-Total			<0.000050		mg/L		0.00005	18-SEP-20
Sodium (Na)-Total			<0.050		mg/L		0.05	18-SEP-20
Thorium (Th)-Total			<0.00010		mg/L		0.0001	18-SEP-20
Uranium (U)-Total			<0.000010		mg/L		0.00001	18-SEP-20
Vanadium (V)-Total			<0.00050		mg/L		0.0005	18-SEP-20
Zinc (Zn)-Total			<0.0030		mg/L		0.003	18-SEP-20
WG3407352-4 MS		**L2504259-1**						
Aluminum (Al)-Total			105.9		%		70-130	18-SEP-20
Antimony (Sb)-Total			108.7		%		70-130	18-SEP-20
Arsenic (As)-Total			110.3		%		70-130	18-SEP-20
Cadmium (Cd)-Total			106.2		%		70-120	18-SEP-20
Calcium (Ca)-Total			N/A	MS-B	%		-	18-SEP-20
Chromium (Cr)-Total			107.3		%		70-130	18-SEP-20
Cobalt (Co)-Total			107.7		%		70-130	18-SEP-20
Copper (Cu)-Total			104.6		%		70-130	18-SEP-20
Iron (Fe)-Total			108.0		%		70-130	18-SEP-20
Lead (Pb)-Total			110.7		%		70-130	18-SEP-20
Lithium (Li)-Total			108.4		%		70-130	18-SEP-20
Magnesium (Mg)-Total			N/A	MS-B	%		-	18-SEP-20
Manganese (Mn)-Total			106.4		%		70-130	18-SEP-20
Molybdenum (Mo)-Total			109.7		%		70-130	18-SEP-20

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-TB	**Water**							
Batch R5231596								
WG3407352-4 MS		**L2504259-1**						
Nickel (Ni)-Total			108.0		%		70-130	18-SEP-20
Potassium (K)-Total			100.5		%		70-130	18-SEP-20
Selenium (Se)-Total			112.4		%		70-130	18-SEP-20
Sodium (Na)-Total			N/A	MS-B	%		-	18-SEP-20
Thorium (Th)-Total			116.0		%		70-130	18-SEP-20
Uranium (U)-Total			110.5		%		70-130	18-SEP-20
Vanadium (V)-Total			108.0		%		70-130	18-SEP-20
Zinc (Zn)-Total			105.3		%		70-130	18-SEP-20
WG3407352-8 MS		**L2504396-5**						
Aluminum (Al)-Total			98.0		%		70-130	18-SEP-20
Antimony (Sb)-Total			100.1		%		70-130	18-SEP-20
Arsenic (As)-Total			104.2		%		70-130	18-SEP-20
Cadmium (Cd)-Total			96.9		%		70-120	18-SEP-20
Calcium (Ca)-Total			N/A	MS-B	%		-	18-SEP-20
Chromium (Cr)-Total			99.3		%		70-130	18-SEP-20
Cobalt (Co)-Total			99.9		%		70-130	18-SEP-20
Copper (Cu)-Total			95.6		%		70-130	18-SEP-20
Iron (Fe)-Total			95.8		%		70-130	18-SEP-20
Lead (Pb)-Total			100.0		%		70-130	18-SEP-20
Lithium (Li)-Total			90.8		%		70-130	18-SEP-20
Magnesium (Mg)-Total			N/A	MS-B	%		-	18-SEP-20
Manganese (Mn)-Total			N/A	MS-B	%		-	18-SEP-20
Molybdenum (Mo)-Total			104.7		%		70-130	18-SEP-20
Nickel (Ni)-Total			97.1		%		70-130	18-SEP-20
Potassium (K)-Total			97.0		%		70-130	18-SEP-20
Selenium (Se)-Total			104.0		%		70-130	18-SEP-20
Sodium (Na)-Total			100.1		%		70-130	18-SEP-20
Thorium (Th)-Total			108.4		%		70-130	18-SEP-20
Uranium (U)-Total			103.4		%		70-130	18-SEP-20
Vanadium (V)-Total			103.7		%		70-130	18-SEP-20
Zinc (Zn)-Total			96.6		%		70-130	18-SEP-20
PH-TITR-TB	**Water**							

Quality Control Report

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Henderson NV 89074
Contact: Paul Brugger

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-TITR-TB	**Water**							
Batch R5230813								
WG3406900-3 DUP		**L2504386-1**						
pH		7.88	7.86	J	pH	0.02	0.2	18-SEP-20
WG3406900-2 LCS								
pH			6.99		pH		6.9-7.1	18-SEP-20
SO4-IC-N-TB	**Water**							
Batch R5230812								
WG3406937-5 DUP		**L2503686-2**						
Sulfate (SO4)		207	210		mg/L	1.1	20	18-SEP-20
WG3406937-2 LCS								
Sulfate (SO4)			96.3		%		90-110	18-SEP-20
WG3406937-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	18-SEP-20
WG3406937-6 MS		**L2504185-2**						
Sulfate (SO4)			102.6		%		75-125	18-SEP-20
TDS-TB	**Water**							
Batch R5231128								
WG3408216-3 DUP		**L2504244-1**						
Total Dissolved Solids		1260	1280		mg/L	1.3	20	19-SEP-20
WG3408216-2 LCS								
Total Dissolved Solids			96.8		%		85-115	19-SEP-20
WG3408216-1 MB								
Total Dissolved Solids			<10		mg/L		10	19-SEP-20
Batch R5231138								
WG3408120-3 DUP		**L2503968-2**						
Total Dissolved Solids		212	217		mg/L	2.1	20	19-SEP-20
WG3408120-2 LCS								
Total Dissolved Solids			98.1		%		85-115	19-SEP-20
WG3408120-1 MB								
Total Dissolved Solids			<10		mg/L		10	19-SEP-20
TOC-WT	**Water**							
Batch R5235124								
WG3408494-3 DUP		**L2504259-10**						
Total Organic Carbon		<0.50	<0.50	RPD-NA	mg/L	N/A	20	23-SEP-20
WG3408494-2 LCS								
Total Organic Carbon			90.9		%		80-120	23-SEP-20
WG3408494-1 MB								
Total Organic Carbon			<0.50		mg/L		0.5	23-SEP-20

Quality Control Report

Client: Barrick Gold of North America.
Attention: Allison Brown Closure Group 2270 Corporate Circle, Suite 100
Henderson NV 89074
Contact: Paul Brugger

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TOC-WT	**Water**							
Batch R5235124								
WG3408494-4 MS		**L2504259-10**						
Total Organic Carbon			97.0		%		70-130	23-SEP-20
Batch R5244054								
WG3414896-2 LCS								
Total Organic Carbon			95.2		%		80-120	01-OCT-20
WG3414896-1 MB								
Total Organic Carbon			<0.50		mg/L		0.5	01-OCT-20
TSS-TB	**Water**							
Batch R5231253								
WG3408127-3 DUP		**L2503968-2**						
Total Suspended Solids		20.4	20.2		mg/L	1.0	20	19-SEP-20
WG3408127-2 LCS								
Total Suspended Solids			89.7		%		85-115	19-SEP-20
WG3408127-1 MB								
Total Suspended Solids			<3.0		mg/L		3	19-SEP-20
Batch R5232093								
WG3408987-3 DUP		**L2504879-3**						
Total Suspended Solids		3450	3580		mg/L	3.9	20	21-SEP-20
WG3408987-2 LCS								
Total Suspended Solids			92.3		%		85-115	21-SEP-20
WG3408987-1 MB								
Total Suspended Solids			<3.0		mg/L		3	21-SEP-20

Quality Control Report

Workorder: L2504259 Report Date: 16-MAR-21

Client: Barrick Gold of North America.
Attention: Allison Brown Closure Group 2270 Corporate Circle, Suite 100
Henderson NV 89074
Contact: Paul Brugger

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Appendix 3
September 12, 2020
Thermistor Monitoring Results

THERMISTOR MONITORING RESULTS
Station 940-21

2020 Thermistor Readings for 940-21								
	T18-1		T18-2		T18-3		T18-4	
Node No	Depth (mbgs)	Temp°C	Depth (mbgs)	Temp°C	mbgs	Temp°C	mbgs	Temp°C
7 orange	-0.31	0	-0.81	11.6	-1.33	15.4	-1.12	12.2
6 brown	0.19	5.1	-0.31	11.6	-0.83	N/R	-0.62	N/R
5 yellow	0.69	N/R	0.19	6.5	-0.33	N/R	-0.12	11.4
4 blue	1.19	N/R	0.69	3.9	0.17	N/R	0.38	N/R
3 green	1.69	1.2	1.19	3.0	0.67	N/R	0.88	3.0
2 white	2.19	-0.6	1.69	1.1	1.17	3.1	1.38	N/R
1 red	3.44	-1.3	2.94	-0.6	2.42	-0.4	2.63	-1.0
Stick up (m) (1)	1.42		1.51		1.66		1.65	

Notes:
(1) After 2020 casing repairs

Appendix 4
2021 Spill Response Plan

CULLATON LAKE
ENVIRONMENTAL SPILL RESPONSE PLAN

COMPANY INFORMATION

Cullaton Lake Gold Mines Ltd. is wholly owned by Barrick Gold Inc. The Barrick head office responsible for the site is located at:

Barrick Gold Inc.
BCE Place, Canada Trust Tower, Suite 3700
161 Bay Street, P.O. Box 212
Toronto, Ontario
M5J 2S1

The site manager is:

Paul Brugger,
Barrick Gold Inc.
1084 County Rd 8
Campbellford, Ontario
K0L 1L0
Phone: 705-632-1871
Cell: 807-631-4895
e-mail: pbrugger@barrick.com

SITE LOCATION:

The Cullaton Lake property is located in the southern part of the District of Keewatin in the Nunavut Territory. The property is 250 km west of Arviat, NU, 400 km northwest of Churchill, Manitoba and 645 km north of Thompson, Manitoba. A topographic map is attached as Figure 1.

PROJECT HISTORY AND CURRENT ACTIVITY:

Cullaton Lake operated as an underground gold mine for four years from 1981 to 1985. Decommissioning and reclamation began in 1991 and was completed in 2001. By the end of 2001, all mine buildings had been removed, roads were decommissioned and the tailings impoundment area was reclaimed. No chemicals, fuels or reagents remain on site.

Present site activities consist of a single one to five day annual visit for inspection, monitoring and maintenance purposes. The site is dormant and uninhabited for the remainder of the year.

REVISIONS AND EFFECTIVE DATE OF PLAN:

This plan was last reviewed and revised on March 12, 2021 and is effective until March 31, 2022.

SPILL CONTROL AND REPORTING PROCEDURES:

Should it be necessary to mobilize contractors to the site for any reason in the future, the contractor will be required to supply spill control and clean up materials, have a spill control plan and train personnel in spill response procedures.

Upon discovery of a spill, the person discovering the spill will take the following actions:

INITIAL ACTIONS:

a. Stop the flow if possible.
b. Eliminate open flame ignition sources (i.e. extinguish cigarettes, shut off motors (from a remote location if surrounded by vapours).
c. Contain flow of fuel by dyking, barricading or blocking flow by any means available. Use earth-moving equipment if available. A dam made of earth or other available fill can be quickly constructed to contain and prevent a spill from spreading. If the ground is permeable, it may be necessary to excavate a shallow depression and line it with plastic to prevent the spill from seeping away.

ACTION IN CASE OF FIRE:

a. Use $C0_2$, dry chemical, foam or water spray (fog), although water may spread the fire.
b. Use jet streams to wash away burning gasoline.
c. Use fog streams to protect any rescue team and trapped people.
d. Use water to cool surface of tanks.
e. Divert the oil or gasoline to an open area and let it burn off under control. If the fire is put out before all the fuel is consumed, beware of re-ignition. Rubber tires are almost impossible to extinguish after igniting with fire. Remove vehicles with burning tires from the danger area.

RECOVERY PROCEDURE:

a. Unburned oil or gasoline can be soaked up by sand and peat moss, or by commercial absorbents such as Graboil.
b. If necessary, contaminated soil should be excavated and disposed of as per the following section.
c. Fuel entering the ground can be recovered by digging sumps or trenches.

DISPOSAL:

a. Evaporation may be used if appropriate.
b. Disposal as per the approved Abandonment and Restoration (1996) Plan.

REPORTING:

An individual discovering a spill must report it as soon as possible to the 24 hour Spill Report Line by calling:

(867) 920-8130

(1) A person reporting a spill shall give as much of the following information as possible:

- date and time of spill
- location of spill
- direction spill is moving
- name and phone number of a contact person close to the location of the spill
- type and description of contaminant spilled including an estimate of the quantity
- cause of spill
- status of spill (i.e. continuing or stopped)
- action taken to contain, recover, clean-up, and dispose of contaminant
- name, address and phone number of person reporting the spill
- name of owner, or person in charge or control of contaminant at time of spill

(2) No person shall delay reporting a spill because of lack of knowledge of the factors listed in subsection (1).

(3) The person reporting the spill shall also contact:

- INAC Manager of Field Operations at: (**867) 975-4295**
- Environment Canada at **(867) 920-8130**
- Government of Nunavut Environmental Protection at **(867) 975-7700**
- Kivalliq Inuit Association at **(867) 645-5733** or **1-800-220-6581 Contact Stephen Hartman**
- Barrick Gold Corporation :

  Paul Brugger,
  Site Manager
  Phone: **705-632-1871**
  Cell: 807-631-4895

  Alternate:
  Allison Brown,
  Canadian Closed Sites Manager
  Cell: **778-929-3079**
- If required:
  - RCMP – Arviat at **(867) 857-0123**
  - Arviat Hospital at **(867) 857-3100**
  - Arviat Fire Response at **(867) 857-9999**

(4) The attached NT-NU Spill Report will also be completed and submitted to the Nunavut spills reporting office at fax: (867) 873-6924 or email spills@gov.nt.ca

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

Government of Northwest Territories | Nunavut | Canada | Inuvialuit Land Administration

NT-NU 24-HOUR SPILL REPORT LINE
Tel: (867) 920-8130 • Fax: (867) 873-6924 • Email: spills@gov.nt.ca

REPORT LINE USE ONLY

A	Report Date: MM DD YY	Report Time:	☐ Original Spill Report **OR** ☐ Update # _____ to the Original Spill Report	**Report Number:**
B	Occurrence Date: MM DD YY	Occurrence Time:		
C	Land Use Permit Number (if applicable):		Water Licence Number (if applicable):	
D	Geographic Place Name or Distance and Direction from the Named Location:		Region: ☐ NT ☐ Nunavut ☐ Adjacent Jurisdiction or Ocean	
E	Latitude: _____ Degrees _____ Minutes _____ Seconds		Longitude: _____ Degrees _____ Minutes _____ Seconds	
F	Responsible Party or Vessel Name:		Responsible Party Address or Office Location:	
G	Any Contractor Involved:		Contractor Address or Office Location:	
H	Product Spilled: ☐ Potential Spill	Quantity in Litres, Kilograms or Cubic Metres:	U.N. Number:	
I	Spill Source:	Spill Cause:	Area of Contamination in Square Metres:	
J	Factors Affecting Spill or Recovery:	Describe Any Assistance Required:	Hazards to Persons, Property or Environment:	
K	Additional Information, Comments, Actions Proposed or Taken to Contain, Recover or Dispose of Spilled Product and Contaminated Materials:			

L	Reported to Spill Line by:	Position:	Employer:	Location Calling From:	Telephone:
M	Any Alternate Contact:	Position:	Employer:	Alternate Contact Location:	Alternate Telephone:

REPORT LINE USE ONLY

N	Received at Spill Line by:	Position:	Employer:	Location Called:	Report Line Number:

Lead Agency: ☐ EC ☐ CCG/TCMSS ☐ GNWT ☐ GN ☐ ILA ☐ AANDC ☐ NEB ☐ Other: _____

Significance: ☐ Minor ☐ Major ☐ Unknown

File Status: ☐ Open ☐ Closed

Agency:	**Contact Name:**	**Contact Time:**	**Remarks:**
Lead Agency:			
First Support Agency:			
Second Support Agency:			
Third Support Agency:			

Cullaton Lake

AIRSTRIP

Shear Lake

See Inset A

Kognak River

Tailings Pond #1

Tailings Pond #2

Quarry Pit

A

Encapsulated Waste Rock Pile

Waste Rock Pile

Shear Lake

Shear Creek

0 50 100 m

CANADA

Project Location

Legend

- Quarry Pit
- Encapsulated Waste Rock Pile
- Waste Rock Pile
- Tailings Pond
- Flow Direction

Base Mapping

Contours
- Index (50m)
- Intermediate (10m)

Hydrology
- Waterbody
- Watercourse

- Vegetation
- Wetland
- Road (decommissioned)

Base data: National Topographic Database (NTDB) compiled by Natural Resources Canada at 1:50,000 scale. Sampling performed by Gartner Lee Ltd., June 2008. Road GPS-tracked by Gartner Lee Ltd., June 2008. Airport footprint approximate; for reference purposes only. EWR pile, tailings ponds and quarry outlines, BGC Engineering, Inc. (2006). All other data, AECOM 2009.

N W E S

0 0.5 1
Kilometres

1:30,000
UTM Zone 14N, NAD 83

File Name: 107651_By1_Fig1_CullatonLake_Mar17_2011.mxd

Prepared By: MM Date Issued: Mar, 2011
Reviewed By: KW Project Number: 107651

Barrick Gold

Project: Cullaton Lake Project
Location: Nunavut

Cullaton Lake Site

AECOM

Figure 1

File Location: P:\60146995\000-CADD\050 GIS WIP\By7_Grizzly_Habitat\107651_By1_Fig1_CullatonLake_Mar17_2011.mxd

Date Revised: March 17, 2011
Date Plotted: March 17, 2011