CULLATON LAKE GOLD MINES LTD.

WATER LICENCE 1BR-CUL1118

ANNUAL WATER LICENCE REPORT 2018

PREPARED on behalf of:

BARRICK GOLD INC.

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ᐊᕎᔪᖏᓂ 2018 ᓄᓇᖏᓂ ᐱᓕᕆᓂᐅᓂᐊᖅᑐᑦ ᒪᑭᑦᓗᑎᑐᖅ ᐅᐸᖅᑕᐅᓯᐅᖅᑐᖅ, ᓯᓚᓕᓂᖅ ᔪᓯᐃ 10 ᐊᓘᒪᓗ 11, 2018 ᐃᒪᖏᓂᖅ ᖃᐅᔨᓴᕐᓯᓗᑎᑐᖅ ᑯᐳᑕᐅᔪᒥᑦ ᑯᓚᖅᑐᓚᐅᓂᖅᒥᑦ 2 ᐊᓘᒪᓗ ᓴᓗᒪᓴᖅᑕᐅᑦᓗᓂ ᒥᑦᑕᖅᑯᓚᓂᖅᑐᑦ. ᐱᖃᑕ ᓯᑎᐱᓗ 10–ᒥᑦ 14–ᒧᑦ, 2018 ᖃᐅᔨᓴᓗᐊᖅᑐᑦᓗᑎᑐᖅ ᐊᕎᔪᑕᒪᒃᑯ ᖃᐅᔨᓴᖃᑦᑕᖅᓯᒪᓂᖅᑐᖅ, ᐃᒥᐅᓪᓗ ᐱᐅᑎᓂᖏᓐᓄᑦ, ᐊᓘᒪᓗ ᖁᐊᖏᓂᖏᓐᓄᑦ ᐊᓘᒪᓗ ᑯᓚᖅᑐᓚᐅᓂᐅᑦ ᓴᓇᓯᒪᓂᖏᓐᓄᑦ ᐅᓴᖅᑭᑐᓂᖅ ᒪᓪᓕᐊᓂᖏᓐᓄᑦ No. 1BR-CUL1118, ᑭᖑᓇᖅᑕᐅᓪᓗᑎᑐᖅ ᑎᓴᒪᐃᑦ ᖃᐅᔨᓴᖅᑎᑎᑦ ᐊᐸᓪᓚᕆᒪᔪᑦ ᖁᐊᖏᓂᖅᓴᓂᑦ ᖃᐅᔨᓴᖅᑎᑎᑦ, ᑯᓘᓂᓪᓗ ᖃᐅᔨᓴᖅᓗᑎᑐᖅ ᐊᓘᒪᓗ ᑯᓚᖅᑐᓚᐅᓂᐅᑦ ᓴᓇᓯᒪᓂᖅᑐᑦ ᒥᑦᑕᖅᑯᓚᓂᖅᑐᑦ.

ᓇᐃᓐᓇᕐᓗᒍ, ᖃᐅᔨᓴᖅᓂᕐᓂᑦ ᑕᑭᓯᐸᑎᑎᕐᓂᑦ ᐊᕎᔪᑕᒪᒃᑯ ᖃᐅᔨᓴᖅᓂᑦᑎᓐᓄᑦ ᐅᑯᓂᖏᓐ:

- ᐃᒥᐅᑦ ᐱᐅᑎᒥᓂᖏᓐ ᓯᕿᐸᓪᓕᐊᖏᑦᑕᖅ ᐊᑐᐊᖏᓂᖅ ᒪᓕᒃᓯᒪᔪᑦ ᐱᐅᑎᒥᔨᓕᐊᖅᑯᓂᖅᑐᖅ ᐃᒥᓪᒧᑦ ᐱᔪᓐᓇᐅᑎᖏᓐᓄᑦ ᒪᓕᒃᓕᓗᒍ ᑭᓯᐅᖅᑕᐅᓗᑎᑦ 1. ᖃᓯᑎᒃᓂᓕᕆᐅᓂᖏᓐ ᓇᓴᐅᑎᒃᓯᑦ ᑭᒃᓕᑎᔨᕆᐊᖃᖅᑎᑦ ᐃᒥᖅᑕᒥᐊᖏᓪᓕᓂᖅᑐᑦ ᐱᓵᔪᑕᐅᓪᓗᑎᒍ ᐊᓘᒪᓗ ᐊᓄᕆᖅᑕᑦᑕᓂᖏᓐᓄᑦ ᖃᐅᔨᓴᖅᑎᓪᓗᑎᑦ.

- ᑯᓚᖅᑐᓚᐅᓂᖅ ᓯᕿᐸᓪᓕᐊᖏᑦᑕᖅ ᖃᓄᐅᓕᕆᓪᓕᐊᖏᑦᑕᖅ..

- ᖃᓯᐊᖓᓂᖏᓐ ᑯᓚᖅᑐᓚᐅᓂᖅᑐᖅ ᖁᓕᓴᖏᓐ ᐃᓱᔪᓂᖅᑎᑦ ᐊᑯᓂᖏᓐᓂ 1.8m ᐊᓘᒪᓗ 2.1m ᓯᑎᐱᓗᒥ ᐊᔪᓪᓕᕆᑕᐅᓪᓗᑎᑦ ᖃᐅᔨᓴᖅᑎᑎᑦ, ᓂᐅᑎᑐᒪᒧᑦ ᖃᐅᔨᓴᖅᑎᑎᑦ ᐊᑐᖅᑐᑦ.

ᔪᓚᐃᒥ, ᓇᓂᑦ ᓴᓇᓴᖅᑎᑎᕐᓯᒪᒧᑦ ᒥᑦᑕᖅᑯᓚᓂᖅᑐᑦ ᐊᕎᔪᖏᓂ 2017 ᐊᓘᒪᓗ ᐃᒪᖏᓐᓂᑐᑦ ᖁᑦᑕᐅᖅᑯᓚᓂ ᐅᔪᖁᑦᑕᕆᑕᐅᓂᑦ ᑦᑎᓴᓵᒧᑦ, ᒪᓂᑐᑉᐸ, ᔪᓯᐃᓚᒥ. ᐃᒪᖏᓐᓂᑦ ᐊᓘᒪᓗ ᐃᒪᖏᓐᓂᑐᑦ ᖁᑦᑕᐅᖅᑯᐃᑦ ᐅᔪᖁᑦᑕᕆᑕᐅᓂᖅᑎᓪᓗᓂ ᑐᑦᑎᓴᓵᒧᑦ ᒪᓂᑐᑉᐸ, ᐊᒥᐊᖁᔨᓗᑎᑐᖅ ᑎᓴᒪᐃᑦ ᐃᓗᐃᑦᑐᑦ ᖁᑦᑕᐅᖅᑯᐃᑦ ᐊᕿᖑᓂᖅᓗ ᐅᔪᕐᕉᖁᑦᑕᓂᑦ.

ᐊᓘᒪᓗᑦᑕᐅᖅ ᐅᖃᐅᔪᐅᖃᑦᑕᓪᓕᕆᔨᖅ <ᓱᑦ ᐊᓘᒪᓗ ᓴᕿᒪᑐᖃᖅᑲᓂᑦ- ᓄᓇᖃᖅᖁᓕᓴᕐᓗᓂᑦᓗᑎᑦ ᐱᔨᔪᑎᖃᖅᑐᖅ ᒪᑐᐅᖅᓯᒪᓂᖅ ᓴᓇᓯᒪᓂᖅᓗᓪᓗ ᑭᖑᓪᓕᐅᖅᓯᒪᔪᖅᑐᖅ ᐊᑐᐊᖏᓂᖅᑐᖅ ᑐᓴᕐᓯᒪᔪᓕ 30, 2017. ᐱᓗᐊᖅᑐᒥᑦ ᑭᓇᐅᔨᒪᑦ ᓇᓂᕿᖅᑕᐅᔪᓕᕆᓚᑦᑕᑦ ᐅᓄᖅᑎᑎᓂᖏᓐᓄᑦ ᐊᑲᖅᑕᐅᓚᐅᓂᖅᑐᖅ ᐊᓘᒪᓗ ᓄᑕᒥᑦ ᐱᐊᓂᖅ 1BR-CUL1828 ᑐᓂᓴᐅᓕᐅᖅᑎᖅ ᐅᑐᐱᖅ 15,2018.

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 2018 site activities consisted of two site visits; the first occurred on July 10th and 11th, 2018 to conduct aquatic surveys downstream of tailings Pond No. 2 and initiate airstrip shrub removal. The second trip occurred on September 10th to 14th, 2018 to conduct the annual site inspection, water quality and thermistor monitoring and the tailings dam geotechnical inspection pursuant to then current Water Licence No. 1BR-CUL1118, replace the 4 non-functioning thermistors on the tailings, complete benthic surveys upstream and downstream of the site and continue with airstrip shrub removal.

Summarized, the results of the annual site inspection and monitoring indicate that:

- Water quality continues to remain within the guidelines specified in the Water Licence with the exception of Total Suspended Solids (TSS) in Tailings Pond No 1. The elevated TSS level is attributable to a combination of low water level and disturbance from the persistent strong winds during the week leading up to the sample campaign.

- The tailings storage facility continues to remain stable.

- The permafrost in the tailings cover was found to vary between 1.8m and 2.1m below surface during the September thermistor replacement program, as encountered by augur drill.

During the July trip, the remaining loose scrap stored at the airstrip from the 2017 clean-up campaign and several empty fuel drums were backhauled to Thompson, Manitoba, During the September trip, additional full and empty drums were removed on backhaul flights to Thompson, leaving 4.5 full drums for future removal.

In addition to the above site activities, several discussions occurred between Barrick and Crown – Indigenous Relations and Northern Affairs Canada (CIRNAC, formerly INAC) regarding final acceptance of the new Closure and Reclamation Plan submitted on June 30th, 2017. Specifically, the amount of Financial Assurance was finalized and new Water License 1BR-CUL1828 was issued on October 15th, 2018.

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).

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.

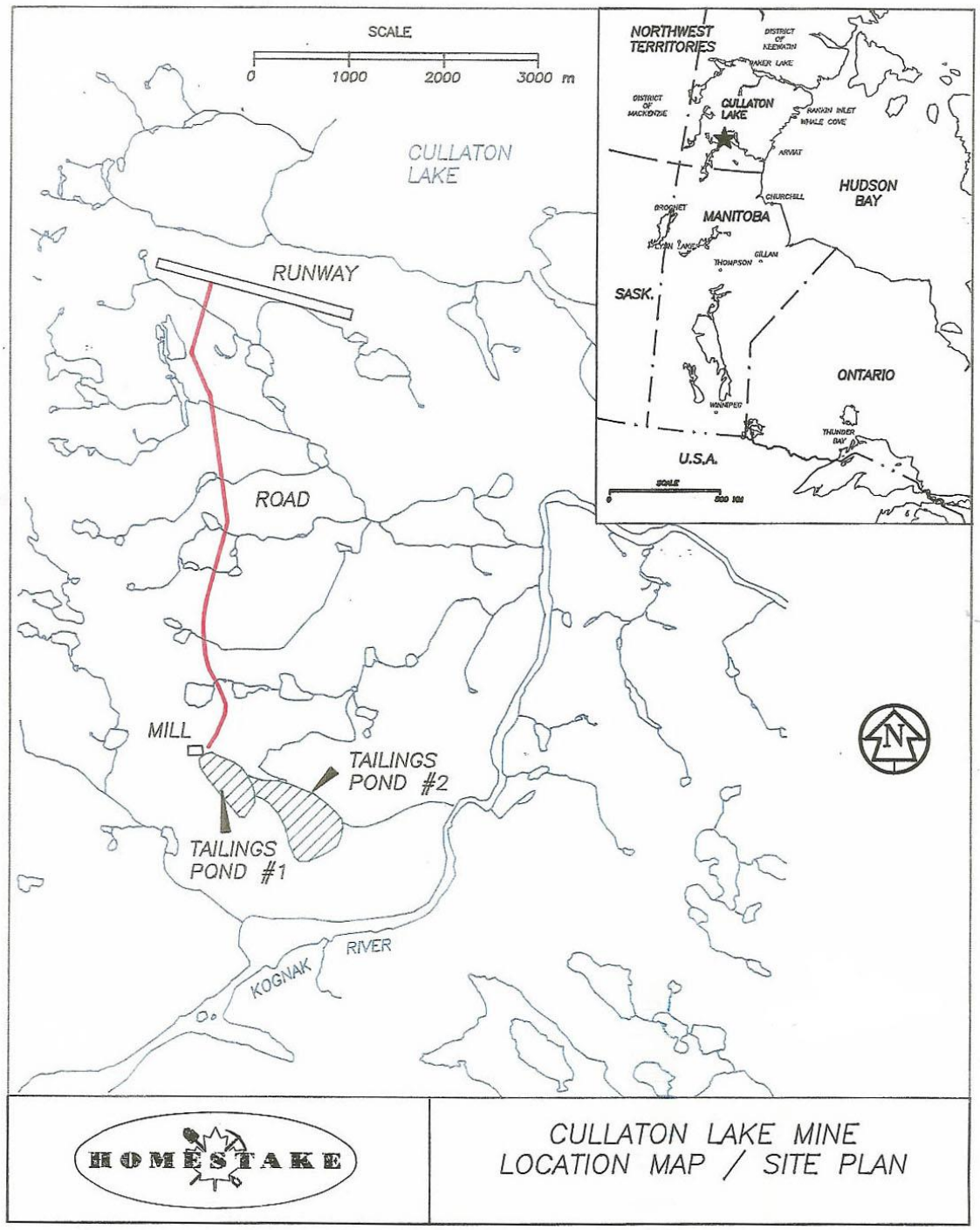
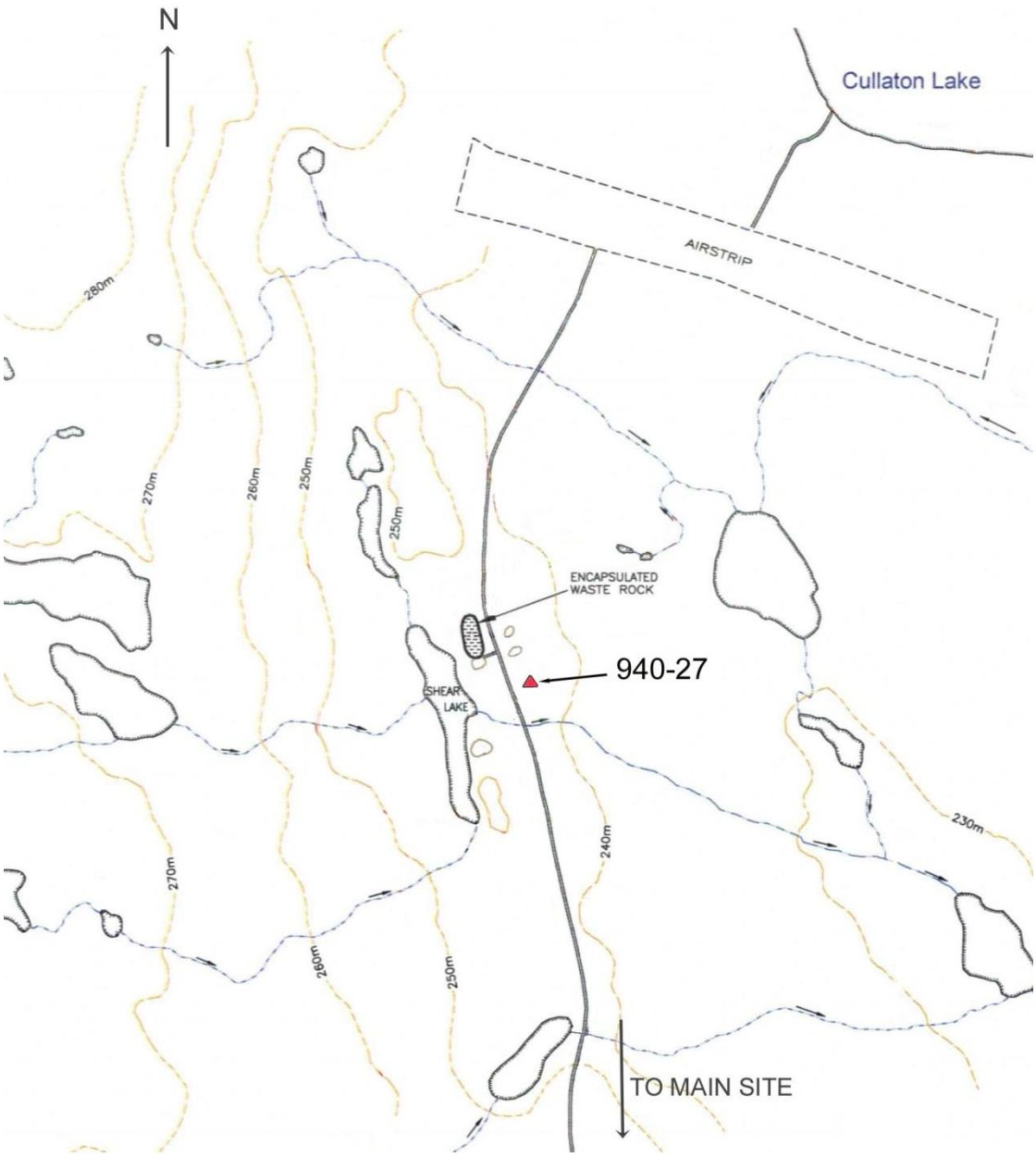
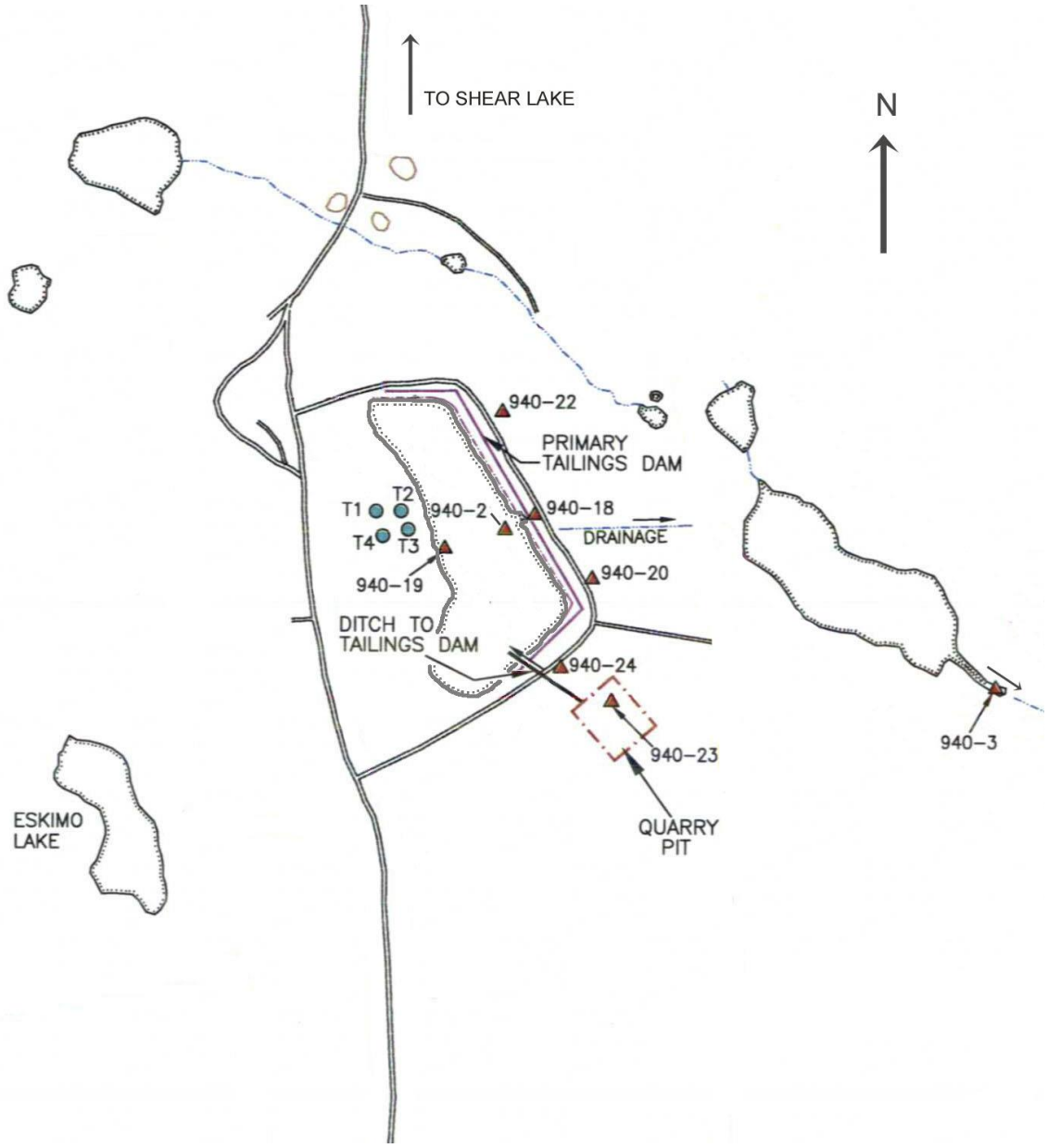


Figure 1: Cullaton Lake Mine location and general site layout



Legend:
940-27 Water sample station

Figure 2: Cullaton Lake Shear Lake site showing features and water sampling station (not to scale).



Legend:
T1: Thermistor station
940-2: Water sample station

Figure 3: Cullaton Lake main site showing features, water sampling and thermistor stations (not to scale).

2.0 WATER LICENCE SUPPLEMENTAL CONDITIONS AND NOTES

Management of Cullaton Lake was conducted in 2018 pursuant to Water Licence 1BR-CUL1118, which was issued on February 9, 2011 to renew previously issued license number 1BR-CUL0911. Water License 1BR-CUL1118 expired on October 15th, 2018 subsequent to the completion of 2018 activities and is now replaced by 1BR-CUL1828. 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].

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.

   The variability in detection limits is largely the result of the many recent laboratory acquisitions / mergers and procedure changes. After discussing the issue with the present laboratory and reviewing the associated methods and equipment limitations, the 2007 proposed detection limits were as follows:

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

Licence Parameter	Method Detection Limit
Total Suspended Solids	1 mg/l
Total Cyanide	0.005 mg/l
Total Arsenic	0.4 μg/l
Total Copper	1 μg/l
Total Lead	0.5 μg/l
Total Mercury	0.00005 mg/l
Total Nickel	1 μg/l
Total Zinc	5 μg/l

Following the 2007 sampling, the lab erroneously used a TSS detection limit of 10mg/l for the 2007 results. According to the lab, a correction to 1mg/l was not possible due the volume of analysis being less than 500ml. In 2008 the license required water samples were collected by Gartner Lee personnel along with the additional samples required for supporting their ERA. The 2008 and subsequent detection limits were equal to or lower than those shown above except for TSS in 2011 when the lab once again used a higher DL of 4mg/l. In addition to the foregoing, the lab also reported Weak Acid Dissociated (WAD) cyanide instead of the requested Total cyanide. Results were corrected for the 2012 monitoring round.

A new lab (ALS Environmental) was engaged in 2014 for logistical reasons and is the lab going forward for the foreseeable future. As a result detection limits have been adjusted slightly to reflect their standard. The new detection limits are:

Licence Parameter	Method Detection Limit
Total Suspended Solids	2 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	0.00001 mg/l
Total Nickel	2 μg/l
Total Zinc	3 μg/l

The 2018 surface water samples report detection limits were equal to or lower than the above.

2. The NWB commented on the 2005 anomalous zinc value at station 940-23 (.065 mg/l) Follow-up monitoring is summarized in the following table:

Station	Year	Zn (mg/l
940-23 (Quarry Pit)	2005	0.065
	2006	0.012
	2007	0.006
	2008	0.009
	2009	0.023
	2010	0.030
	2011	0.014
	2012	0.0504
	2013	0.0119
	2014	0.0140
	2015	0.024
	2016	0.032
	2017	0.0079
	2018	0.0101

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 in Appendix 4 of this report.

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.

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.

3.0 2018 ACTIVITIES

Two site visits were completed in 2018. The first visit occurred on July 10th and 11th, 2018. Personnel attending the site during this trip included:

Paul Brugger, P. Eng., Closed Properties Manager, Eastern Canada, Barrick Gold Inc.

Alexandra Crichton, M.Sc., P. Bio., Aquatic Biologist, Palmer Environmental Consulting Group

2 Labourers provided by McCreedy Campground, Thompson, Manitoba

Access during the 2-day July trip was by provided by a Wings over Kississing Cessna Grand Caravan chartered from Thompson Manitoba. During this campaign the following activities were performed:

- Ms. Crichton and Mr. Brugger completed several reconnaissance surveys between the Tailings Pond No. 2 outlet and the Kognac River in an attempt to identify a flow path that could support fish habitat. No flow path was found.
- McCreedy Campground personnel work on removing brush from the airstrip and around the survival cabin.
- The remaining steel scrap stockpiled at the airstrip in 2017 and several empty fuel drums were loaded removed to Thompson Manitoba on the July 10th return empty flight.

During the September 10th to 14th trip access was again via several flights by Wings over Kissing charter from Thompson, Manitoba. Personnel attending the site during this trip included:

Paul Brugger, P. Eng., Closed Properties Manager, Eastern Canada, Barrick Gold Inc.(Sept. 10th – 14th)

Maria Sotiropoulos, M.Sc., Fisheries Biologist, Palmer Environmental Consulting Group (Sept.11th – 12th)

Andrew Wesley-James, M.Sc., OBBN, Fisheries Biologist, Palmer Environmental Consulting Group (Sept 11th – 12th)

Renata Klassen, MSc, P. Eng., Arctic Engineer, **exp** Services Inc. (Sept 11th only)

Eric Jaczkowski, M.Sc, Field Technician, Golder Associates (Sept 12th – 14th)

2 drill personnel, Paddock Drilling Ltd., (Sept 12th – 14th)

2 Labourers provided by McCreedy Campground, Thompson, Manitoba (Sept 10th -14th)

Thermistor drilling equipment mobilization and demobilization to and from the airstrip was completed via multiple flights by Wings over Kississing on Sept 6th and 7th (mob) and Sept 17th and 18th (demob). Drill parts assembly and moving between holes was completed with helicopter support from Custom Helicopters.

During the September campaign the following activities were completed:

- Mr. Brugger conducted visual inspections of the quarry pit, tailings cover, all former underground access areas, EWR and the site in general, collected water samples pursuant to Water Licence 1BR-CUL1118 and provided support for the various programs being completed.

- Ms. Klassen performed the annual geotechnical inspection pursuant to Water Licence 1BR-CUL1118.

- Ms. Sotiropoulos and Mr. Wesley-James completed water quality, sediment, benthic and fish surveys at several stream locations on site.

- Mr. Jaczkowski supervised the drilling program and replaced the 4 thermistors in the tailings dry cover.

- McCreedy Campground personnel continued work on removing brush from the airstrip and around the survival cabin and loaded drums on backhaul flights to Thompson, Manitoba as they became available.

3.1 ANNUAL SITE INSPECTION GENERAL FINDINGS

The annual site inspection performed during the week of September 10th, 2018 indicated that the site remains undisturbed, stable and in good condition. The following findings were noted:

The minor subsidence areas on the quarry pit landfill remain largely unchanged. Most of the affected areas are occupied by arctic ground squirrels.

Minor subsidence was found on the B-Zone fresh air raise (see Photo 14, Appendix 1). The affected area was plugged with large waste rock and will be checked again in 2019.

The Tailings Pond No. 1 water level continues to drop, likely due to prolonged drought conditions. The lower level has exposed some tailings beach along portions of the west side of the pond (see Photo 17).

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

Select photos are included in Appendix 1.

3.2 WATER QUALITY MONITORING

Duplicate water sampling was completed on September 12th, 2018 at 5 of the 9 stations identified in the Water Licence (see Figures 2 and 3 for locations). All other stations were dry during the visit. Results are provided in Appendix 2. Recent historic results are also included for comparison. 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 were collected on September 12th, 2018. Results indicated that all parameters were below the limits prescribed in the Water Licence with the exception of TSS. The concentration of TSS was 128 mg/L as compared to a limit of 25mg/l. Persistent strong winds during the week combined with very low water levels caused a considerable amount of suspended material to be present in the tailings pond water with resultant high turbidity (see Photo 16), which is reflected in the results.

Station 940-3 (Tailings Pond No. 2) – Duplicate water samples were collected on September 12th, 2018. Results indicated that all parameters were below the limits prescribed in the Water Licence**.**

Station 940-18 (Tailings Pond No. 1 spillway) – Duplicate water samples were collected on September 12th, 2018. Results indicated that all parameters were below the limits prescribed in the Water Licence**.**

Station 940-19 (Tailings Pond No. 1 at piezometer) – Duplicate water samples were collected on September 12th, 2018. Results indicated that all parameters were below the limits prescribed in the Water Licence.

Station 940-20 (Tailings Pond No. 1 seepage at east side) – There was no flow observed on September 12th, 2018 and consequently no samples were collected.

Station 940-22 (Tailings Pond No. 1 seepage at northeast corner) – There was no flow observed on September 12th, 2018 and consequently no samples were collected.

Station 940-23 (Quarry Pit) – Duplicate water samples were collected on September 12th, 2018. Results indicated that all parameters were below the limits prescribed in the Water Licence. There was also no visible sheen indicating the presence of oil / grease.

Station 940-24 (Quarry Pit flow to Tailings Pond No. 1) - There was no flow from the Quarry Pit to Tailings Pond No. 1 on September 12th, 2018 and consequently no samples were collected.

Station 940-27 (Seepage from Encapsulated Waste Rock to Shear Lake Creek) - There was no flow observed on September 12th, 2018 and consequently no samples were collected.

3.3 THERMISTOR MONITORING

On September 12th to 14th four new thermistors were installed next to the original non-functioning units installed in 1991. The permafrost ranged between 1.8m and 2.1m below ground surface in the 4 drill holes.

The new thermistors have been calibrated and first readings will recorded in 2020 as per the monitoring schedule outlined in new Water License 1BR-CUL1828. The installation report for the new thermistors is included as Appendix 3.

3.4 GEOTECHNICAL INSPECTION

Renata Klassen, M.SC., P. Eng. (**exp** Services Inc.) performed the geotechnical inspection on September 11th, 2018, pursuant to Part D, Article 8d of Water Licence 1BR-CUL1118. A copy of the inspection report was submitted to the NWB on November 5th, 2018, with a copy to INAC.

In summary, the report indicates that the tailings dam remains stable. Continued monitoring for erosion in the No. 1 Spillway channel is also recommended.

Pursuant to Part D, Article 8e of Water Licence 1BR-CUL1118, the condition of the encapsulated waste rock cover at Shear Lake is to be monitored by the geotechnical engineer for erosion until vegetation is sufficiently established so as to stabilize the cover. At the time of the 2018 site inspection, the engineer noted the vegetation continues to take hold and is helping to reduce erosion. A recommendation for additional monitoring was also made.

As in the past 6 annual reports, the engineer also recommended reducing the frequency of geotechnical inspections to once every 3 years. Pursuant to the monitoring schedule outlined in new Water License 1BR-CUL1828, geotechnical inspection will occur every 2 years going forward

3.5 ADDITONAL AQUATIC STUDIES

Palmer Environmental Consulting Group (PECG) completed additional aquatic studies during 2018 to support the adaptive management monitoring program outlined in new Water License 1BR-CUL1828.

During the July trip, several reconnaissance trips were made in the area between the Tailings Pond No. 2 outlet and the Kognak River to identify fish habitat. No open stream channels were found and it is now evident that a short distance beyond the confluence of stagnant water at the end of the bypass drainage ditch and the water from Tailings Pond No. 2, surface water travels within and under the large area boulder field lying on the slope down to the Kognak River. Water resurfaces at the lower edge of this field immediately above the river and forms small pools before entering the river. These pools were electro-fished with no results.

During the September trip water, sediment and benthic surveys were completed to support the new monitoring program commencing this year under Water License 1BR-CUL1828.

Due to dry site conditions water samples were collected at three of the 4 monitoring stations outlined in the new license: 940-02 (original location at Tailings Pond No. 1 Spillway), SW9 (Shear Creek downstream of Shear Lake site) and SW33 (confluence of Tailings Pond No 2 outlet channel and tailings area bypass ditch). Background reference station SW18 upstream of the main site was dry at the time of the visit. Benthic samples were collected at SW9 (Shear Creek downstream of the site) and at SW33 (downstream of Tailings Pond No 2. Sediment sampling occurred at SW9 only due to dry or compacted channel bottom conditions.

Overall the aquatic monitoring program indicated that site conditions have not deteriorated since the last program was conducted in 2016. The report is included as Appendix 4.

4.0 ANNUAL REVIEW OF SPILL RESPONSE PLAN

Pursuant to Part H, Article 1a, b and c of Water Licence 1BR- CUL1118, a review and update of the Spill Response Plan was conducted in March. An updated version is provided in Appendix 5.

5.0 ANNUAL REVIEW OF ABANDONMENT AND RESTORATION PLAN

Pursuant to Part I, Article 2 of the Water Licence, an annual review of the Abandonment and Restoration Plan is required. The Closure and Reclamation Plan originally submitted on June 30th, 2017 was reviewed by all parties during 2018 and was re-submitted with final revisions on August 10th, 2018.

6.0 ANNUAL REVIEW OF QUALITY ASSURANCE / QUALTY CONTROL

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 2018 samples are included in Appendix 2.

7.0 2019 PROPOSED PROGRAM

Although a formal visit is not required in 2019 according to the new monitoring schedule, a 5-day site visit is planned for late summer to continue maintenance on the airstrip and access road. Quarry pit cover maintenance will also be initiated along with any required maintenance for general site stability including an inspection of the vent raise cover.

The remaining 4.5 drums of fuel will also be removed during this campaign.

Appendix 1
Cullaton Lake 2018 Site Photos

Photo 1: Cullaton Lake main site, looking south east (September 2017 photo).

Photo 2: Shear Lake site, looking southeast with shrub covered EWR on the left.

Photo 3: Tailings No.1 Pond spillway invert (dry) on September 12, 2018

Photo 4: Former Tailings Pond No. 2 spillway flowing on September 12, 2018

Photo 5: Former Shear Lake Portal on September 12, 2018.

Photo 6: Former B Zone Portal and Fresh Air Raise, looking north on September 12, 2018

Photo 7: Encapsulated Waste Rock at Shear Lake 13 years after the application of additional seed and fertilizer.

Photo 8: Encapsulated Waste Rock cover top looking north on September 12, 2018.

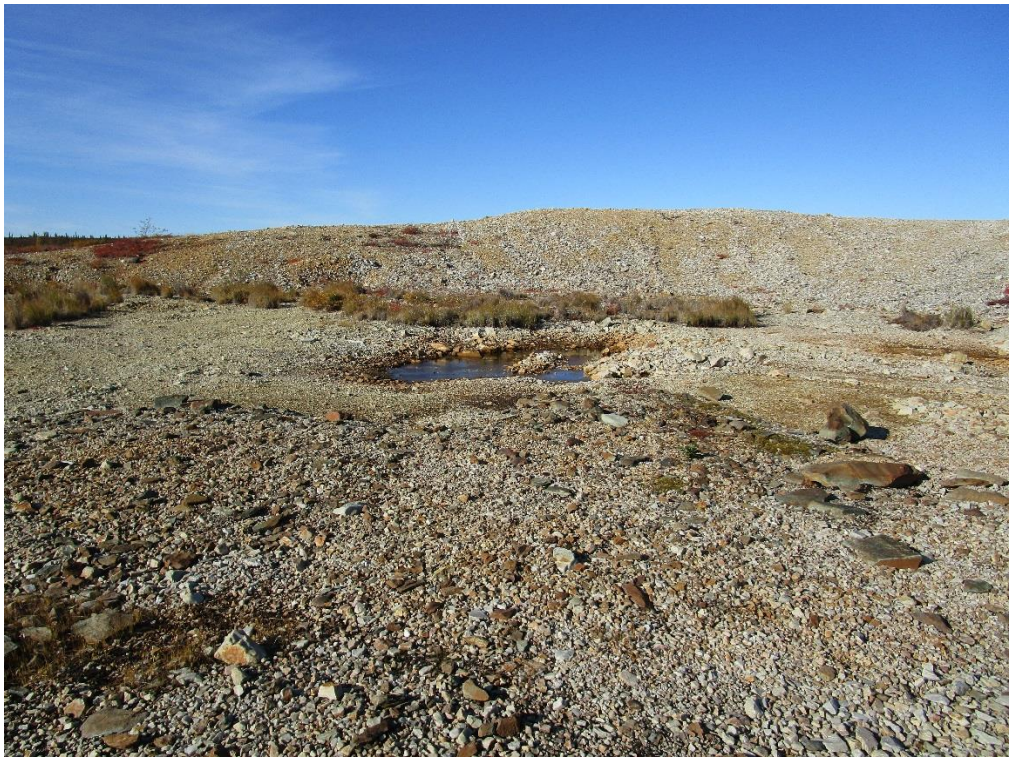


Photo 9: Shear Lake low pH pool area on September 12, 2018.

Photo 10: Vegetation on former low grade waste rock storage area at Shear Lake.

Photo 11: Tailings cover vegetation, looking southwest on September 12, 2018.

Photo 13: Scrap drums and abandoned spill pad loaded for removal.

Photo 14: Small are of subsidence at B-zone Vent Raise.

Photo: 15: Vent raise subsidence filled with waste rock.

Photo 16: Tailings Pond No. 1 low water and turbidity on September 12, 2018.

Photo 17: Exposed tailings beach on west side of pond due to low water level.

Appendix 2
September 12, 2018
Water Quality Monitoring Results

Cullaton Lake
Water Quality Monitoring Results
September 12, 2018

Location	Sample Number	Field PH	Temp ºC	Lab PH	Suspended Solids mg/L	Total Cyanide mg/L	Total Arsenic mg/L	Total Copper mg/L	Total Lead mg/L	Total Mercury mg/L	Total Nickel mg/L	Total Zinc mg/L
Tailings Pond No. 1 (at discharge)	940-2A 940-2B	8.74	5.5	7.94 7.93	128 123	0.0167 0.0163	0.0563 0.0525	0.0039 0.0035	0.0193 0.0190	<0.000005 <0.000005	0.0051 0.0049	<0.003 <0.003
Tailings Pond No. 2	940-3A 940-3B	8.07	3.1	8.11 8.14	<2.0 2.3	<0.002 <0.002	0.0031 0.0030	0.0024 0.0023	<0.0010 <0.0010	<0.000005 <0.000005	0.0037 0.0037	<0.003 <0.003
Tailings Pond No. 1 (spillway)	940-18A 940-18B	8.00	6.2	7.83 7.83	<2.0 <2.0	0.0116 0.0117	0.0066 0.0068	0.0015 0.0016	<0.0010 <0.0010	<0.000005 <0.000005	0.0108 0.0110	<0.003 <0.003
Tailings Pond No. 1 (at piezometer)	940-19A 940-19B	8.94	5.0	7.92 7.90	8.1 7.1	0.0086 0.0084	0.0105 0.0103	0.0018 0.0018	0.0083 0.0085	<0.000005 <0.000005	0.0030 0.0029	<0.003 <0.003
Tailings Pond No. 1 (seepage at east side)	940-20A 940-20B	Dry										
Tailings Pond No. 1 (seepage at northeast corner)	940-22A 940-22B	Dry										
Quarry Pit	940-23A 940-23B	8.52	5.0	8.06 8.07	<2.0 <2.0	<0.002 <0.002	0.0024 0.0025	0.0018 0.0018	<0.0010 <0.0010	<0.000005 <0.000005	0.0030 0.0031	0.0101 0.0105
Quarry Pit (flow to Tailings Pond No. 1)	940-24	Dry										
Seepage from Shear Lake Encapsulated Waste Rock to Shear Lake Creek	940-27	Dry										

Cullaton Lake
Water Quality Monitoring
September 12, 2018
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: 14-SEP-18
Report Date: 25-SEP-18 09:43 (MT)
Version: FINAL

Client Phone: 807-964-1657

Certificate of Analysis

Lab Work Order #: L2164550

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

Kyle Watkins
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L2164550-1	L2164550-2	L2164550-3	L2164550-4	L2164550-5
Description	SW	SW	SW	SW	SW
Sampled Date	12-SEP-18	12-SEP-18	12-SEP-18	12-SEP-18	12-SEP-18
Sampled Time	13:35	12:00	13:15	14:30	13:50
Client ID	940-02A	940-03A	940-18A	940-19A	940-23A
Grouping / **Analyte**					
WATER					
Physical Tests pH (pH)	7.94	8.11	7.83	7.92	8.06
Total Suspended Solids (mg/L)	128	<2.0	<2.0	8.1	<2.0
Cyanides Cyanide, Total (mg/L)	0.0167	<0.0020	0.0116	0.0086	<0.0020
Total Metals Arsenic (As)-Total (mg/L)	0.0563	0.0031	0.0066	0.0105	0.0024
Calcium (Ca)-Total (mg/L)	33.1	41.4	83.9	31.6	30.8
Copper (Cu)-Total (mg/L)	0.0039	0.0024	0.0015	0.0018	0.0018
Iron (Fe)-Total (mg/L)	4.72	0.122	0.732	0.729	0.084
Lead (Pb)-Total (mg/L)	0.0193	<0.0010	<0.0010	0.0083	<0.0010
Magnesium (Mg)-Total (mg/L)	11.6	19.2	27.9	11.2	11.8
Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Nickel (Ni)-Total (mg/L)	0.0051	0.0037	0.0108	0.0030	0.0030
Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	0.0101

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L2164550-6	L2164550-7	L2164550-8	L2164550-9	L2164550-10
Description	SW	SW	SW	SW	SW
Sampled Date	12-SEP-18	12-SEP-18	12-SEP-18	12-SEP-18	12-SEP-18
Sampled Time	09:30	13:35	12:00	13:15	14:30
Client ID	SHEAR CREEK A	940-02B	940-03B	940-18B	940-19B
Grouping / **Analyte**					
WATER					
Physical Tests pH (pH)	7.02	7.93	8.14	7.83	7.90
Total Suspended Solids (mg/L)	<2.0	103	2.3	<2.0	7.1
Cyanides Cyanide, Total (mg/L)	<0.0020	0.0163	<0.0020	0.0117	0.0084
Total Metals Arsenic (As)-Total (mg/L)	<0.0010	0.0525	0.0030	0.0068	0.0103
Calcium (Ca)-Total (mg/L)	4.39	33.7	41.9	85.6	32.2
Copper (Cu)-Total (mg/L)	0.0027	0.0035	0.0023	0.0016	0.0018
Iron (Fe)-Total (mg/L)	0.520	4.38	0.122	0.746	0.783
Lead (Pb)-Total (mg/L)	<0.0010	0.0190	<0.0010	<0.0010	0.0085
Magnesium (Mg)-Total (mg/L)	1.36	11.4	19.0	28.1	11.2
Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Nickel (Ni)-Total (mg/L)	0.0025	0.0049	0.0037	0.0110	0.0029
Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L2164550-11				
	Description	SW				
	Sampled Date	12-SEP-18				
	Sampled Time	13:50				
	Client ID	940-23B				
Grouping	**Analyte**					
WATER						
Physical Tests	pH (pH)	8.07				
	Total Suspended Solids (mg/L)	<2.0				
Cyanides	Cyanide, Total (mg/L)	<0.0020				
Total Metals	Arsenic (As)-Total (mg/L)	0.0025				
	Calcium (Ca)-Total (mg/L)	30.8				
	Copper (Cu)-Total (mg/L)	0.0018				
	Iron (Fe)-Total (mg/L)	0.087				
	Lead (Pb)-Total (mg/L)	<0.0010				
	Magnesium (Mg)-Total (mg/L)	11.8				
	Mercury (Hg)-Total (mg/L)	<0.0000050				
	Nickel (Ni)-Total (mg/L)	0.0031				
	Zinc (Zn)-Total (mg/L)	0.0105				

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-TOT-WT	Water	Cyanide, Total	ISO 14403-2

Total cyanide is determined by the combination of UV digestion and distillation. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

When using this method, high levels of thiocyanate in samples can cause false positives at ~1-2% of the thiocyanate concentration. For samples with detectable cyanide analyzed by this method, ALS recommends analysis for thiocyanate to check for this potential interference

HG-T-CVAF-TB	Water	Total Mercury in Water by CVAFS	EPA 1631E (mod)

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

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

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

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.

Cullaton Lake
Water Quality Monitoring Results
2003 - 2018

CULLATON LAKE GOLD MINES LTD.

CULLATON LAKE MINE

WATER ANALYSIS REPORT

STATION 940-02A - TAILNGS POND NO. 1 DISCHARGE, 2003 - 2018

Physical and General	Units	Water License	July 29 2003	July 7 2004	Aug. 5 2005	Aug. 2 2006	July 5 2007	June 28 2008	Aug. 5 2009	Aug. 4 2010	Aug. 4 2011	Aug. 2 2012	Aug. 15 2013	Aug. 12 2014	Sept. 3 2015	Sept. 7 2016	Sept. 6 2017	Sept. 12 2018	MINIMUM	MAXIMUM	AVERAGE
pH (lab)	units	**6.0 - 9.5**	8.07	7.77	7.8	8.0	7.7	7.5	8.0	7.8	7.8	7.7	8.1	8.25	7.98	8.02	8.32	7.94	7.50	8.32	7.92
Temperature	^{o}C		21.0	15.3	NR	14.5	15.2	12.5	15.8	13.6	13.3	14.7	18.6	15.0	11.0	10.4	10.7	5.5	5.5	21.0	13.8
Suspended Solids (105^{o}C)	mg/L	**25.0**	< 3	< 3	14	< 1	< 10	1	< 1	1	< 4	< 1	< 1	< 2	< 5	< 2	< 2	**128**	< 1	128	< 11
Total Cyanide (1)	mg/L	**0.80**	< 0.005	< 0.0050	0.006	< 0.005	< 0.005	0.0088	< 0.005	< 0.005	< 0.0005	0.00264	0.00150	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.0167	< 0.0005	0.0167	< 0.0046
Total Hardness	mg CaCO3/L			197	199	210	220	162	210	230	225	211	207	E	E	E	E	E			
Minor Cations																					
Arsenic	mg/L	**0.30**	0.0025	0.00159	0.003	0.0018	0.0021	0.00563	0.0019	0.0027	0.0021	0.00212	0.00188	0.0023	0.0022	0.0036	0.0042	0.0563	0.0016	0.0563	0.0060
Copper	mg/L	**0.20**	0.002	0.0014	0.002	0.001	0.001	0.00136	0.0012	0.0010	0.0021	0.00115	0.00105	0.0018	< 0.0020	0.0012	0.0010	0.0039	0.0010	0.0039	0.0016
Lead	mg/L	**0.20**	< 0.001	< 0.0010	< 0.001	< 0.0005	< 0.0005	0.00146	0.00032	0.00038	0.00030	0.00033	< 0.00020	< 0.0010	< 0.0010	0.0011	< 0.0010	0.0193	< 0.0002	0.0193	< 0.0019
Mercury	mg/L		< 0.00005	< 0.00005	< 0.0001	< 0.00005	< 0.00005	< 0.00001	< 0.00002	< 0.00001	< 0.00005	< 0.00005	< 0.00005	< 0.00001	< 0.00002	< 0.000005	< 0.000005	< 0.000005	< 0.00001	< 0.00010	< 0.00003
Nickel	mg/L	**0.30**	0.001	< 0.020	< 0.002	< 0.001	0.002	0.00258	0.001	0.0008	0.0010	< 0.001	< 0.001	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.0051	0.0008	< 0.0200	< 0.0029
Zinc	mg/L	**0.30**	< 0.005	< 0.005	< 0.003	< 0.005	< 0.005	0.0011	< 0.0025	< 0.0025	0.006	< 0.005	< 0.005	< 0.0030	< 0.0200	< 0.0030	< 0.0030	< 0.0030	0.0011	< 0.0200	< 0.0048

( ) Laboratory replicate.
[ ] Results re-checked.
(E) Not analyzed
NR: Not recorded due to equipment malfunction
(1) WAD Cn reported for 2011

CULLATON LAKE GOLD MINES LTD.

CULLATON LAKE MINE

WATER ANALYSIS REPORT

STATION 940-03A - TAILNGS POND NO. 2 DISCHARGE, 2003 - 2018

Physical and General	Units	Water License	CCME Guidelines	July 29 2003	July 7 2004	Aug. 5 2005	Aug. 2 2006	July 5 2007	June 28 2008	Aug. 5 2009	Aug. 4 2010	Aug. 4 2011	Aug. 2 2012	Aug. 15 2013	Aug. 12 2014	Sept. 3 2015	Sept. 7 2016	Sept. 6 2017	Sept. 12 2018	MINIMUM	MAXIMUM	AVERAGE
pH (lab)	units	**6.0 - 9.5**	**6.5-9.0**	8.07	7.96	7.7	7.9	7.8	7.7	8.0	8.2	7.9	7.8	8.4	8.56	7.93	7.97	8.33	8.11	7.70	8.56	8.02
Temperature	^{0}C			20.8	19.3	NR	17.4	13.7	17.0	15.4	11.4	12.4	14.6	18.5	16.3	10.4	11.1	10.0	3.1	3.1	20.8	13.21
Suspended Solids (105^{o}C)	mg/L	**25.0**		5	< 3	2	2	< 10	2	2	13	< 4	< 1	1.9	< 2	< 5	9.3	< 2.0	< 2.0	< 1	13	4.14
Total Cyanide (1)	mg/L	**0.80**		0.010	0.0072	< 0.0020	< 0.005	< 0.005	0.0016	< 0.005	< 0.005	< 0.0005	0.00192	0.00233	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0005	0.010	< 0.00
Total Hardness	mg CaCO3/L				92.4	100	90	88	82.3	94	99	95.2	118	109	E	E	E	E	E	82.3	118	96.8
Minor Cations																						
Arsenic	mg/L	**0.30**	**0.005**	**0.0059**	0.00305	0.004	0.0037	**0.0055**	0.0032	0.0027	0.0046	0.0029	0.00293	**0.00513**	0.0044	0.0025	0.0036	0.0031	0.0031	0.0025	0.0059	0.0038
Copper	mg/L	**0.20**	**0.002**	**0.003**	**0.0043**	**0.020**	**0.004**	**0.006**	**0.0037**	**0.0039**	**0.0035**	**0.0036**	**0.00367**	**0.00444**	**0.0046**	**0.0038**	**0.0032**	**0.0027**	**0.0024**	0.0024	0.0200	0.0048
Lead	mg/L	**0.20**	**0.002**	< 0.001	< 0.0010	< 0.001	< 0.0005	< 0.0005	0.00006	< 0.00005	0.00009	< 0.0002	< 0.0002	< 0.0002	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.00005	< 0.0010	< 0.0006
Mercury	mg/L		**0.0002**	< 0.00005	< 0.00005	< 0.0001	< 0.00005	< 0.00005	0.00001	< 0.00002	< 0.00001	< 0.00005	< 0.00005	< 0.00005	< 0.00001	< 0.00002	< 0.000005	< 0.000005	< 0.000005	< 0.00001	< 0.00010	< 0.00003
Nickel	mg/L	**0.30**	**0.065**	0.004	< 0.020	0.003	0.005	0.005	0.00357	0.0036	0.0043	0.005	0.0034	0.0055	0.0048	0.0045	0.0038	0.0032	0.0037	0.0030	< 0.020	< 0.0051
Zinc	mg/L	**0.30**	**0.030**	< 0.005	< 0.005	0.015	< 0.005	< 0.005	0.0009	< 0.0005	0.0005	0.006	< 0.005	< 0.005	< 0.0030	< 0.0200	< 0.0030	< 0.0030	< 0.0030	< 0.0005	< 0.020	< 0.0053

( ) Laboratory replicate.
[ ] Results re-checked.
(E) Not analyzed
NR: Not recorded due to equipment malfunction
(1) WAD Cn reported for 2011
Bold values indicate CCME exceedence

CULLATON LAKE GOLD MINES LTD.

CULLATON LAKE MINE

WATER ANALYSIS REPORT

STATION 940-18A - TAILNGS POND NO. 1 SPILLWAY, 2003 - 2018

Physical and General	Units	Water License	CCME Guidelines	July 29 2003	July 7 2004	Aug. 5 2005	Aug. 2 2006	July 5 2007	June 28 2008	Aug. 5 2009	Aug. 4 2010	Aug. 4 2011	Aug. 2 2012	Aug. 15 2013	Aug. 12 2014	Sept. 3 2015	Sept. 7 2016	Sept. 6 2017	Sept. 12 2018	MINIMUM	MAXIMUM	AVERAGE
pH (lab)	units	**6.0 - 9.5**	**6.5-9.0**	8.87	7.89	8.1	8.4	7.8	7.5	7.8	8.7	8.7	9.3	D	8.69	7.97	7.77	8.15	7.83	7.50	9.30	8.23
Temperature	^{o}C			20.5	18.5	NR	21.4	15.2	15.8	15.8	12.8	12.6	16.9	D	15.0	10.0	11.1	9.9	6.2	6.2	21.4	14.4
Suspended Solids (105^{o}C)	mg/L	**25.0**		4	< 3	< 2	3	< 10	< 1	1	< 1	< 4	< 1	D	< 2	< 5	< 2	< 2	< 2	< 1	< 10	< 3
Total Cyanide (1)	mg/L	**0.80**		0.009	0.0096	0.004	0.037	0.005	0.0077	< 0.005	0.006	0.0043	0.00361	D	0.0022	0.0033	< 0.0020	< 0.0020	0.0116	< 0.0020	0.0370	< 0.0075
Total Hardness	mg CaCO3/L				217	200	210	230	159	220	220	228	212	D	E	E	E	E	E	159	230	211
Minor Cations																						
Arsenic	mg/L	**0.30**	**0.005**	0.0029	0.00165	0.002	**0.0055**	0.0023	0.00133	0.0033	**0.0057**	0.0043	0.00375	D	**0.0055**	0.0049	0.0024	**0.0082**	**0.0066**	0.00133	0.0082	0.0040
Copper	mg/L	**0.20**	**0.004**	0.002	0.0018	0.001	**0.005**	0.002	0.00086	0.0012	0.0013	0.0021	0.0014	D	0.0026	< 0.0020	< 0.0010	0.0027	0.0015	0.00086	0.005	0.0019
Lead	mg/L	**0.20**	**0.007**	< 0.001	< 0.0010	< 0.001	< 0.0005	< 0.0005	0.00032	0.00011	0.00011	0.00030	< 0.00020	D	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.00011	< 0.001	< 0.0007
Mercury	mg/L		**0.0002**	< 0.00005	< 0.00005	< 0.0001	< 0.00005	< 0.00005	< 0.00001	< 0.00002	< 0.00001	< 0.00005	< 0.00005	D	< 0.00001	< 0.00002	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000100	< 0.000032
Nickel	mg/L	**0.30**	**0.150**	0.001	< 0.020	< 0.002	0.002	0.001	0.00124	0.001	0.0009	0.003	0.001	D	< 0.0020	< 0.0020	< 0.0020	0.0121	0.0037	0.0009	< 0.020	< 0.0037
Zinc	mg/L	**0.30**	**0.030**	< 0.005	< 0.005	< 0.003	< 0.005	< 0.005	0.0003	< 0.0025	< 0.0025	0.010	< 0.005	D	< 0.0030	< 0.0200	< 0.0030	< 0.0030	< 0.0030	0.0003	< 0.020	< 0.0050

( ) Laboratory replicate.
[ ] Results re-checked.
(E) Not analyzed
NR: Not recorded due to equipment malfunction
(1) WAD Cn reported for 2011
Bold values indicate CCME exceedence

CULLATON LAKE GOLD MINES LTD.

CULLATON LAKE MINE

WATER ANALYSIS REPORT

STATION 940-19A - TAILNGS POND NO. 1 AT PIEZOMETER LOCATION 2003 - 2018

Physical and General	Units	NWB Water License	July 29 2003	July 7 2004	Aug. 5 2005	Aug. 2 2006	July 5 2007	June 28 2008	Aug. 5 2009	Aug. 4 2010	Aug. 4 2011	Aug. 2 2012	Aug. 15 2013	Aug. 12 2014	Sept. 3 2015	Sept. 7 2016	Sept. 6 2017	Sept. 12 2018	MINIMUM	MAXIMUM	AVERAGE
pH (lab)	units	**6.0 - 9.5**	8.08	7.69	7.9	7.9	7.8	7.9	7.9	7.9	8.1	8.0	8.1	8.19	7.90	8.08	8.40	7.92	7.69	8.40	7.99
Temperature	°C		20.8	16.3	NR	15.4	15.3	21.3	15.3	13.9	13.5	15.2	19.3	15.8	10.5	10.6	10.4	5.0	5.0	21.3	14.6
Suspended Solids (105°C)	mg/L	**25.0**	8	< 3	2	< 1	< 10	< 1	< 1	3	7	1.3	< 1	< 2	7	2.4	< 2.0	8.1	< 1	< 10	< 4
Total Cyanide (1)	mg/L	**0.80**	< 0.005	0.0074	0.006	< 0.005	< 0.005	0.0009	< 0.005	< 0.005	0.0074	0.00238	0.00168	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.0086	0.0009	0.0086	0.0042
Total Hardness	mg CaCO3/L			206	201	210	220	749	220	230	246	210	210	E	E	E	E	E	201	749	270
Minor Cations																					
Arsenic	mg/L	**0.30**	0.0036	0.00209	0.002	0.0019	0.0016	0.0025	0.0019	0.0030	0.0021	0.00209	0.00195	0.0023	0.0024	0.0031	0.0054	0.0105	0.0016	0.0105	0.0030
Copper	mg/L	**0.20**	0.002	0.0015	0.002	0.001	0.001	0.00143	0.0015	0.0010	0.0010	0.00102	0.00097	0.0013	< 0.0020	0.0011	0.0012	0.0018	0.0010	0.002	0.0014
Lead	mg/L	**0.20**	< 0.001	< 0.0010	< 0.001	< 0.0005	< 0.0005	0.00182	0.00032	0.00036	< 0.0002	0.00034	< 0.0002	< 0.0010	< 0.0010	0.0011	< 0.0010	0.0083	< 0.0002	0.0083	< 0.0012
Mercury	mg/L		< 0.00005	< 0.00005	< 0.0001	< 0.00005	< 0.00005	< 0.00001	< 0.00002	< 0.00001	< 0.00005	< 0.00005	< 0.00005	< 0.00001	< 0.00002	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.0001	< 0.000033
Nickel	mg/L	**0.30**	0.002	< 0.020	< 0.002	< 0.001	0.002	0.00858	0.001	0.0011	0.0010	< 0.001	< 0.001	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.0030	< 0.0010	< 0.020	< 0.0032
Zinc	mg/L	**0.30**	< 0.005	< 0.005	< 0.003	< 0.005	< 0.005	0.0161	< 0.0025	< 0.0025	< 0.005	< 0.005	< 0.005	< 0.0030	< 0.020	< 0.0030	< 0.0030	< 0.0030	< 0.0025	< 0.020	< 0.0057

( ) Laboratory replicate.
[ ] Results re-checked.
(E) Not analyzed
NR: Not recorded due to equipment malfunction
(1) WAD Cn reported for 2011
Bold values indicate CCME exceedence

CULLATON LAKE GOLD MINES LTD.

CULLATON LAKE MINE

WATER ANALYSIS REPORT

STATION 940-20A - TAILNGS POND NO. 1 EAST SIDE SEEPAGE, 2003 - 2018

Physical and General	Units	Water License	CCME Guidelines	July 29 2003	July 7 2004	Aug. 5 2005	Aug. 2 2006	July 5 2007	June 28 2008	Aug. 5 2009	Aug. 4 2010	Aug. 4 2011	Aug. 2 2012	Aug. 15 2013	Aug. 12 2014	Sept. 3 2015	Sept. 7 2016	Sept. 6 2017	Sept. 12 2018	MINIMUM	MAXIMUM	AVERAGE
pH (lab)	units	**6.0 - 9.5**	**6.5-9.0**	D	8.13	7.8	8.1	8.2	8.1	8.3	8.7	8.3	D	D	9.14	7.81	D	D	D	7.8	9.1	8.3
Temperature	^{o}C			D	21.3	NR	22.0	17.9	19.6	18.9	13.8	13.3	D	D	21.0	10.0	D	D	D	10.0	22.0	15.8
Suspended Solids (105^{o}C)	mg/L	**25.0**		D	< 3	< 2	1	< 10	4	1	1	< 4	D	D	< 2	< 5	D	D	D	1	10	3
Total Cyanide (1)	mg/L	**0.80**		D	0.0104	0.118	< 0.005	< 0.005	0.0038	< 0.005	< 0.005	0.0014	D	D	< 0.0020	< 0.0020	D	D	D	0.001	0.118	0.016
Total Hardness	mg CaCO3/L				310	338	220	620	370	240	230	215	D	D	E	E	D	D	D	215	620	254
Minor Cations																						
Arsenic	mg/L	**0.30**	**0.005**	D	0.00297	0.001	0.0044	**0.0052**	0.00337	0.0028	0.0042	**0.0057**	D	D	0.0042	0.0017	D	D	D	0.0010	**0.0057**	0.0036
Copper	mg/L	**0.20**	**0.004**	D	**0.0041**	0.004	0.004	**0.005**	**0.00423**	0.0031	0.0029	**0.0044**	D	D	0.0040	0.0037	D	D	D	0.0029	**0.0050**	0.0039
Lead	mg/L	**0.20**	**0.007**	D	< 0.0010	< 0.001	< 0.0005	< 0.0005	0.00023	< 0.00005	0.00005	< 0.0002	D	D	< 0.0010	< 0.0010	D	D	D	< 0.0001	< 0.0010	< 0.0006
Mercury	mg/L		**0.0002**	D	< 0.00005	< 0.0001	< 0.00005	< 0.00005	< 0.00001	< 0.00002	< 0.00001	< 0.00005	D	D	< 0.00001	< 0.00002	D	D	D	< 0.00001	< 0.00010	< 0.00004
Nickel	mg/L	**0.30**	**0.150**	D	< 0.020	0.015	0.006	0.008	0.00644	0.0036	0.0033	0.006	D	D	0.0041	0.0040	D	D	D	0.0033	< 0.020	< 0.0076
Zinc	mg/L	**0.30**	**0.030**	D	< 0.005	< 0.003	< 0.005	< 0.005	0.0016	0.0038	< 0.0025	0.007	D	D	0.0036	< 0.0200	D	D	D	0.0016	< 0.0200	< 0.0057

( ) Laboratory replicate.
[ ] Results re-checked.
D Dry
NR: Not recorded due to equipment malfunction
(1) WAD Cn reported for 2011
Bold values indicate CCME exceedence

CULLATON LAKE GOLD MINES LTD.

CULLATON LAKE MINE

WATER ANALYSIS REPORT

STATION 940-22A - TAILNGS POND NO. 1 NORTH SIDE SEEPAGE, 2003 - 2018

Physical and General	Units	Water License	CCME Guidelines	July 29 2003	July 7 2004	Aug. 5 2005	Aug. 2 2006	July 5 2007	June 28 2008	Aug. 5 2009	Aug. 4 2010	Aug. 4 2011	Aug. 2 2012	Aug. 15 2013	Aug. 12 2014	Sept. 3 2015	Sept. 7 2016	Sept. 6 2017	Sept. 12 2018	MINIMUM	MAXIMUM	AVERAGE
pH (lab)	units	**6.0 - 9.5**	**6.5-9.0**	D	D	7.7	D	D	8.0	D	D	D	D	D	D	D	D	D	D	7.7	8.0	7.9
Temperature	^{o}C			D	D	NR	D	D	18.7	D	D	D	D	D	D	D	D	D	D	18.7	18.70	18.70
Suspended Solids (105^{o}C)	mg/L	**25.0**		D	D	6	D	D	1	D	D	D	D	D	D	D	D	D	D	1	6	4
Total Cyanide	mg/L	**0.80**		D	D	0.073	D	D	0.0015	D	D	D	D	D	D	D	D	D	D	0.0015	0.073	0.037
Total Hardness	mg CaCO3/L			D	D	515	D	D	546	D	D	D	D	D	D	D	D	D	D	515	546	531
Minor Cations																						
Arsenic	mg/L	**0.30**	**0.005**	D	D	0.001	D	D	0.00339	D	D	D	D	D	D	D	D	D	D	0.001	0.00339	0.0022
Copper	mg/L	**0.20**	**0.004**	D	D	0.004	D	D	0.00239	D	D	D	D	D	D	D	D	D	D	0.00239	0.004	0.0032
Lead	mg/L	**0.20**	**0.007**	D	D	< 0.001	D	D	0.00057	D	D	D	D	D	D	D	D	D	D	0.00057	< 0.001	< 0.0008
Mercury	mg/L		**0.0002**	D	D	< 0.0001	D	D	< 0.00001	D	D	D	D	D	D	D	D	D	D	< 0.00001	< 0.0001	< 0.00006
Nickel	mg/L	**0.30**	**0.150**	D	D	0.045	D	D	0.00415	D	D	D	D	D	D	D	D	D	D	0.00415	0.045	0.0246
Zinc	mg/L	**0.30**	**0.030**	D	D	< 0.010	D	D	0.0022	D	D	D	D	D	D	D	D	D	D	0.0022	< 0.010	< 0.0061

( ) Laboratory replicate.
[ ] Results re-checked.
D Dry
NR: Not recorded due to equipment malfunction

CULLATON LAKE GOLD MINES LTD.

CULLATON LAKE MINE

WATER ANALYSIS REPORT

STATION 940-23A - QUARRY PIT, 2003 - 2018

Physical and General	Units	Water License	CCME Guidelines	July 29 2003	July 7 2004	Aug. 5 2005	Aug. 2 2006	July 5 2007	June 28 2008	Aug. 5 2009	Aug. 4 2010	Aug. 4 2011	Aug. 2 2012	Aug. 15 2013	Aug. 12 2014	Sept. 3 2015	Sept. 7 2016	Sept. 6 2017	Sept. 12 2018	MINIMUM	MAXIMUM	AVERAGE
pH (lab)	units	**6.0 - 9.5**	**6.5-9.0**	8.07	7.56	7.8	8.1	7.7	7.4	8.1	8.0	8.0	7.9	8.0	8.26	8.15	8.17	8.29	8.06	7.40	8.29	7.97
Temperature	^{o}C			20.7	15.7	NR	15.5	14.4	14.5	14.3	13.8	13.0	14.7	18.3	14.1	10.3	10.2	10.1	5.0	5.0	20.7	13.6
Suspended Solids (105^{o}C)	mg/L	**25.0**		10	< 3	4	1	< 10	< 1	< 1	2	< 4	< 1	< 1	< 2	< 5	< 2	< 2	< 2	< 1	10	< 3
Total Cyanide (1)	mg/L	**0.80**		< 0.006	< 0.0050	< 0.002	< 0.005	< 0.005	< 0.0005	< 0.005	< 0.005	< 0.00050	0.00074	0.00117	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0005	< 0.006	< 0.0029
Total Hardness	mg CaCO3/L				37.9	104.0	120.0	78.0	46.7	100.0	110.0	93.6	110.0	106.0	E	E	E	E	E	37.9	120.0	90.6
Minor Cations																						
Arsenic	mg/L	**0.30**	**0.005**	0.0019	0.00096	0.002	0.0014	0.0011	0.00084	0.0013	0.0020	0.0017	0.00175	0.00235	0.0033	0.0031	0.0028	0.0039	0.0024	0.00084	0.0039	0.0020
Copper	mg/L	**0.20**	**0.002**	0.002	< 0.0010	0.002	0.002	< 0.001	0.00102	**0.0024**	0.0016	**0.0022**	**0.00227**	0.00188	0.0024	< 0.0020	0.0019	**0.0026**	0.0018	< 0.001	0.0026	< 0.0019
Lead	mg/L	**0.20**	**0.002**	< 0.001	< 0.0010	< 0.001	< 0.0005	< 0.0005	0.00009	0.00014	0.00019	0.0003	0.00028	< 0.00020	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.00009	< 0.0010	< 0.0006
Mercury	mg/L		**0.0002**	< 0.00005	< 0.00005	< 0.0001	< 0.00005	< 0.00005	0.00001	< 0.00002	< 0.00001	< 0.00005	< 0.00005	< 0.00005	< 0.00001	< 0.00002	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000100	< 0.000033
Nickel	mg/L	**0.30**	**0.065**	0.002	< 0.020	0.002	0.002	0.001	0.00141	0.0023	0.0022	0.003	0.0026	0.0021	0.0034	0.0034	0.0045	0.0032	0.0030	0.00100	< 0.0200	< 0.0036
Zinc	mg/L	**0.30**	**0.030**	0.007	0.0087	**0.065**	0.012	0.006	0.0086	0.0229	**0.0301**	0.0140	**0.0504**	0.0119	0.0140	0.0240	**0.0320**	0.0079	0.0101	0.00600	0.0650	0.0203

( ) Laboratory replicate.
[ ] Results re-checked.
(E) Not analyzed
NR: Not recorded due to equipment malfunction
(1) WAD Cn reported for 2011
Bold values indicate CCME exceedence

CULLATON LAKE GOLD MINES LTD.

CULLATON LAKE MINE

WATER ANALYSIS REPORT

STATION 940-24A - AREA OF SEEPAGE FROM QUARY PIT TO TAILINGS POND, 2003 - 2018

Physical and General	Units	Water License	CCME Guidelines	July 29 2003	July 7 2004	Aug. 5 2005	Aug. 2 2006	July 5 2007	June 28 2008	Aug. 5 2009	Aug. 4 2010	Aug. 4 2011	Aug. 2 2012	Aug. 15 2013	Aug. 12 2014	Sept 3 2015	Sept 7 2016	Sept. 6 2017	Sept. 12 2018	MINIMUM	MAXIMUM	AVERAGE
pH (lab)	units	**6.0 - 9.5**	**6.5-9.0**	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Temperature	^{o}C			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Suspended Solids (105^{o}C)	mg/L	**25.0**		D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Total Cyanide	mg/L	**0.80**		D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Total Hardness	mg CaCO3/L			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Oil and Grease	mg/L	**Visible**		D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Minor Cations																						
Arsenic	mg/L	**0.30**	**0.005**	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Copper	mg/L	**0.20**	**0.004**	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Lead	mg/L	**0.20**	**0.007**	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Mercury	mg/L		**0.0002**	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Nickel	mg/L	**0.30**	**0.150**	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Zinc	mg/L	**0.30**	**0.030**	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D			

( ) Laboratory replicate.
[ ] Results re-checked.
D: Dry

CULLATON LAKE GOLD MINES LTD.

CULLATON LAKE MINE

WATER ANALYSIS REPORT

STATION 940-27A - AREA OF SEEPAGE FROM EWR TO SHEAR LAKE CREEK (1), 2005 - 2018

Physical and General	Units	Water License	CCME Guidelines	Aug. 5 2005	Aug. 2 2006	July 5 2007	June 28 2008	Aug. 5 2009	Aug. 4 2010	Aug. 4 2011	Aug. 2 2012	Aug. 15 2013	Aug. 12 2014	Sept. 3 2015	Sept. 7 2016	Sept. 6 2017	Sept. 12 2018	MINIMUM	MAXIMUM	AVERAGE
pH (lab)	units	**6.0 - 9.5**	**6.5-9.0**	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Temperature	^{0}C			D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Suspended Solids (105^{o}C)	mg/L	**25.0**		D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Total Cyanide	mg/L	**0.80**		D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Total Hardness	mg CaCO3/L			D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Sulphate	mg/L			D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Minor Cations																				
Arsenic	mg/L	**0.30**	**0.005**	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Copper	mg/L	**0.20**	**0.004**	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Lead	mg/L	**0.20**	**0.007**	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Mercury	mg/L		**0.0002**	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Nickel	mg/L	**0.30**	**0.150**	D	D	D	D	D	D	D	D	D	D	D	D	D	D			
Zinc	mg/L	**0.30**	**0.030**	D	D	D	D	D	D	D	D	D	D	D	D	D	D			

(1) Station added in 2005
( ) Laboratory replicate.
[ ] Results re-checked.
D: Dry

Appendix 3

Technical Memorandum

Barrick Cullaton Lake Tailings - 2018 Thermistor Installation

Golder Associates

(sent separately)

Appendix 4

Aquatic Monitoring Report – 2018 Open Water Season

Palmer Environmental Consulting Group

(sent separately)

Appendix 5

2018 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 one-day annual visit for inspection and monitoring purposes. The site is dormant and uninhabited for the remainder of the year.

REVISIONS AND EFFECTIVE DATE OF PLAN:

This plan was reviewed and revised on March 21st, 2019 and is effective until March 31, 2020.

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

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