

CULLATON LAKE GOLD MINES LTD.
WATER LICENCE 1BR-CUL1118

ANNUAL WATER LICENCE REPORT 2015

PREPARED on behalf of:

BARRICK GOLD INC.

By P.J. Brugger and Associates
1084 County Rd 8
Campbellford, ON
K0L 1L0

March 2016

Table of Contents

Executive Summary (Inuktitut)	i
Executive Summary (English)	ii
1.0 Site Background / Location	1
1.1 Closure and Post Closure Maintenance History	1
2.0 Water Licence Supplemental Conditions and Notes	6
3.0 2015 Activities	9
3.1 Annual Site Inspection Findings	9
3.2 Water Quality Monitoring	10
3.3 Thermistor Monitoring	11
3.4 Geotechnical Inspection	11
4.0 Annual Review of Spill Response Plan	11
5.0 Annual Review of Abandonment and Restoration Plan	11
6.0 Annual Review of Quality Assurance / Quality Control	11
7.0 2016 Proposed Program	12
Appendix 1 – Site Photos	
Appendix 2 – Water Quality Monitoring Results September 3, 2015	
Appendix 3 – Thermistor Monitoring Results September 3, 2015	
Appendix 4 – 2016 Spill Response Plan	

ጋኒሴካ ሚኒንግ ዲግሪ

To follow

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 2015 site activities consisted of the removal of eighteen drums of fuel historically stored at the airstrip by unauthorized third parties in late August and a September 3, 2015 site visit to conduct the annual site inspection, water quality and thermistor monitoring and the tailings dam geotechnical inspection pursuant to Water Licence No. 1BR-CUL1118. The site visit was re-scheduled to September at the request of Aboriginal Affairs and Northern Development Canada (now Indigenous and Northern Affairs Canada) (INAC), in order to measure the tailings cover permafrost level at its seasonal lowest elevation.

In addition to the above and also at the request of INAC, the field work component of a Dam Safety Review was completed by Thurber Engineering Ltd. during the visit. A final report will be issued shortly.

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.
- The tailings storage facility continues to remain stable.
- The permafrost in the tailings cover was found 1.42m below surface on September 3, 2015 by test pit at thermistor T4.

Discussions continued in 2015 following receipt of an April 4, 2014 letter from INAC outlining requirements for returning the property to the government. Additional discussions are planned for 2016.

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, Indigenous and Northern Affairs Canada) (INAC) initiated a review to assess closure conditions. INAC 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 INAC should not accept return of the property. In response, INAC, 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 new 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 INAC 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 INAC. In April 2014, INAC 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, INAC 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. Discussions are continuing.

The site continues to be inspected on an annual basis to confirm chemical and physical stability as per the conditions of the water license. The site visit has been moved to September at the request of INAC

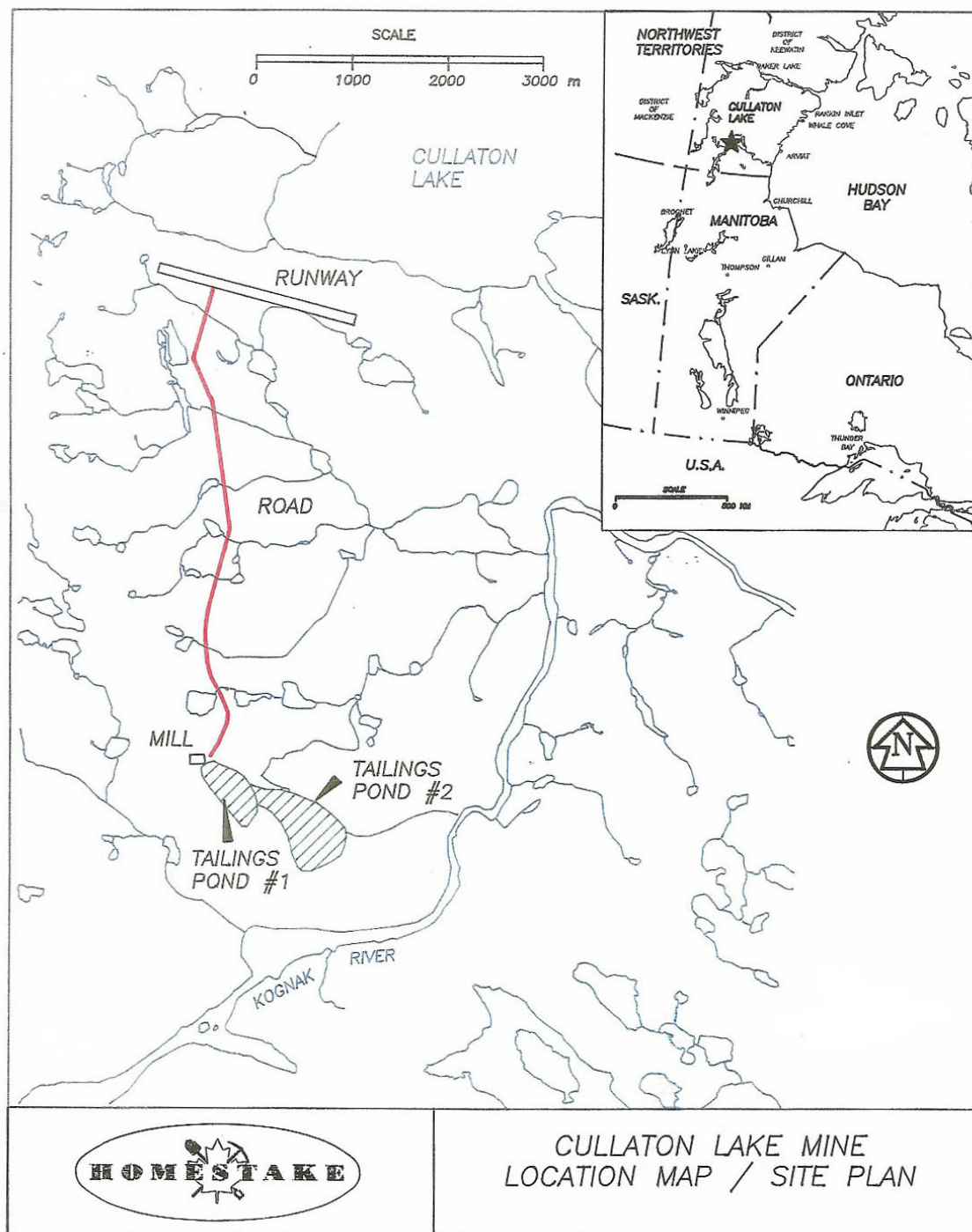
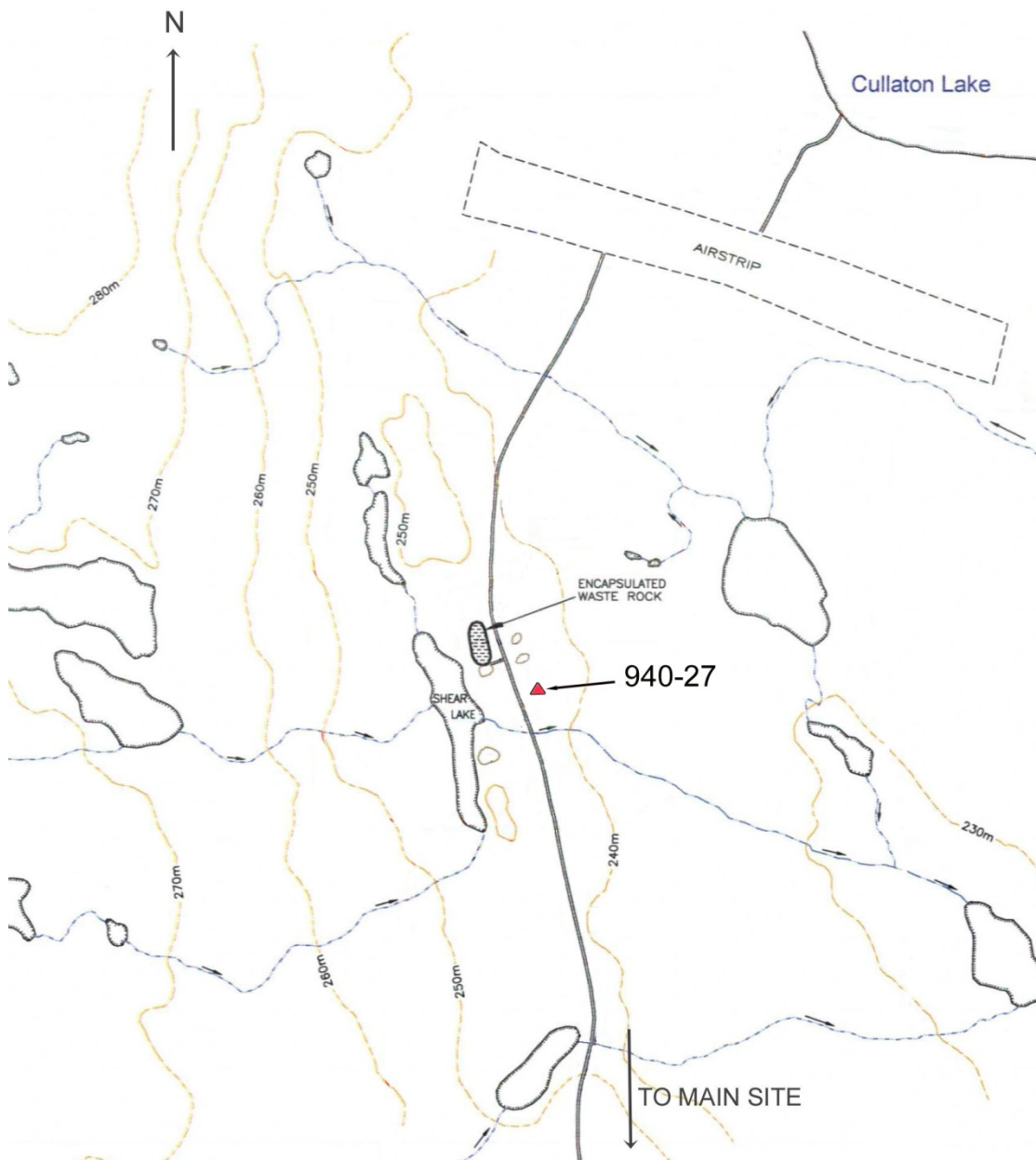
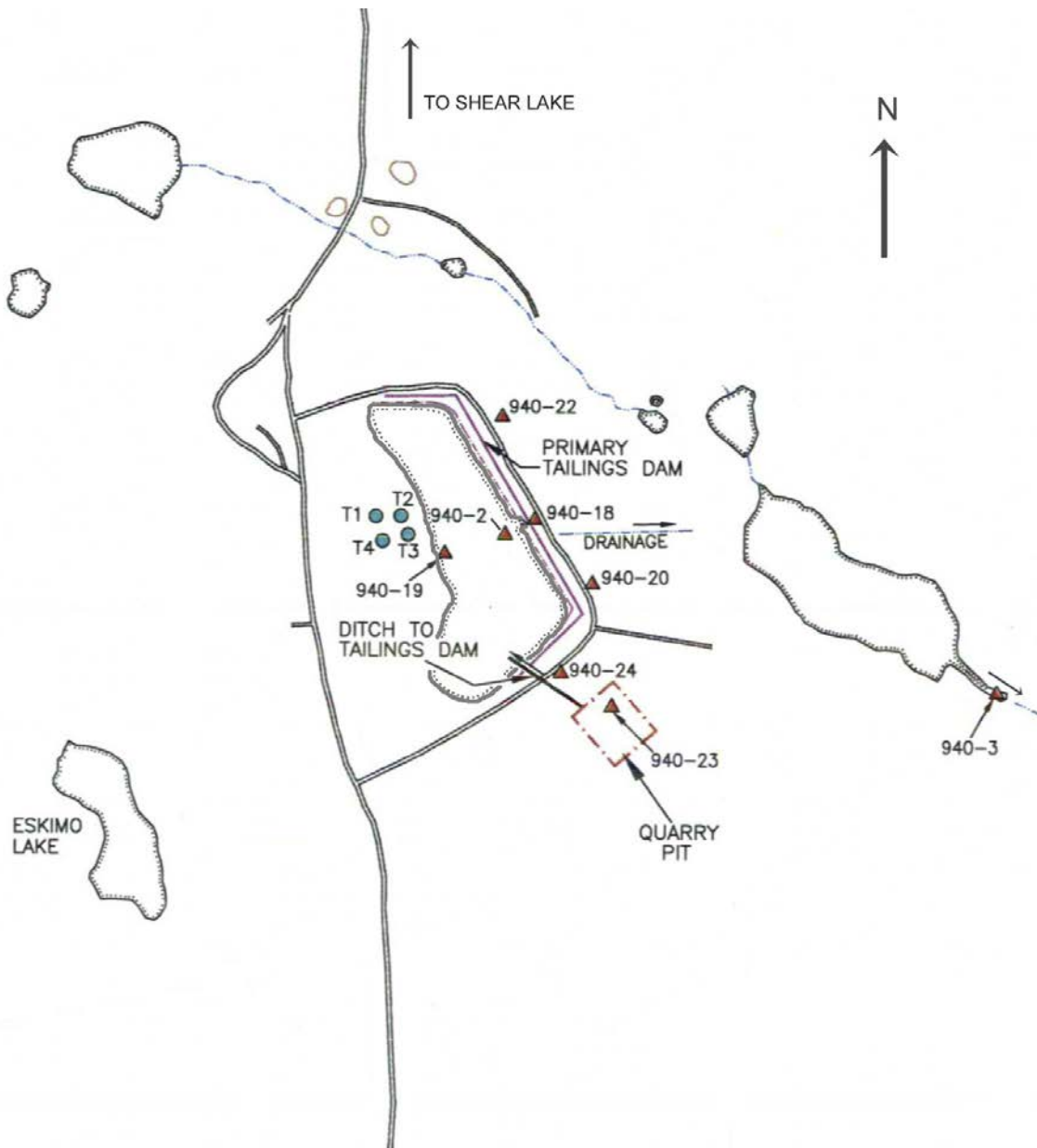


Figure 1: Cullaton Lake Mine location and general site layout



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 is conducted pursuant to Water Licence 1BR-CUL1118, which was issued on February 9, 2011 to amend the expiry date of 1BR-CUL0911, in order to facilitate additional divestiture discussions and studies. 1BR-CUL1118 will expire on January 31, 2018. 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 will 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 2015 surface water samples were sent a different ALS lab due to a required weekend delivery. As a result the 2015 detection limits varied slightly from 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

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.

Water Licence 1BR-CUL1118 included a recommendation by Environment Canada and INAC to replace the non-functioning tailings cover thermistors. Subsequent research has indicated that, unless the thermistors are properly anchored in the permafrost, replacements will be susceptible to frost heave upward movement similar to the original installations. However, in light of the subsequent 2009 screening level risk assessment that indicated there are no significant impacts at the Cullaton site, the License holder intends to request that this recommendation is no longer necessary and that it be removed from the license.

3.0 2015 ACTIVITIES

During the week of August 26, 2015, aircraft charter company Wings over Kississing (WOK) took possession of and removed 18 barrels of fuel oil that had been cached at the airstrip for several years by unauthorized third parties. WOK personnel also dragged the airstrip to improve the surface and reduce the encroaching vegetation.

The annual site inspection was conducted at the closed Cullaton Lake Gold Mine (Cullaton Lake) on September 3, 2015. Personnel attending the site during this trip included:

Barrick Personnel:

Paul Brugger, P. Eng., Closed Properties Manager, Eastern Canada

Demetri Georgiou, MSc, P. Eng., Principle, qualified geotechnical engineer, **exp** Services Inc. (formerly Trow Associates) Personnel:

Jeremy Boswell, M. Eng., P. Eng., Senior Associate / Senior Tailings Engineer, Thurber Engineering Ltd.

Matt Dehaene, pilot, Wings over Kississing (assisted with test pit)

INAC Personnel:

Jane Doucette, P. Eng., AMEC Foster Wheeler.

Access to the site was via a chartered aircraft from Thompson, Manitoba. During this trip Mr. Brugger conducted visual inspections of the quarry pit, tailings cover, all former underground access areas, EWR and the site in general and collected water samples pursuant to Water Licence 1BR-CUL1118. Mr. Dehaene excavated the test pit at Thermistor T4 to determine the depth of permafrost. Mr. Georgiou performed the annual geotechnical inspection. Mr. Boswell conducted a geotechnical and general site inspection to support a Dam Safety Review.

The annual site inspection trip was delayed one day due to inclement weather. On the following day at the site, rain and cold temperatures were persistent throughout the day.

3.1 ANNUAL SITE INSPECTION GENERAL FINDINGS

The annual site inspection performed on September 3, 2015 indicated that the site remains undisturbed 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.

Select photos are included in Appendix 1.

3.2 WATER QUALITY MONITORING

Duplicate water sampling was completed on September 3, 2015 at 6 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 3, 2015. Results indicated that all parameters were below the limits prescribed in the Water Licence.

Station 940-3 (Tailings Pond No. 2) – Duplicate water samples were collected on September 3, 2015. 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 3, 2015. 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 3, 2015. 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) – Duplicate water samples were collected on September 3, 2015. Results indicated that all parameters were below the limits prescribed in the Water Licence.

Station 940-22 (Tailings Pond No. 1 seepage at northeast corner) – There was no flow observed on September 3, 2015 and consequently no samples were collected.

Station 940-23 (Quarry Pit) – Duplicate water samples were collected on September 3, 2015. Results indicated that all parameters were below the limits prescribed in the Water Licence. Zinc reported lower again this year and comparable to average historic values. Zinc will continue to be scrutinized in future campaigns. 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 3, 2015 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 3, 2015 and consequently no samples were collected.

3.3 THERMISTOR MONITORING

A test pit excavated at Thermistor T4 in 2007 indicated that the thermistors are no longer providing correct readings. As in years subsequent to 2007, the T4 test pit was re-opened during the September 3, 2015 visit in order to visually ascertain the depth of permafrost. Thermistor readings were not recorded at any of the 4 historic stations as 2 were not functioning and the remaining 2 were inaccessible due to the casing having heaved upwards.

Based on the test pit finding, the permafrost was found at a depth of 1.42m on September 3, 2015. The till cover is 90cm thick at this location. The thawed 52cm of tailings above the permafrost was saturated (see field notes and photos in Appendix 3).

3.4 GEOTECHNICAL INSPECTION

Demetri Georgiou (exp Services Inc.) performed the geotechnical inspection on September 3, 2015, pursuant to Part D, Article 8d of Water Licence 1BR-CUL1118. A copy of the inspection report was submitted to the NWB on February 19, 2016.

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 2015 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 4 annual reports, the engineer has also recommended reducing the frequency of geotechnical inspections to once every 3 years.

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 this month. An updated version is provided in Appendix 4.

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 was completed. There were no changes to the plan.

6.0 ANNUAL REVIEW OF QUALITY ASSURANCE / QUALITY 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 2015 samples are included in Appendix 2.

7.0 2016 PROPOSED PROGRAM

The 2016 program will consist of two visits to site in order to comply with the requirements of Water Licence 1BR-CUL1118 and to implement the Adaptive Monitoring Plan described in the June 2015 Letter:

- a visit in mid-July to collect surface water, benthic samples and sediment samples; and
- a visit tentatively scheduled to occur during the first week of September to perform a site inspection, enhanced water quality monitoring, tailings dam geotechnical inspection.

In addition to the above, minor maintenance activities will be performed, including additional top dressing at previously filled areas of settlement and erosion channel repair as required. Regular maintenance of the airstrip will also continue in 2016 along with the removal of additional unauthorized third party fuel drums cached at the airstrip.

Appendix 1
Cullaton Lake Site Photos
September 3, 2015



Photo 1: Cullaton Lake main site, looking southeast, (from August 2014).



Photo 2: Shear Lake site, looking southwest, (from August 2014).



Photo 3: Tailings No.1 Pond spillway invert on September 3, 2015



Photo 4: Former Tailings Pond No. 2 spillway flowing on September 3, 2015



Photo 5: Former Shear Lake Portal, September 3, 2015.



Photo 6: Former B Zone Portal and Fresh Air Raise, looking north on September 3, 2015.



Photo 7: Encapsulated Waste Rock at Shear Lake 10 years after the application of additional seed and fertilizer.



Photo 8: Shear Lake low pH pool area on September 3, 2015.



Photo 9: Vegetation on former low grade stockpile area at Shear Lake.



Photo 10: Tailings cover, looking southeast on September 3, 2015.



Photo 11: Tailings No. 1 Pond looking northwest on August 12, 2014.



Photo 12: Subsidence area at southwest corner of of Quarry Pit pond on September 3, 2015.



Photo 13: Subsidence at southwest corner of Quarry Pit pond on August 12, 2014.

Appendix 2
September 3, 2015
Water Quality Monitoring Results

**Cullaton Lake
Water Quality Monitoring Results
September 3, 2015**

Location	Sample Number	Field PH	Temp °C	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	8.34	11.0	7.98	<5.0	<0.0020	0.0022	<0.0020	<0.0010	<0.000020	<0.0020	<0.020
	940-2B			8.14	<5.0	<0.0020	0.0018	<0.0020	<0.0010	<0.000020	0.0029	<0.020
Tailings Pond No. 2	940-3A	7.85	10.4	7.93	<5.0	<0.0020	0.0025	0.0038	<0.0010	<0.000020	0.0045	<0.020
	940-3B			7.97	<5.0	<0.0020	0.0028	0.0040	<0.0010	<0.000020	0.0060	<0.020
Tailings Pond No. 1 (spillway)	940-18A	7.97	10.0	7.97	<5.0	0.0033	0.0049	<0.0020	<0.0010	<0.000020	<0.0020	<0.020
	940-18B			7.95	<5.0	0.0033	0.0047	0.0021	<0.0010	<0.000020	<0.0020	<0.020
Tailings Pond No. 1 (at piezometer)	940-19A	8.20	10.5	7.90	<5.0	<0.0020	0.0024	<0.0020	<0.0010	<0.000020	<0.0020	<0.020
	940-19B			8.09	<5.0	<0.0020	0.0024	<0.0020	<0.0010	<0.000020	<0.0020	<0.020
Tailings Pond No. 1 (seepage at east side)	940-20A	7.53	10.0	7.81	<5.0	<0.0020	0.0017	0.0037	<0.0010	<0.000020	0.0040	<0.020
	940-20B			7.90	<5.0	<0.0020	0.0018	0.0037	0.0011	<0.000020	0.0035	<0.020
Tailings Pond No. 1 (seepage at northeast corner)	940-22A 940-22B	Dry										
Quarry Pit	940-23A	7.75	10.3	8.15	<5.0	<0.0020	0.0031	<0.0020	<0.0010	<0.000020	0.0034	0.024
	940-23B			8.15	<5.0	<0.0020	0.0028	<0.0020	<0.0010	<0.000020	0.0033	0.020
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 3, 2015
Water Analysis Certificate and Quality Control Report**



Barrick Gold Corp.
ATTN: PAUL BRUGGER
171 COPPER CLIFF RD, E
THUNDER BAY ON P7L 0B6

Date Received: 04-SEP-15
Report Date: 17-SEP-15 11:55 (MT)
Version: FINAL

Client Phone: 807-964-1657

Certificate of Analysis

Lab Work Order #: L1668534
Project P.O. #: NOT SUBMITTED
Job Reference: CULLATON LAKE
C of C Numbers:
Legal Site Desc:

Bobbie Shortreed
Project Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 1081 Barton Street, Thunder Bay, ON P7B 5N3 Canada | Phone: +1 807 623 6463 | Fax: +1 807 623 7598
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1668534-1 SW 03-SEP-15 940-02A	L1668534-2 SW 03-SEP-15 940-03A	L1668534-3 SW 03-SEP-15 940-18A	L1668534-4 SW 03-SEP-15 940-19A	L1668534-5 SW 03-SEP-15 940-20A
Grouping	Analyte						
WATER							
Physical Tests	pH (pH units)		7.98	7.93	7.97	7.90	7.81
	Total Suspended Solids (mg/L)		<5.0	<5.0	<5.0	7.0	<5.0
Cyanides	Cyanide, Total (mg/L)		<0.0020	<0.0020	0.0033	<0.0020	<0.0020
Total Metals	Arsenic (As)-Total (mg/L)		0.0022	0.0025	0.0049	0.0024	0.0017
	Copper (Cu)-Total (mg/L)		<0.0020	0.0038	<0.0020	<0.0020	0.0037
	Lead (Pb)-Total (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Mercury (Hg)-Total (mg/L)		<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
	Nickel (Ni)-Total (mg/L)		<0.0020	0.0045	<0.0020	<0.0020	0.0040
	Zinc (Zn)-Total (mg/L)		<0.020	<0.020	<0.020	<0.020	<0.020

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1668534-6 SW 03-SEP-15 940-23A	L1668534-7 SW 03-SEP-15 SHEAR CREEK A	L1668534-8 SW 03-SEP-15 940-02B	L1668534-9 SW 03-SEP-15 940-03B	L1668534-10 SW 03-SEP-15 940-18B
Grouping	Analyte						
WATER							
Physical Tests	pH (pH units)		8.15	6.74	8.14	7.97	7.95
	Total Suspended Solids (mg/L)		<5.0	<5.0	<5.0	<5.0	<5.0
Cyanides	Cyanide, Total (mg/L)		<0.0020	<0.0020	<0.0020	<0.0020	0.0033
Total Metals	Arsenic (As)-Total (mg/L)		0.0031	<0.0010	0.0018	0.0028	0.0047
	Copper (Cu)-Total (mg/L)		<0.0020	0.0031	<0.0020	0.0040	0.0021
	Lead (Pb)-Total (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Mercury (Hg)-Total (mg/L)		<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
	Nickel (Ni)-Total (mg/L)		0.0034	0.0037	0.0029	0.0060	<0.0020
	Zinc (Zn)-Total (mg/L)		0.024	<0.020	<0.020	<0.020	<0.020

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1668534-11 SW 03-SEP-15 940-19B	L1668534-12 SW 03-SEP-15 940-20A	L1668534-13 SW 03-SEP-15 940-23B		
Grouping	Analyte						
WATER							
Physical Tests	pH (pH units)		8.09	7.90	8.15		
	Total Suspended Solids (mg/L)		7.0	<5.0	<5.0		
Cyanides	Cyanide, Total (mg/L)		<0.0020	<0.0020	<0.0020		
Total Metals	Arsenic (As)-Total (mg/L)		0.0024	0.0018	0.0028		
	Copper (Cu)-Total (mg/L)		<0.0020	0.0037	<0.0020		
	Lead (Pb)-Total (mg/L)		<0.0010	0.0011	<0.0010		
	Mercury (Hg)-Total (mg/L)		<0.000020	<0.000020	<0.000020		
	Nickel (Ni)-Total (mg/L)		<0.0020	0.0035	0.0033		
	Zinc (Zn)-Total (mg/L)		<0.020	<0.020	0.020		

* 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	Arsenic (As)-Total	MS-B	L1668534-1, -2, -3, -4, -5, -6, -7, -8

Qualifiers for Individual Parameters Listed:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-TOT-WP	Water	Cyanide, Total	ISO 14403 (modified)
Total or strong acid dissociable (SAD) cyanide in aqueous matrices is determined by sample distillation and colourimetric detection.			
HG-T-CVAF-WP	Water	Mercury Total	EPA245.7 V2.0
Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.			
MET-T-MS-WP	Water	Total Metals by ICP-MS	APHA 3030E/EPA 6020A-T
This analysis involves preliminary sample treatment by hotblock acid digestion (APHA 3030E). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			

PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			

SOLIDS-TOTSUS-WP	Water	Total Suspended Solids	APHA 2540 D (modified)
Total suspended solids in aqueous matrices is determined gravimetrically after drying the residue at 103 105°C.			

** 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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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 ww - 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.



Canada Toll Free: 1 800 668 9878

L1668534-COFC

Page 1 of 3

REFER TO BACK PAGE FOR ALL LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NA-0126a v09 Final 94 January 2011

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy

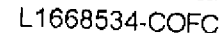
1. If any water samples are taken from a **Regulated Drinking Water (DW) System** please submit using an **Authorized DW COC form**



Canada Toll Free: 1 800 668 9878

www.alsglobal.com

Page 2 of 2



REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NA-EM-0328-020 Filed 01/10/14 Page 20 of 20

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System** please submit using an **Authorized DW COC form**

**Cullaton Lake
Water Quality Monitoring Results
2003 - 2015**

CULLATON LAKE GOLD MINES LTD.
CULLATON LAKE MINE

WATER ANALYSIS REPORT
STATION 940-02A - TAILNGS POND NO. 1 DISCHARGE, 2003 - 2015

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	MINIMUM	MAXIMUM	AVERAGE
pH (lab)	units	6.0 - 9.5	6.5-9.0	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	7.5	8.3	7.9
Temperature	°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	11.0	21.0	13.9
Suspended Solids (105°C)	mg/L	25.0		< 3	< 3	14	< 1	< 10	1	< 1	1	< 4	< 1	< 1	< 2	< 5	< 0	14	< 3
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	< 0.0005	0.0088	< 0.0041
Total Hardness	mg CaCO ₃ /L				197	199	210	220	162	210	230	225	211	207	E	E	162	230	207
Minor Cations																			
Arsenic	mg/L	0.30	0.005	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	0.00159	0.00563	0.0024
Copper	mg/L	0.20	0.004	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	0.0010	0.0021	0.0015
Lead	mg/L	0.20	0.007	< 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	< 0.00020	0.00146	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	< 0.00005	< 0.00001	< 0.00002	< 0.00001	< 0.0001	< 0.00004
Nickel	mg/L	0.30	0.150	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	0.0008	< 0.020	< 0.0029
Zinc	mg/L	0.30	0.030	< 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	0.0011	0.020	0.0052

() 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 - 2015

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	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	7.7	8.6	8.0
Temperature	°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	10.4	20.8	14.4
Suspended Solids (105°C)	mg/L	25.0		5	< 3	2	2	< 10	2	2	13	< 4	< 1	1.9	< 2	< 5	< 1	13	4
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	< 0.0005	0.010	< 0.0038
Total Hardness	mg CaCO ₃ /L				92.4	100	90	88	82.3	94	99	95.2	118	109	E	E	82.3	118	97
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	0.0025	0.0059	0.0039
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	0.003	0.020	0.005
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	< 0.00005	< 0.0010	< 0.00052
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	< 0.00001	< 0.00010	< 0.00004
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	0.003	< 0.020	< 0.006
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	< 0.0005	0.020	< 0.0058

() 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 940-18A - TAILNGS POND NO. 1 SPILLWAY, 2003 - 2015

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	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	7.5	9.3	8.3
Temperature	°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	10.0	21.4	15.9
Suspended Solids (105°C)	mg/L	25.0		4	< 3	< 2	3	< 10	< 1	1	< 1	< 4	< 1	D	< 2	< 5	< 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	0.0022	0.0370	0.0081
Total Hardness	mg CaCO ₃ /L				217	200	210	230	159	220	220	228	212	D	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	0.00133	0.0057	0.0036
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	0.00086	0.0050	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	0.00011	< 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	D	< 0.00001	< 0.00002	< 0.00001	< 0.00010	< 0.00004
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	0.0009	< 0.0200	< 0.0031
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	0.0003	0.0200	0.0042

() 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 940-19A - TAILNGS POND NO. 1 AT PIEZOMETER LOCATION 2003 - 2015

Physical and General	Units	NWB 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	MINIMUM	MAXIMUM	AVERAGE
pH (lab)	units	6.0 - 9.5	6.5-9.0	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	7.7	8.2	8.0
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	10.5	21.3	16.1
Suspended Solids (105°C)	mg/L	25.0		8	< 3	2	< 1	< 10	< 1	< 1	3	7	1.3	< 1	< 2	7	< 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	0.0009	0.0074	0.0042
Total Hardness	mg CaCO ₃ /L				206	201	210	220	749	220	230	246	210	210	E	E	201	749	270
Minor Cations																			
Arsenic	mg/L	0.30	0.005	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	0.0016	0.0036	0.0023
Copper	mg/L	0.20	0.004	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	0.0010	0.0020	0.0014
Lead	mg/L	0.20	0.007	< 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	< 0.0002	0.0018	< 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	< 0.00005	< 0.00001	< 0.00002	< 0.00001	< 0.00010	< 0.00004
Nickel	mg/L	0.30	0.150	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	< 0.0010	< 0.0200	< 0.0034
Zinc	mg/L	0.30	0.030	< 0.005	< 0.005	< 0.003	< 0.005	< 0.005	0.0161	< 0.0025	< 0.0025	< 0.005	< 0.005	< 0.005	< 0.0030	< 0.0200	< 0.0025	0.0200	< 0.0063

() 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 940-20A - TAILNGS POND NO. 1 EAST SIDE SEEPAGE, 2003 - 2015

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	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	7.8	9.1	8.3
Temperature	°C			D	21.3	NR	22.0	17.9	19.6	18.9	13.8	13.3	D	D	21.0	10.0	10.0	22.0	15.8
Suspended Solids (105°C)	mg/L	25.0		D	< 3	< 2	1	< 10	4	1	1	< 4	D	D	< 2	< 5	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	0.001	0.118	0.016
Total Hardness	mg CaCO ₃ /L				310	338	220	620	370	240	230	215	D	D	E	E	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	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	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	< 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	< 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	0.0033	< 0.0200	< 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	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

CULLATON LAKE GOLD MINES LTD.
CULLATON LAKE MINE

WATER ANALYSIS REPORT

STATION 940-22A - TAILNGS POND NO. 1 NORTH SIDE SEEPAGE, 2003 - 2015

Physical and General	Units	Water License	CCME Guidelines	July 29 2003	July 7 2004	Aug. 5 2005	Aug. 2 2006	July 5 2007	Jun 28 2008	Aug. 5 2009	Aug. 4 2010	Aug. 4 2011	Aug. 2 2012	Aug. 15 2013	Aug. 12 2014	Sept 3 2015	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	7.7	8.0	7.9
Temperature	°C			D	D	NR	D	D	18.7	D	D	D	D	D	D	D	18.7	18.70	18.70
Suspended Solids (105°C)	mg/L	25.0		D	D	6	D	D	1	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	0.0015	0.073	0.037
Total Hardness	mg CaCO3/L			D	D	515	D	D	546	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	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	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	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	< 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	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	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 - 2015

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	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	7.4	8.3	7.9
Temperature	°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	10.3	20.7	14.9
Suspended Solids (105°C)	mg/L	25.0		10	< 3	4	1	< 10	< 1	< 1	2	< 4	< 1	< 1	< 2	< 5	< 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	< 0.0005	< 0.006	< 0.003
Total Hardness	mg CaCO ₃ /L				37.9	104.0	120.0	78.0	46.7	100.0	110.0	93.6	110.0	106.0	E	E	0.00	120.00	82.38
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	0.0008	0.0033	0.0018
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	< 0.0010	0.0024	< 0.0018
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	0.0001	< 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	< 0.00001	< 0.00010	< 0.00004
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	0.0010	< 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	0.0060	0.0650	0.0211

() 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 940-24A - AREA OF SEEPAGE FROM QUARY PIT TO TAILINGS POND, 2003 - 2015

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	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			
Temperature	°C			D	D	D	D	D	D	D	D	D	D	D	D	D			
Suspended Solids (105°C)	mg/L	25.0		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			
Total Hardness	mg CaCO ₃ /L			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			
Minor Cations																			
Arsenic	mg/L	0.30	0.005	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			
Lead	mg/L	0.20	0.007	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			
Nickel	mg/L	0.30	0.150	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			

() 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), 2003 - 2015

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	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			
Temperature	°C					D	D	D	D	D	D	D	D	D	D	D			
Suspended Solids (105°C)	mg/L	25.0				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			
Total Hardness	mg CaCO ₃ /L					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			
Minor Cations																			
Arsenic	mg/L	0.30	0.005			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			
Lead	mg/L	0.20	0.007			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			
Nickel	mg/L	0.30	0.150			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			

(1) Station added in 2005

() Laboratory replicate.

[] Results re-checked.

D: Dry

Appendix 3
September 3, 2015
Thermistor Monitoring Results

THERMISTOR MONITORING RESULTS

Station 940-21

Field notes for pit excavated on September 3, 2105 at same location as last year.
(immediately north of T4)

0 – 0.9m: till cover

0.9m – 1.42m: saturated tailings

1.42m: Permafrost



September 3, 2015 test pit showing saturated tailings to the left of the pit.

Test pit excavated at T4 on August 15, 2013 – permafrost at 1.4m.

Thermistor Reading - Test Pit Comparison

September 3, 2015 Test Pit Field Notes:

0 – 0.9m: till cover

0.9m – 1.42m: saturated tailings

1.42m: Permafrost

September 3, 2015 Thermistor readings (See Notes below)

Depth (m)	T1 (°C)	T2 (°C)	T3 (°C)	T4 (°C)
0.3	NR(3)	NR(2)	NR(2)	NR(3)
0.8	NR(3)	NR(2)	NR(2)	NR(3)
1.3	NR(3)	NR(2)	NR(2)	NR(3)
1.8	NR(3)	NR(2)	NR(2)	NR(3)
2.3	NR(3)	NR(2)	NR(2)	NR(3)
2.8	NR(3)	NR(2)	NR(2)	NR(3)

August 12, 2014 T4 Test Pit Field Notes:

0 -0.9m: till cover

0.9m -1.07m: saturated tailings

1.07m: permafrost

August 12, 2014 Thermistor Readings (See Notes Below)

Depth (m)	T1 (°C)	T2 (°C)	T3 (°C)	T4 (°C)
0.3	NR(3)	21.26	18.45	NR(3)
0.8	NR(3)	Nr	15.67	NR(3)
1.3	NR(3)	7.02	17.50	NR(3)
1.8	NR(3)	5.49	9.09	NR(3)
2.3	NR(3)	1.68	8.50	NR(3)
2.8	NR(3)	-0.66	NR(3)	NR(3)

August 15, 2013 T4 Test Pit Field Notes:

0 -0.9m: till cover

0.9m -1.35m: saturated tailings

1.4m: permafrost

August 15, 2013 Thermistor Readings (See Notes Below)

Depth (m)	T1 (°C)	T2 (°C)	T3 (°C)	T4 (°C)
0.3	NR(3)	NR(3)	18.45	NR(3)
0.8	NR(3)	13.57	17.81	NR(3)
1.3	NR(3)	9.69	19.12	NR(3)
1.8	NR(3)	6.84	13.32	NR(3)
2.3	NR(3)	2.08	9.69	NR(3)
2.8	NR(3)	-0.66	NR(3)	NR(3)

Notes:

- (1) Thermistor readings are suspect and are included for comparison with test pit findings. High temperature readings for the top 2 sensors (0.3m and 0.8m) indicate they are above ground level and reflect daytime heating in the exposed black plastic casing.
- (2) Cable was not accessible.
- (3) Reading indicated open circuit.

Appendix 4
2016 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.

Remaining activities on the site 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 15, 2016 and is effective until March 31, 2017.

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 oil from seeping away.

ACTION IN CASE OF FIRE:

- a. Use CO₂, 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:

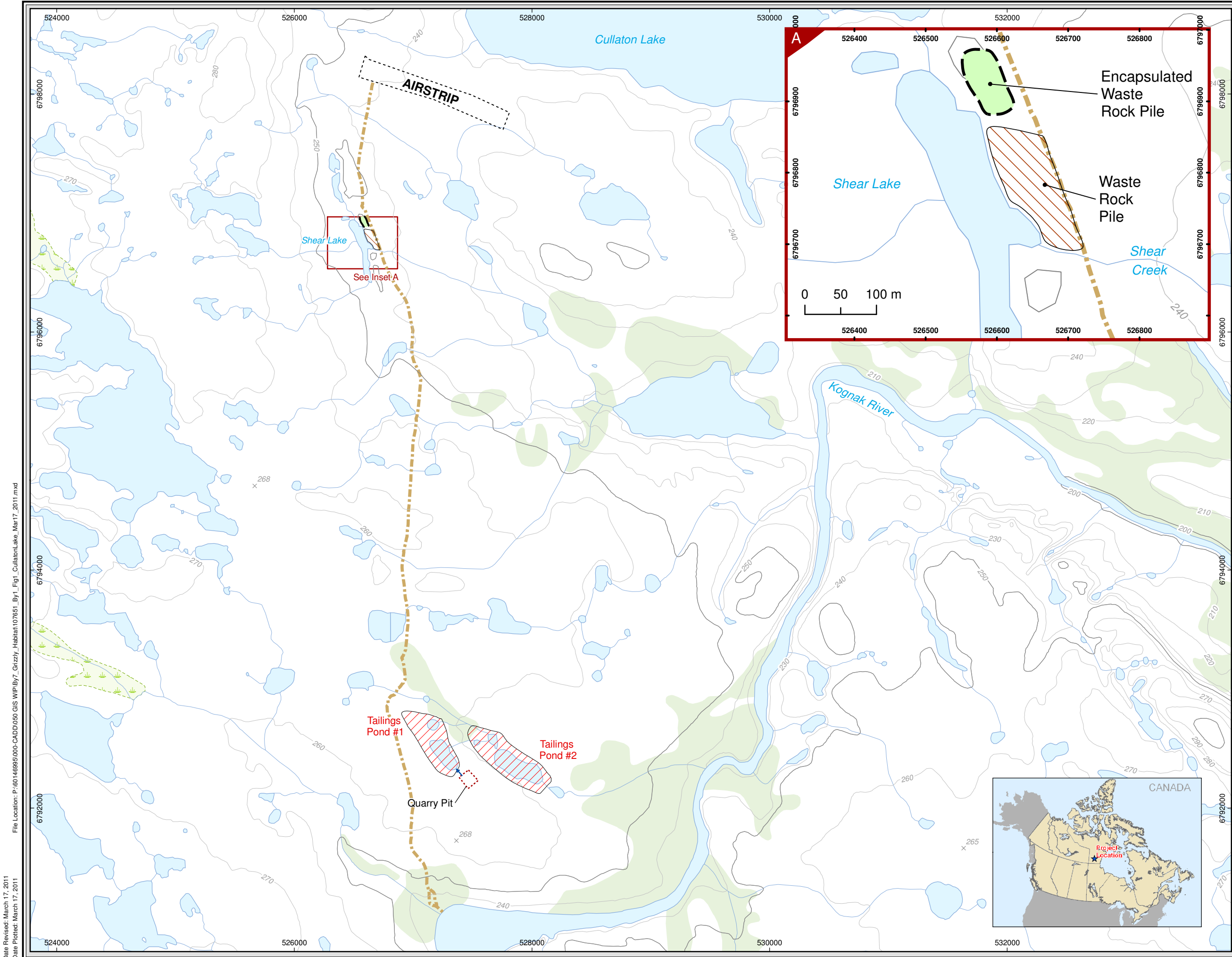
- date and time of spill
- location of spill
- direction spill is moving
- name and phone number of a contact person close to the location of the spill
- type and description of contaminant spilled including an estimate of the quantity
- cause of spill
- status of spill (i.e. continuing or stopped)
- 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:

- AANDC Manager of Field Operations at: **(867) 975-4295**
- Environment Canada at **(867) 975-4644**
- Government of Nunavut Environmental Protection at **(867) 857-2828**
- Kivalliq Inuit Association at **(867) 645-5728** or **1-800-220-6581** Contact **Stephen Hartman**
- Barrick Gold Corporation :
 - Paul Brugger,
Site Manager
Phone: **705-632-1871**
Cell: 807-631-4895
 - Alternate:
Walter Baumann,
Manager, Closure Sites
Phone: 702-522-6941
Cell: 801-244-3540
- 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



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)

©2009 AECOM Canada Ltd. All Rights Reserved.
This document is protected by copyright law and may not be used, reproduced or modified in any manner or for any purpose except with the written permission of AECOM Canada Ltd. ("AECOM") or a party to which its copyright has been assigned. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses, reproduces, modifies, or relies on this document without AECOM's express written consent.

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.

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

Figure 1

Date Revised: March 17, 2011
Date Plotted: March 17, 2011
File Location: P:\6014695\000-CADD\050 GIS WP\ByZ_Grizzly_Habitat\107651_By1_Fig1_CullatonLake_Mar17_2011.mxd



Canada

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: MONTH – DAY – YEAR		REPORT TIME		<input type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER _____-_____	
	B		OCCURRENCE DATE: MONTH – DAY – YEAR				OCCURRENCE TIME
C	LAND USE PERMIT NUMBER (IF APPLICABLE)			WATER LICENCE NUMBER (IF APPLICABLE)			
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION				REGION <input type="checkbox"/> NWT <input type="checkbox"/> NUNAVUT <input type="checkbox"/> 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		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES		U.N. NUMBER		
	SECOND PRODUCT SPILLED (IF APPLICABLE)		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
		STATION OPERATOR		YELLOWKNIFE, NT	(867) 920-8130
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC			SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY		CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY					
FIRST SUPPORT AGENCY					
SECOND SUPPORT AGENCY					
THIRD SUPPORT AGENCY					