

CULLATON LAKE GOLD MINES LTD.

WATER LICENCE 1BR-CUL1118

ANNUAL WATER LICENCE REPORT 2012

PREPARED on behalf of:

BARRICK GOLD INC.

**By P.J. Brugger and Associates
171 Copper Cliff Rd E
Neebing, ON
P7L 0B6**

March 2013

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EXECUTIVE SUMMARY

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

The 2012 site activities consisted of an August 2, 2012 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.

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 1.35m below surface on August 2, 2012 by test pit at thermistor T4.

Divestiture discussions were not advanced in 2012.

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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 2 meters of 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, waste rock at the Shear Lake Portal area, which 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 (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 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. Summarized the report indicated that the surface waters at the site are not significantly impacted by the former mine operation or existing conditions.

The site continues to be inspected on an annual basis in mid-summer to confirm chemical and physical stability.

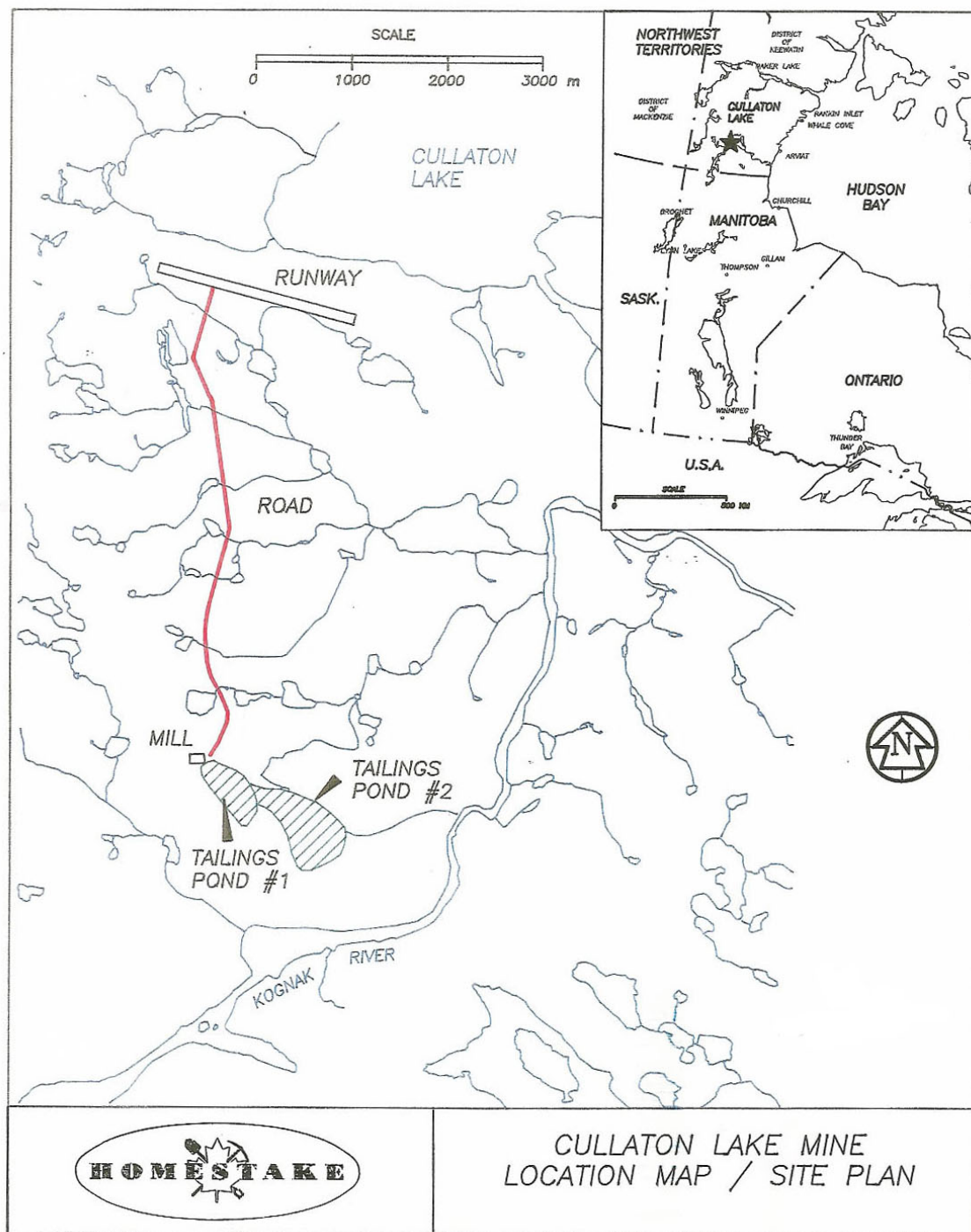
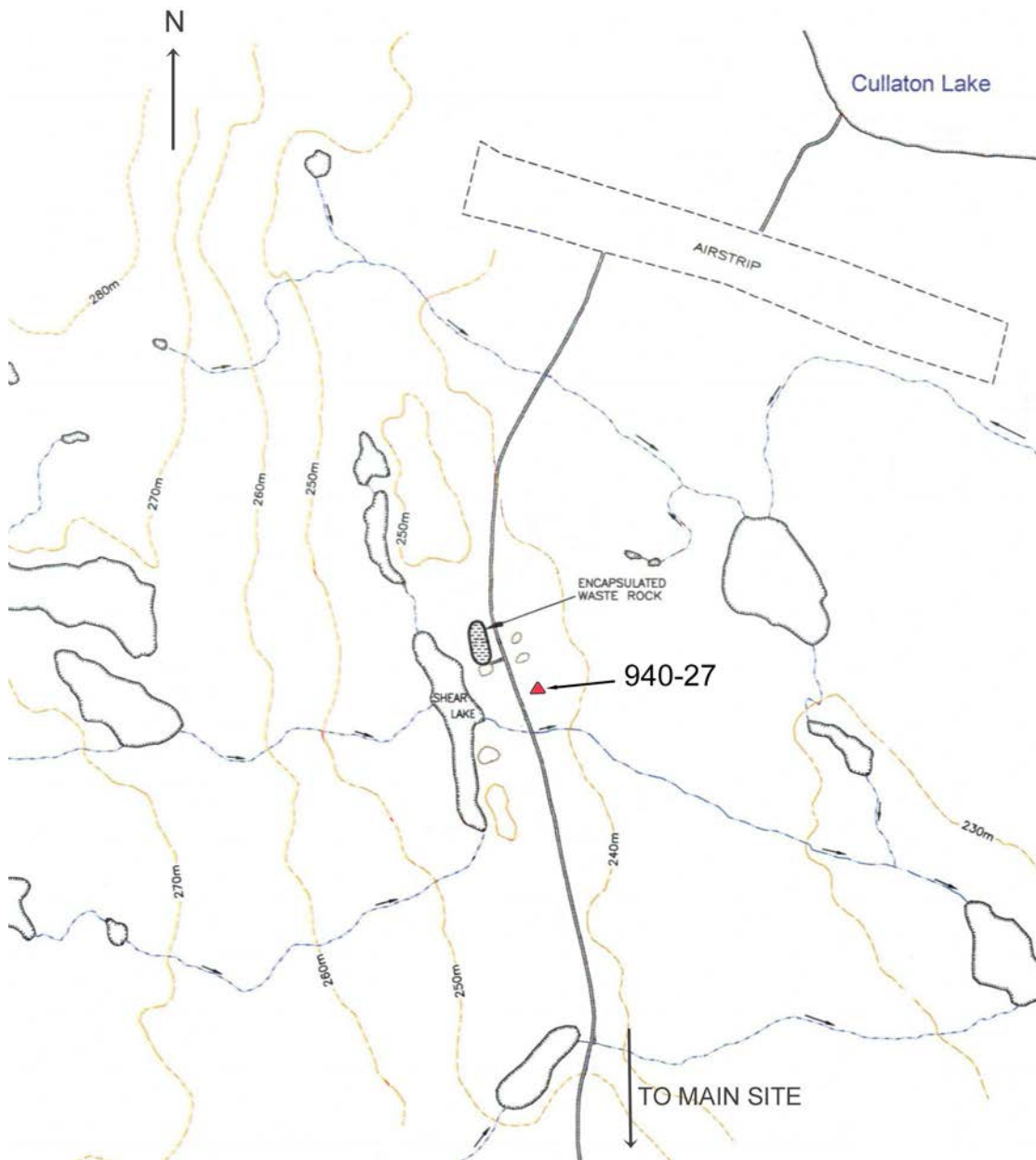
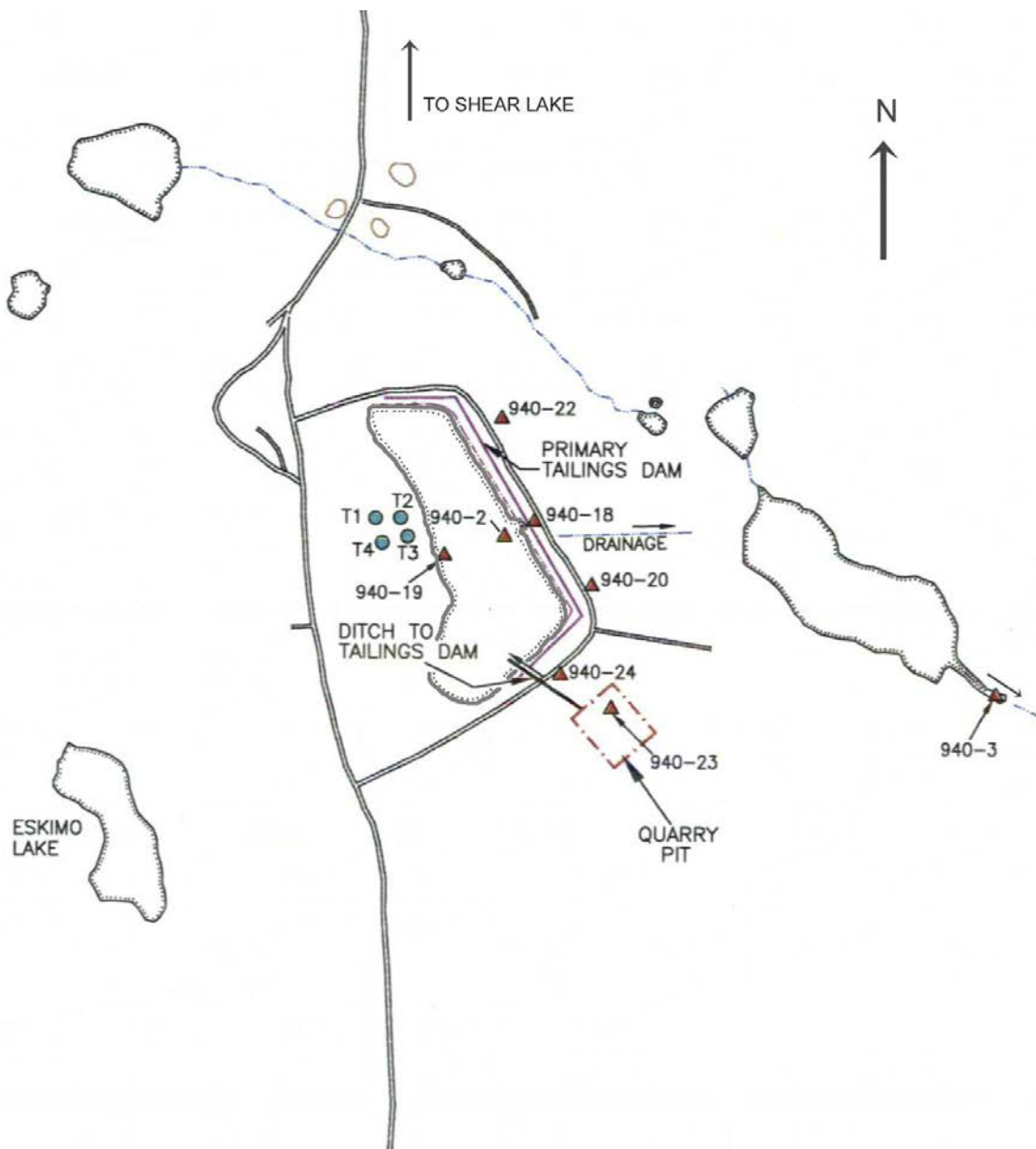


Figure 1: Cullaton Lake Mine location and general site layout



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 µ/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.

- 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

- 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.

- 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 AANDC 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 2012 ACTIVITIES

The annual site inspection was conducted at the closed Cullaton Lake Gold Mine (Cullaton Lake) on August 2, 2012. Personnel attending the site during this trip included:

Barrick Personnel:

Paul Brugger, Closed Properties Manager, Eastern Canada
Ron Aubry, assistant

exp Inc. (formerly Trow Associates) Personnel:

Demetri Georgiou, Principle, qualified geotechnical engineer

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. Aubry excavated the test pit at Thermistor T4 to determine the depth of permafrost. Mr. Georgiou performed the annual geotechnical inspection.

There were no weather related or other issues affecting the inspections.

3.1 ANNUAL SITE INSPECTION GENERAL FINDINGS

The annual site inspection performed on August 2, 2012 indicated that overall the site remains 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 August 2, 2012 at 5 of the 9 stations identified in the Water Licence (see Figures 2 and 3 for locations). 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 August 2, 2012. 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 August 2, 2012. 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 August 2, 2012. Results indicated that all parameters were below the limits prescribed in the Water Licence for 940-18A. Duplicate sample 940-18B lab pH and Total Cyanide varied considerably from 940-18A and results are suspect, particularly since the metals analysis for each sample indicated no issues.

Station 940-19 (Tailings Pond No. 1 at piezometer) – Duplicate water samples were collected on August 2, 2012. 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 August 2, 2012 and consequently no samples were collected.

Station 940-22 (Tailings Pond No. 1 seepage at northeast corner) – There was no flow observed on August 2, 2012 and consequently no samples were collected.

Station 940-23 (Quarry Pit) – Duplicate water samples were collected on August 2, 2012. Results indicated that all parameters were below the limits prescribed in the Water Licence. It is noted that zinc reported significantly higher than recent previous campaigns and is comparable to the 2005 value. 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 August 2, 2012 and consequently no samples were collected.

Station 940-27 (Seepage from Encapsulated Waste Rock to Shear Lake Creek) - There was no flow observed on August 2, 2012 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 August 2, 2012 visit in order to visually ascertain the depth of permafrost. Thermistor readings were also recorded at all 4 stations and are provided for comparison in Appendix 3.

Based on the test pit finding, the permafrost was found at a depth of 1.35m on August 2, 2012. The till cover is 90cm thick at this location. The thawed 45cm of tailings above the permafrost was saturated (see field notes and photos in Appendix 3).

3.4 GEOTECHNICAL INSPECTION

Demetri Georgiou (Trow Associates) performed the geotechnical inspection on August 2, 2012, pursuant to Part D, Article 8d of Water Licence 1BR-CUL1118. A copy of the inspection report was submitted to the NWB on February 13, 2013.

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 2012 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 2 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 2012 samples are included in Appendix 2.

7.0 2013 PROPOSED PROGRAM

The 2013 program will consist of a site inspection, water quality monitoring, tailings dam geotechnical inspection and EWR cover stability inspection pursuant to Water Licence 1BR-CUL1118. The program is tentatively scheduled to occur during the first week of August.

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.

Appendix 1
Cullaton Lake Site Photos
August 2, 2012



Photo 1: Cullaton Lake main site, looking southeast, August 2, 2012



Photo 2: Shear Lake site, looking northeast, August 2, 2012



Photo 3: Tailings No.1 Pond spillway invert, looking west on August 2, 2012



Photo 4: Former polishing pond spillway dry on August 2, 2012



Photo 5: Former Shear Lake Portal, August 2, 2012.



Photo 6: Former B Zone Portal and Fresh Air Raise, looking north on August 2, 2012.



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



Photo 8: Shear Lake low pH pool area dry on August 2, 2012.



Photo 9: Tailings cover, looking southeast on August 2, 2012.



Photo 10: Tailings No 1 Pond, looking southeast from cover on August 2, 2012.



Photo 11: Tailings No. 1 Pond looking northwest on August 2, 2012.



Photo 12: Previously filled subsidence area on August 2, 2012.



Photo 13: Subsidence at southwest corner of Quarry Pit on August 2, 2012.

Appendix 2
August 2, 2012
Water Quality Monitoring Results

**Cullaton Lake
Water Quality Monitoring Results
August 2, 2012**

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	8.11	14.7	7.7	<1.0	0.00264	0.00212	0.00115	0.00033	<0.00005	<0.001	<0.005
	940-2B			7.8	<1.0	0.00252	0.00201	0.00104	0.00029	<0.00005	<0.001	<0.005
Tailings Pond No. 2	940-3A	8.03	14.7	7.8	<1.0	0.00192	0.00293	0.00367	<0.00020	<0.00005	0.0034	<0.005
	940-3B			7.8	<1.0	0.00149	0.00294	0.00347	<0.00020	<0.00005	0.0035	<0.005
Tailings Pond No. 1 (spillway)	940-18A	9.15	16.9	9.3	<1.0	0.00361	0.00375	0.00140	<0.00020	<0.00005	0.001	<0.005
	940-18B			13.0(1)	1.0	0.00066	0.00384	0.00147	<0.00020	<0.00005	<0.001	<0.005
Tailings Pond No. 1 (at piezometer)	940-19A	8.38	15.2	8.0	1.3	0.00238	0.00209	0.00102	0.00034	<0.00005	<0.001	<0.005
	940-19B			7.8	<1.0	0.00304	0.00214	0.00201	0.00031	<0.00005	<0.001	<0.004
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	8.10	14.7	7.9	<1.0	<0.00074	0.00175	0.00227	0.00028	<0.00005	0.0026	0.0504
	940-23B			7.9	<1.0	<0.00079	0.00179	0.00204	0.00038	<0.00005	0.0028	0.0496
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										

Notes: (1) Lab error suspected for Station 940-18B pH and Total Cn.

**Cullaton Lake
Water Quality Monitoring
August 2, 2012
Water Analysis Certificate and Quality Control Report**



Site#: CULLATON LAKE
Site Location: CULLATON LAKE
Your C.O.C. #: 32350901, 32350902

Attention: PAUL BRUGGER
BARRICK GOLD CORPORATION
MB Projects (Cullaton Lake)
171 COPPER CLIFF ROAD EAST
NEEBING, ON
CANADA P7L 0B6

Report Date: 2012/08/21

This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B268452
Received: 2012/08/03, 11:45

Sample Matrix: Water
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Cyanide (Total) (1)	12	N/A	2012/08/13	BBY6SOP-00004	SM4500-CN N
Hardness Total (calculated as CaCO ₃) (1)	12	N/A	2012/08/14	BBY WI-00033	Calculated Parameter
Elements by CRC ICPMS (total) (1)	12	2012/08/13	2012/08/14	BBY7SOP-00002	EPA 6020A
pH	12	N/A	2012/08/03	WIN SOP-00009	SM4500 H+B
Total Suspended Solids-LowLevel (1)	3	2012/08/07	2012/08/07	BBY6SOP-00034	SM-2540 D
Total Suspended Solids-LowLevel (1)	9	2012/08/08	2012/08/08	BBY6SOP-00034	SM-2540 D

* Results relate only to the items tested.

(1) This test was performed by Maxxam Vancouver

Encryption Key

 Janelle Kochan
21 Aug 2012 09:41:29 -05:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Janelle Kochan, B.Sc., Project Manager,
Email: JKochan@maxxam.ca
Phone# (204) 772-7276 Ext:2209

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Page 1 of 6

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		EC4005	EC4006	EC4007	EC4008	EC4009	EC4010	EC4011		
Sampling Date		2012/08/02 15:30	2012/08/02 15:30	2012/08/02 14:15	2012/08/02 14:15	2012/08/02 15:55	2012/08/02 15:55	2012/08/02 15:00		
	UNITS	940-02A	940-02B	940-03A	940-03B	940-18A	940-18B	940-19A	RDL	QC Batch
Calculated Parameters										
Total Hardness (CaCO ₃)	mg/L	211	209	118	118	212	211	210	0.50	6056519
Misc. Inorganics										
Cyanide + Thiocyanate	mg/L	0.00264	0.00252	0.00192	0.00149	0.00361	0.00066	0.00238	0.00050	6077367
pH	pH Units	7.7	7.8	7.8	7.8	9.3	13	8.0		6061256
Physical Properties										
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	1.3	1.0	6065735

Maxxam ID		EC4012	EC4013	EC4014	EC4015	EC4016				
Sampling Date		2012/08/02 15:00	2012/08/02 16:30	2012/08/02 16:30	2012/08/02 17:00	2012/08/02 17:00				
	UNITS	940-19B	940-23A	940-23B	SHEAR CREEK A	SHEAR CREEK B	RDL	QC Batch		
Calculated Parameters										
Total Hardness (CaCO ₃)	mg/L	213	110	111	14.9	14.8	0.50			6056519
Misc. Inorganics										
Cyanide + Thiocyanate	mg/L	0.00304	0.00074	0.00079	0.00095	0.00092	0.00050			6077367
pH	pH Units	7.8	7.9	7.9	6.4	6.1				6061256
Physical Properties										
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	<1.0	1.1	1.0			6062082

RDL = Reportable Detection Limit

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

[illegible][illegible]

RDL = Reportable Detection Limit

QUALITY ASSURANCE REPORT

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
6062082	Total Suspended Solids	2012/08/07			100	80 - 120	<1.0	mg/L		
6065735	Total Suspended Solids	2012/08/08			105	80 - 120	<1.0	mg/L		
6077367	Cyanide + Thiocyanate	2012/08/13	94	N/A	93	N/A	<0.00050	mg/L	NC	20
6078387	Total Arsenic (As)	2012/08/14	103	80 - 120	105	80 - 120	<0.10	ug/L	NC	20
6078387	Total Copper (Cu)	2012/08/14	99	80 - 120	100	80 - 120	<0.20	ug/L	NC	20
6078387	Total Lead (Pb)	2012/08/14	99	80 - 120	101	80 - 120	<0.20	ug/L	NC	20
6078387	Total Mercury (Hg)	2012/08/14	88	80 - 120	95	80 - 120	<0.050	ug/L		
6078387	Total Nickel (Ni)	2012/08/14	103	80 - 120	103	80 - 120	<1.0	ug/L	NC	20
6078387	Total Zinc (Zn)	2012/08/14	108	80 - 120	106	80 - 120	<5.0	ug/L	NC	20

N/A = Not Applicable

RPD = Relative Percent Difference

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

INVOICE INFORMATION:				REPORT INFORMATION (if differs from Invoiced):				PROJECT INFORMATION:				Laboratory Use Only:			
Company Name:	#3998 BARRICK GOLD CORPORATION	Company Name:		Quotation #:	B20881	MAXXAM JOB #:		BOTTLE ORDER #:		Project #:		Project Manager:			
Contact Name:	Paul Brugger	Contact Name:		P.O. #:		Project #:		Project #:		Project #:		Project Manager:			
Address:	171 COPPER CLIFF ROAD EAST	Address:		Project Name:		Project Name:		Project Name:		Project Name:		Project Manager:			
Phone:	(807) 964-1657	Phone:		Site #:		Site #:		Site #:		Site #:		Project Manager:			
Email:	pbrugger@xplornet.com	Email:		Fac:		Fac:		Fac:		Fac:		Project Manager:			
REGULATORY CRITERIA:				SPECIAL INSTRUCTIONS:				ANALYSIS REQUESTED (Please be specific):				TURNAROUND TIME (TAT) REQUIRED:			
												PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS <input checked="" type="checkbox"/> Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests Please note: Standard TAT for certain tests such as BOD and Dissolved Oxygen are > 3 days - contact your Project Manager for details <input type="checkbox"/> Job Specific Rush TAT (if applies to entire submission) Date Required: _____ Time Required: _____ Rush Confirmation Number: _____ Rush Lab for #: _____			
(Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form) SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM															
Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water ? (Y/N)	Metals Field Filtered ? (Y/N)	pH	Total Metals (ICPMS)	Hardness Total (calculated as CaCO3)	Total Suspended Solids-LowLevel	Cyanide (Total)	# of Bottles	Comments		
1 EC4005	940-02A	Aug 2/12	1530	SW			X	X	X	X	X	4			
2 06	940-02B	"	"	"											
3 07	940-03A		1415	"											
4 08	940-03B		"	"											
5 09	940-18A		1555	"											
6 10	940-18B		"	"											
7 11	940-19A		1500	"											
8 12	940-19B		"	"											
9 13	940-23A		1636	"											
10 14	940-23B		"	"											
RECEIVED BY: (Signature/Print) <i>Paul Brugger</i> Date (YY/MM/DD) Aug 3/12 Time: 8 am RECEIVED BY: (Signature/Print) <i>Maxxam</i> Date (YY/MM/DD) 12/08/03 Time: 11:45 am # Jars Used and Not Submitted: 0				Laboratory Use Only Temperature (°C) in Room: 9.4, 9.3, 7.6 Cleanly Seal intact on Cover? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											

IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

Maxxam Analytics International Corporation o/a Maxxam Analytics

INVOICE INFORMATION:				REPORT INFORMATION (if differs from invoice):				PROJECT INFORMATION:				Laboratory Use Only:			
Company Name: #3398 BARRICK GOLD CORPORATION				Company Name: Contact Name: Address: Phone: Email:				Quotation #: P.O. #: Project #: Project Name: Site #: Sampled By:				MAXXAM JOB #: BOTTLE ORDER #: CHAIN OF CUSTODY #: PROJECT MANAGER:			
171 COPPER CLIFF ROAD EAST NEEBING ON PTL 086				171 COPPER CLIFF ROAD EAST NEEBING ON PTL 086				B20881				B20881			
(807) 964-1657				(807) 964-1658				FAC				Cullation Lake			
pbrugger@xpionet.com												Janelle Kuchan			
REGULATORY CRITERIA:								ANALYSES REQUESTED (Please be specific):							
SPECIAL INSTRUCTIONS:								TURNAROUND TIME (TAT) REQUIRED:							
Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form								Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests Please note: Standard TAT for certain tests such as BOD and Dissolved Oxygen are > 5 days - contact your Project Manager for details.							
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM								Job Specific Rush TAT (if applies to entire submission) Date Required: Time Required: Rush Coordination Number: Comments:							
Sample Barcode Label	Sample Location/Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water ? (Y/N)	Metals Field Filtered ? (Y/N)	pH	Total Metals (ICPMS)	Hardness Total (calculated as CaCO3)	Total Suspended Solids-Low Level	Cyanide (Total)	# of BODs	Comments		
1 EC4015	SHEAR CREEK A	Aug 2	1700	SW			X	X	X	X	X	4			
2 J 16	SHEAR CREEK B	"	1700	I			X	X	X	X	X	4			
3															
4															
5															
6															
7															
8															
9															
10															
RELINQUISHED BY: (Signature/Print)				DATE: (YY/MM/DD)				TIME:				LABORATORY USE ONLY			
Paul Brugger / P. Brugger				Aug 3/12				8 AM				Temperature (°C) in Receipt: 94.9, 3.7, 6.6			
												Culinary Seal next to "Cooler"			
												Time Sampled: [] Yes [] No			

**Cullaton Lake
Water Quality Monitoring Results
2003 - 2012**

CULLATON LAKE GOLD MINES LTD.
CULLATON LAKE MINE

WATER ANALYSIS REPORT

STATION 940-02A - TAILINGS POND NO. 1 DISCHARGE, 2003 - 2012

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	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	7.5	8.07	7.81
Temperature	°C			21.0	15.3	NR	14.5	15.2	12.5	15.8	13.6	13.3	14.7	12.5	21.0	15.1
Suspended Solids (105°C)	mg/L	25.0		< 3	< 3	14	< 1	< 10	< 1	< 1	< 1	< 4	< 1	< 1	14	4
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	< 0.0005	0.0088	< 0.0048
Total Hardness	mg CaCO ₃ /L				197	199	210	220	162	210	230	225	211	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	0.00159	0.00563	0.00254
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	0.001	0.0021	0.0014
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	0.00030	0.00146	0.00068
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	< 0.00001	< 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	0.0008	< 0.020	< 0.0032
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	0.0011	0.006	< 0.0040

() 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 - TAILINGS POND NO. 2 DISCHARGE, 2003 - 2012

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	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	7.7	8.2	7.9
Temperature	°C			20.8	19.3	NR	17.4	13.7	17.0	15.4	11.4	12.4	14.6	11.4	20.8	15.8
Suspended Solids (105°C)	mg/L	25.0		5	< 3	2	2	< 10	2	2	13	< 4	1	< 1	13	4
Total Cyanide (I)	mg/L	0.80		0.010	0.0072	< 0.0020	< 0.005	< 0.005	0.0016	< 0.005	< 0.005	< 0.0005	0.00192	< 0.0005	0.010	0.0043
Total Hardness	mg CaCO ₃ /L				92.4	100	90	88	82.3	94	99	95.2	118	82.3	118	95.4
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	0.0027	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	0.003	0.020	0.006
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	< 0.00005	< 0.0010	< 0.0005
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	0.00001	< 0.0001	< 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	0.003	< 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	< 0.0005	0.015	0.0048

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

CULLATON LAKE GOLD MINES LTD.
CULLATON LAKE MINE

WATER ANALYSIS REPORT

STATION 940-18A - TAILINGS POND NO. 1 SPILLWAY, 2003 - 2012

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	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	7.5	9.30	8.3
Temperature	°C			20.5	18.5	NR	21.4	15.2	15.8	15.8	12.8	12.6	16.9	12.6	21.4	16.6
Suspended Solids (106°C)	mg/L	25.0		4	< 3	2	3	< 10	1	1	1	4	1	< 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	0.00361	0.037	0.00912
Total Hardness	mg CaCO ₃ /L				217	200	210	230	159	220	220	228	212	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	0.00133	0.0057	0.00327
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	0.00086	0.005	0.00187
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	0.00011	< 0.001	< 0.00050
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	< 0.00001	< 0.0001	< 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	0.0009	< 0.020	< 0.0033
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	0.0003	0.010	0.0043

() Laboratory replicate.

[] Results re-checked.

(E) Not analyzed

NR: Not recorded due to equipment malfunction

CULLATON LAKE GOLD MINES LTD.
CULLATON LAKE MINE

WATER ANALYSIS REPORT

STATION 940-19A - TAILINGS POND NO. 1 AT PIEZOMETER LOCATION 2003 - 2012

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	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	7.7	8.1	7.9
Temperature	°C			20.8	16.3	NR	15.4	15.3	21.3	15.3	13.9	13.5	15.2	13.5	21.3	16.3
Suspended Solids (105°C)	mg/L	25.0		8	< 3	2	< 1	< 10	< 1	< 1	3	7	1.3	< 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	0.0009	0.0074	0.0049
Total Hardness	mg CaCO ₃ /L				206	201	210	220	749	220	230	246	210	201	749	277
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	0.0016	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	0.001	0.002	0.001
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	0.00182	< 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	< 0.00001	< 0.0001	< 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	< 0.020	< 0.004
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	< 0.0025	0.0161	< 0.0054

() Laboratory replicate.

[] Results re-checked.

(E) Not analyzed

NR: Not recorded due to equipment malfunction

CULLATON LAKE GOLD MINES LTD.
CULLATON LAKE MINE

WATER ANALYSIS REPORT

STATION 940-20A - TAILINGS POND NO. 1 EAST SIDE SEEPAGE, 2003 - 2012

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	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	7.8	8.7	8.2
Temperature	°C			D	21.3	NR	22.0	17.9	19.6	18.9	13.8	13.3	D	13.3	22.0	18.1
Suspended Solids (105°C)	mg/L	25.0		D	< 3	2	1	< 10	4	1	1	< 4	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	0.0014	0.118	0.0192
Total Hardness	mg CaCO ₃ /L				310	338	220	620	370	240	230	215		215	620	318
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	0.001	0.0057	0.0037
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	0.0029	0.005	0.0040
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	< 0.00005	< 0.001	< 0.00044
Mercury	mg/L		0.0002	D	< 0.00005	< 0.0001	< 0.00005	< 0.00005	< 0.00001	< 0.00002	< 0.00001	< 0.00005	D	< 0.00001	< 0.0001	< 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	0.0033	< 0.020	< 0.0085
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	0.0016	< 0.007	< 0.0041

() 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 940-22A - TAILINGS POND NO. 1 NORTH SIDE SEEPAGE, 2003 - 2012

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	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	7.7	8.0	7.9
Temperature	°C			D	D	NR	D	D	18.7	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	1	6	4
Total Cyanide	mg/L	0.80		D	D	0.073	D	D	0.0015	D	D	D	D	0.0015	0.073	0.037
Total Hardness	mg CaCO ₃ /L			D	D	515	D	D	546	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	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	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	0.00057	< 0.001	< 0.0008
Mercury	mg/L		0.0002	D	D	< 0.0001	D	D	< 0.00001	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	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	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 - 2012

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	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	7.4	8.1	7.8
Temperature	°C			20.7	15.7	NR	15.5	14.4	14.5	14.3	13.8	13.0	14.7	13.0	20.7	15.5
Suspended Solids (106°C)	mg/L	25.0		10	3	4	1	10	1	1	2	4	1	1	10	4
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	< 0.0005	< 0.006	< 0.0038
Total Hardness	mg CaCO ₃ /L				37.9	104	120	78	46.7	100	110	93.6	110	37.9	120	88.3
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	0.00084	0.002	0.00147
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	< 0.001	0.0024	< 0.0017
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	0.00009	< 0.001	< 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	< 0.00001	< 0.0001	< 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	0.001	< 0.020	< 0.004
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	0.006	0.065	0.023

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

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WATER ANALYSIS REPORT
STATION 940-24A - AREA OF SEEPAGE FROM QUARY PIT TO TAILINGS POND, 2003 - 2012

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	MINIMUM	MAXIMUM	AVERAGE
pH (lab)	units	6.0 - 9.5	6.5-9.0	D	D	D	D	D	D	D	D	D	D			
Temperature	°C			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			
Total Cyanide	mg/L	0.80		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			
Oil and Grease	mg/L	Visible		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			
Copper	mg/L	0.20	0.004	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			
Mercury	mg/L		0.0002	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			
Zinc	mg/L	0.30	0.030	D	D	D	D	D	D	D	D	D	D			

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

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WATER ANALYSIS REPORT

STATION 940-27A - AREA OF SEEPAGE FROM EWR TO SHEAR LAKE CREEK (1), 2003 - 2012

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	MINIMUM	MAXIMUM	AVERAGE
pH (lab)	units	6.0 - 9.5	6.5-9.0			D	D	D	D	D	D	D	D			
Temperature	°C					D	D	D	D	D	D	D	D			
Suspended Solids (105°C)	mg/L	25.0				D	D	D	D	D	D	D	D			
Total Cyanide	mg/L	0.80				D	D	D	D	D	D	D	D			
Total Hardness	mg CaCO ₃ /L					D	D	D	D	D	D	D	D			
Sulphate	mg/L					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			
Copper	mg/L	0.20	0.004			D	D	D	D	D	D	D	D			
Lead	mg/L	0.20	0.007			D	D	D	D	D	D	D	D			
Mercury	mg/L		0.0002			D	D	D	D	D	D	D	D			
Nickel	mg/L	0.30	0.150			D	D	D	D	D	D	D	D			
Zinc	mg/L	0.30	0.030			D	D	D	D	D	D	D	D			

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

Appendix 3
August 2, 2012
Thermistor Monitoring Results

THERMISTOR MONITORING RESULTS

Station 940-21

Field notes for pit excavated on August 2, 2012 at same location as last year (immediately north of T4)

0 – 0.9m: till cover
0.9m – 1.35m: saturated tailings
1.35m: Permafrost



Test pit excavated at T4 on August 2, 2012, showing till cover / saturated tailings interface.



August 4, 2011 test pit

Thermistor Reading - Test Pit Comparison

August 2, 2012 T4 Test Pit Field Notes:

0 -0.9m: till cover
0.9m -1.35m: saturated tailings
1.35m: permafrost

August 2, 2012 Thermistor Readings (See Notes Below)

Depth (m)	T1 (°C)	T2 (°C)	T3 (°C)	T4 (°C)
0.3	NR(3)	16.88	17.50	NR(3)
0.8	NR(3)	6.49	15.43	NR(3)
1.3	NR(3)	6.32	16.29	NR(3)
1.8	NR(3)	NR(3)	8.89	NR(3)
2.3	NR(3)	NR(3)	6.32	NR(3)
2.8	NR(3)	NR(3)	NR(3)	NR(3)

August 4, 2011 T4 Test Pit Field Notes:

0 -0.9m: till cover
0.9m -1.4m: saturated tailings
1.4m: permafrost

August 4, 2011 Thermistor Readings (See Notes Below)

Depth (m)	T1 (°C)	T2 (°C)	T3 (°C)	T4 (°C)
0.3	NR(3)	10.11	6.49	NR(3)
0.8	NR(3)	7.02	11.65	9.69
1.3	NR(3)	6.67	13.32	8.89
1.8	NR(3)	6.15	9.90	NR(3)
2.3	NR(3)	2.08	7.02	NR(3)
2.8	NR(3)	NR(3)	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
2012 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.
171 Copper Cliff Road East
Neebing, Ontario
P7L 0B6
Phone: 807-964-1657 (Thunder Bay, Ontario)
Cell: 807-473-7947
e-mail: pbrugger@tbaytel.net

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 9, 2013 and is effective until March 31, 2014.

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 involvement with a fire. Have vehicles with burning tires removed 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:

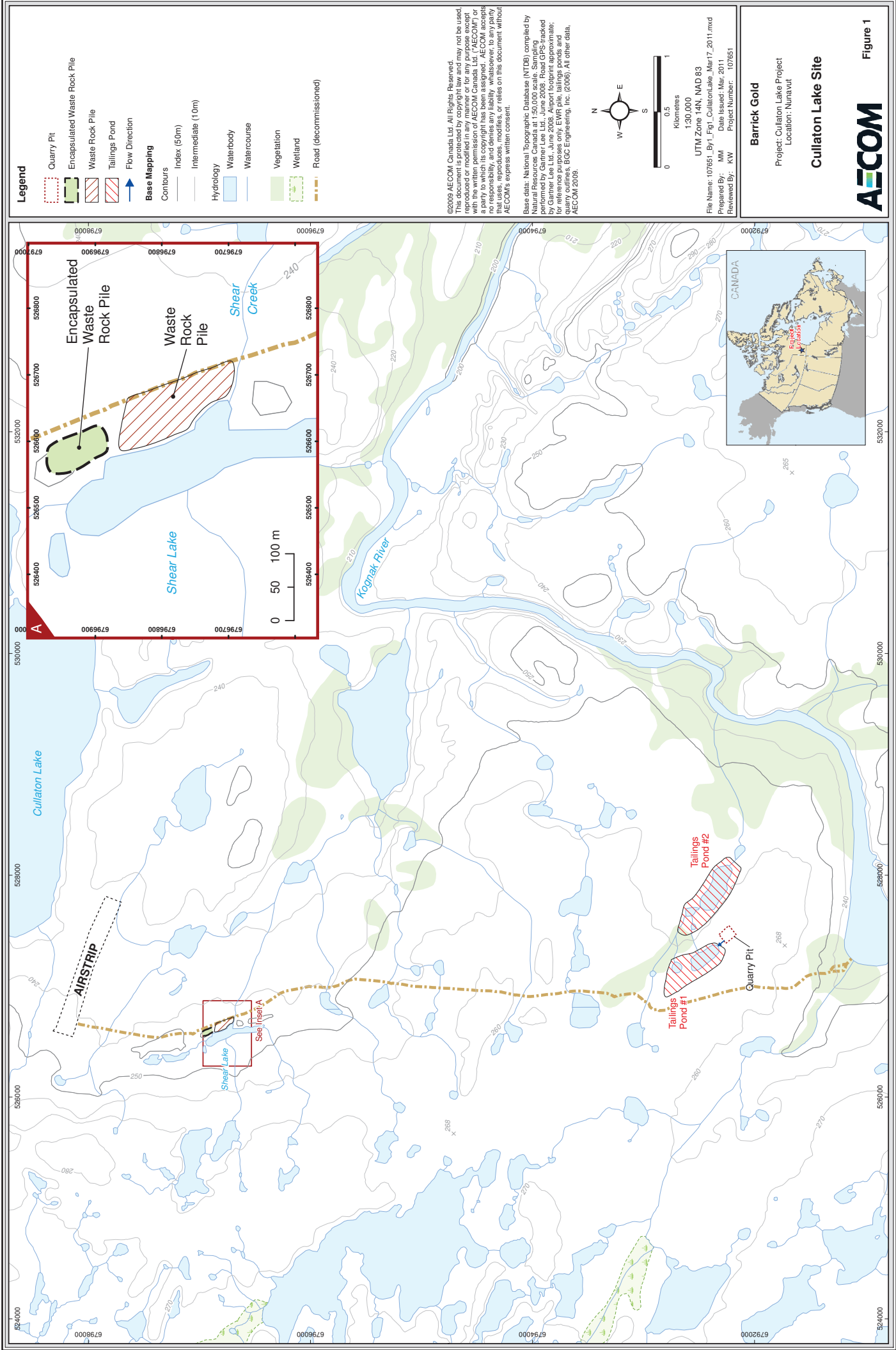
- date and time of spill
- location of spill
- direction spill is moving
- name and phone number of a contact person close to the location of the spill
- type and description of contaminant spilled including an estimate of the quantity
- cause of spill
- status of spill (i.e. continuing or stopped)
-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

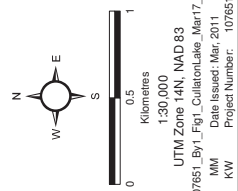
- INAC Manager of Field Operations at: **(867) 975-4295**
- Environment Canada at **(867) 975-4644**
- Government of Nunavut Environmental Protection at **(867) 857-2828**
- Kivalliq Inuit Association at **(867) 645-2810** or **1-800-220-6541** Contact **Stephen Hartman**
- Barrick Gold Corporation :
 - Paul Brugger,
Site Manager
Phone: **807-964-1657**
Cell: 807-473-7947
 - Alternate:
Bill Ferdinand
Director, Environment, Health and Safety,
North American Region
Phone: **801-990-3746**
Cell: 801-244-3540
- If required:
 - RCMP – Arviat at **(867) 857-0123**
 - Arviat Hospital at **(867) 857-3100**
 - Arviat Fire Response at **(867) 857-2538**

(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



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Base data: National Topographic Database (NTDB) compiled by Natural Resources Canada at 1:50,000 scale. Sampling performed by Garmer Lee Ltd., June 2008. Road GPS-tracked by Garmer Lee Ltd., June 2008. Airport footprint approximate: Garmer Lee Ltd., June 2008. Vegetation data: Garmer Lee Ltd. quarry outlines, BGC Engineering, Inc. (2006). All other data, AECOM 2009.



Barrick Gold

Project: Cullaton Lake Project
Location: Nunavut

Cullaton Lake Site

AECOM

Figure 1



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 _____	
	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					

Instructions for Completing the NT-NU Spill Report Form

This form can be filled out electronically and e-mailed as an attachment to spills@gov.nt.ca. Until further notice, please verify receipt of e-mail transmissions with a follow-up telephone call to the spill line. Forms can also be printed and faxed to the spill line at 867-873-6924. Spills can still be phoned in by calling collect at 867-920-8130.

A. Report Date/Time	The actual date and time that the spill was reported to the spill line. If the spill is phoned in, the Spill Line will fill this out. Please do not fill in the Report Number: the spill line will assign a number after the spill is reported.
B. Occurrence Date/Time	Indicate, to the best of your knowledge, the exact date and time that the spill occurred. Not to be confused with the report date and time (see above).
C. Land Use Permit Number /Water Licence Number	This only needs to be filled in if the activity has been licenced by the Nunavut Water Board and/or if a Land Use Permit has been issued. Applies primarily to mines and mineral exploration sites.
D. Geographic Place Name	In most cases, this will be the name of the city or town in which the spill occurred. For remote locations – outside of human habitations – identify the most prominent geographic feature, such as a lake or mountain and/or the distance and direction from the nearest population center. You must include the geographic coordinates (Refer to Section E).
E. Geographic Coordinates	This only needs to be filled out if the spill occurred outside of an established community such as a mine site. Please note that the location should be stated in degrees, minutes and seconds of Latitude and Longitude.
F. Responsible Party Or Vessel Name	This is the person who was in management/control/ownership of the substance at the time that it was spilled. In the case of a spill from a ship/vessel, include the name of the ship/vessel. Please include full address, telephone number and e-mail. Use box K if there is insufficient space. Please note that, the owner of the spilled substance is ultimately responsible for any spills of that substance, regardless of who may have actually caused the spill.
G. Contractor involved?	Were there any other parties/contractors involved? An example would be a construction company who is undertaking work on behalf of the owner of the spilled substance and who may have contributed to, or directly caused the spill and/or is responding to the spill.
H. Product Spilled	Identify the product spilled; most commonly, it is gasoline, diesel fuel or sewage. For other substances, avoid trade names. Wherever possible, use the chemical name of the substance and further, identify the product using the four digit UN number (eg: UN1203 for gasoline; UN1202 for diesel fuel; UN1863 for Jet A & B)
I. Spill Source	Identify the source of the spill: truck, ship, home heating fuel tank and, if known, the cause (eg: fuel tank overfill, leaking tank; ship ran aground; traffic accident, vandalism, storm, etc.). Provide an estimate of the extent of the contaminated/impacted area (eg: 10 m ²)
J. Factors Affecting Spill	Any factors which might make it difficult to clean up the spill: rough terrain, bad weather, remote location, lack of equipment. Do you require advice and/or assistance with the cleanup operation? Identify any hazards to persons, property or environment: for example, a gasoline spill beside a daycare centre would pose a safety hazard to children. Use box K if there is insufficient space.
K. Additional Information	Provide any additional, pertinent details about the spill, such as any peculiar/unique hazards associated with the spilled material. State what action is being taken towards cleaning up the spill; disposal of spilled material; notification of affected parties. If necessary, append additional sheets to the spill report. Number the pages in the same format found in the lower right hand corner of the spill form: eg. "Page 1 of 2", "Page 2 of 2" etc. Please number the pages to ensure that recipients can be certain that they received all pertinent documents. If only the spill report form was filled out, number the form as "Page 1 of 1".
L. Reported to Spill Line by	Include your full name, employer, contact number and the location from which you are reporting the spill. Use box K if there is insufficient space.
M. Alternate Contact	Identify any alternate contacts. This information assists regulatory agencies to obtain additional information if they cannot reach the individual who reported the spill.
N. Report Line Use Only	Leave Blank. This box is for the Spill Line's use only.