CULLATON LAKE GOLD MINES LTD

WATER LICENCE N6L2-0940

ANNUAL WATER LICENCE REPORT 1997

PREPARED BY:
HOMESTAKE CANADA INC
P.O. BOX 11115, 1100 - 1055 WEST GEORGIA STREET
VANCOUVER, B.C.
V6E 3P3

February 1998

HOMESTAKE

February 23, 1998

Philippe di Pizzo, Executive Director
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NT
X0E 1J0

Dear Mr. di Pizzo;

Re: Cullaton Lake - Water Licence N6L2-0940

Pursuant to the terms of our Water Licence, we are pleased to submit the 1997 Annual Report. The report summarizes A & R activities undertaken at the Cullaton property during the past year, as well as water sampling results and thermistor data.

I trust the above is satisfactory. Should you require additional information, or if you have any questions, please contact the undersigned.

Sincerely,
HOMESTAKE CANADA INC.

Sharon Meyer

Sharon Meyer
Environmental Analyst

Distribution:

Nunavut Water Board	4 copies
DIAND, Water Resources, Yellowknife	2 copies
DIAND, Water Resources, Iqaluit	2 copies

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PREAMBLE

Cullaton Lake Gold Mines Ltd. is wholly owned by Homestake Canada Inc. (Homestake).

The Cullaton Lake Gold Mines property is located in the southern part of the District of Keewatin in the Northwest Territories. The property is 250 km west of Arviat, N.W.T., 400 km northwest of Churchill, Manitoba and 645 km north of Thompson, Manitoba. The mine was in operation for four years, from 1981 to 1985. Since September 1985 the mine has remained in a care, maintenance and decommissioning phase.

Decommissioning began in 1991/92 with the rehabilitation of the Tailings Pond #1 dam including construction of a spillway in the dam, covering of the exposed tailings with water or with mine-rock / till, and the elimination of Tailings Pond #2 (the polishing pond).

The fresh water intake, pump house and pipelines at the old diamond drill camp on the Kognak River were dismantled and removed in 1991. By 1993, all buildings and debris around the drill camp had been removed. In 1995, portions of the mill buildings were dismantled. Inert, non-salvageable material was crushed and placed in the quarry pit. In 1996 the remaining mill buildings were dismantled.

Homestake applied for a water licence renewal on April 28, 1995. A revised 'B' Licence was granted effective September 1, 1995, expiring August 31, 1999. As part of the licence renewal, Homestake submitted a revised Abandonment and Restoration Plan in 1996 to DIAND, to the NWT Water Board and to the Nunavut Water Board. In July 1996 the water licence was transferred to the jurisdiction of the Nunavut Water Board.

As per this Water Licence, Homestake is required to file a yearly report pursuant to Section 13(2) of the Northern Inland Waters Act and Section 15(1) of the Regulations, outlining details on water use and/or waste disposal at Cullaton Lake Gold Mine.

1.0 HIGHLIGHTS

KIMEX, a subsidiary of Decommissioning and Reclamation International Inc., was on site for two work periods, during June and July, and again in September, to cover the tailings area with additional overburden, and seed and fertilize the area.

Water samples were taken in June/July and in September. Thermistor readings were taken on July 16, September 12, and September 27 as part of ongoing monitoring of the temperature regime in the tailings.

2.0 DETAILED SUMMARY

2.1 WATER QUALITY MONITORING

Water sampling continued at Cullaton Lake in 1997. Duplicate sampling is required at 6 stations, once in the spring peak flow period (June) and once again after August 1. This year we began water sampling at the Quarry Pit. A container of sampling bottles was shipped by charter to the site in June. However, not enough bottles were shipped from the lab. Our crew contacted the lab and additional bottles were flown to site by charter at the end of the June. A second set of samples was collected in early July from some sites to make up the spring duplicate sampling requirement. In September, a lab error resulted in one bottle having the incorrect preservative; therefore it was not possible to obtain a duplicate sample from one site (940-2). Homestake is currently reviewing its choice of laboratories.

Station 940-2 (Pond #1 discharge to Pond #2) Water was sampled twice during the summer season, duplicate samples in July and one sample in September. All parameters were well below the limits prescribed in the water licence.
Station 940-3 (Pond #2 discharge) Duplicate water samples were taken during the summer season, in June and again in September. All parameters were well below the limits prescribed in the water licence.
Station 940-18 (Pond #1 spillway) Duplicate water samples were taken during the summer season, in June/July and again in September. All parameters were well below the limits prescribed in the water licence.
Station 940-19 (Tailings #1 piesometer) Water was sampled three times during the summer season, once in June, duplicate samples in July and duplicate samples again in September. All parameters were well below the limits prescribed in the water licence.
Station 940-20 (Seepage at E side of tailings) Duplicate samples were taken in July, but the station was dry in September and could not be sampled a second time.
Station 940-22 (Seepage at NE corner of tailings) was dry during 1997 and could not be sampled.
Station 940-Q (Quarry Pit) Water was sampled at the quarry pit as agreed, but duplicate samples were not taken during the first sampling period as not enough bottles were shipped to site by the laboratory. Three samples were taken at the quarry pit in September for comparison. All sampling results were well within the limits prescribed in the water licence.
See Appendix 1 for water quality results.

2.2 TAILINGS

Homestake staff completed an inspection of the tailings area during a site visit in September 1996. After digging into the tailings overburden material in a number of locations across the tailings, it was found that the depth of

overburden material was less than the 1.4 metres of material described in the Abandonment and Restoration Plan (A & R Plan). As a result of this finding, additional cover material was placed on the tailings in 1997.

Cover material was obtained from material stockpiled during the elimination of Dam #2 in 1992, and from overburden located adjacent to the tailings area. Approximately 0.5 m of additional overburden was placed on the covered tailings during the summer of 1997, to ensure an adequate depth of cover.

Although not part of the A & R Plan, Homestake graded, seeded and fertilized the overburden material to provide a vegetation cover for the tailings area. The seed mix chosen was recommended by our arctic vegetation consultant - *Alaska Biological Research, ABR Inc.* (see Table 1).

Table 1

Percentage	Seed
10%	Oxley Cicer Milkfetch
20%	Alpine Bluegrass
10%	Fowl Bluegrass
15%	Nugget Kentucky Bluegrass
30%	Arctared Crested Red Fescue
15%	Tufted Hairgrass

2.3 THERMISTORS

In order to prevent possible acid generation, reclamation of the tailings area has involved two oxygen-limiting methods; a water cover overlying the eastern portion of the tailings impoundment area and a till / mine-rock cover on the remaining Shear and B-Zone tailings area. The application of the till / mine-rock cover was intended to reduce oxygen infiltration, and to raise the level of permafrost in the tailings. Raising the permafrost level in the tailings will help to retain them in a permanently frozen condition which may prevent development and migration of acid drainage. Thermistors were installed in the covered tailings in August 1991 in order to monitor any rise in permafrost levels.

Thermistor readings (Station 940-21) have been taken during the spring and late summer months since 1991. Readings from 1992 to 1994 show an upward trend in the permafrost levels. In 1995 the level remained steady. At the end of the 1996 summer season, the depth of the active zone remained stationary with respect to 1995 readings. Additional cover was placed on the tailings in 1997. During this summer of disturbance, the thermistor readings remained stationary when compared to 1995 and 1996 data (see Appendix 1 for thermistor readings). As a result of the placement of additional cover on the tailings, we hope to see a resumption of the previous upward trend in permafrost levels with 1998 thermistor results.

2.4 ROCK QUARRY

During a 1995 meeting in Yellowknife with DIAND and the NWT Water Board, agreement was reached to use the quarry pit for disposal of non-salvageable materials. During 1995, some of the non-salvageable materials from the dismantling of the primary mill building were placed in the quarry. Other non-salvageable materials were placed alongside the quarry pit for crushing and burial in 1996. This material was crushed and buried in the pit in 1997.

Some material still remains to be placed in the quarry pit. However, even with this additional material, it is unlikely that that pit will be completely filled upon completion of the decommissioning work. Therefore, we will place the crushed material around the edges of the quarry pit and cover it with one metre of overburden as outlined in our A & R Plan. This overburden will be sloped down to the floor of the pit at an angle of ~22°. As discussed at a June 1996 DIAND and NWT Water Board meeting in Yellowknife, a drainage ditch will be constructed to allow any ponded water from the pit to flow towards the tailings pond. Due to the nature of the bedrock surrounding the quarry pit, construction of this ditch will not require any blasting.

2.5 MILL COMPLEX DISMANTLING

The buildings located at the mill site were removed in 1995/96, with the exception of the machine shop building. This building was used in 1997 for repair and maintenance of the equipment required for tailings work. It remains on site and will be removed in 1998. Salvageable equipment was either flown to Thompson, Manitoba or Arviat, NWT, or remained stacked at the airstrip for removal by ice train during the winter.

The entire mill site was graded, seeded and fertilized with the same seed mix used on the tailings area.

2.6 FIELD OBSERVATIONS

While on site during the summer and early fall, the work crew noted no erosion or sloughing of material from the tailings dam. No areas of acid generation or seepage were noted. Field pH and temperatures are presented in Appendix 1.

2.7 MISCELLANEOUS

Additional decommissioning work at Cullaton Lake in 1997 consisted of the completion of core cross-stacking, the removal of some of the roadway culverts, the removal of the exposed liner on the dam around tailings area #2, and the

disposal of remote fuel barrels noted by our crew on a fly-over of the site. The remaining culverts will be removed in 1998.

3.0 1998 PROPOSED WORK SCHEDULE

Homestake Canada Inc. intended to complete the remaining decommissioning work by the end of 1997. However, the additional work required on the tailings area has meant that the decommissioning work will not be completed until the end of 1998. A revised schedule was forwarded to DIAND and the Nunavut Water Board on December 17, 1997.

The remaining work includes removal of the Atco buildings at the Shear Lake camp, removal of the machine shop building at the mill site, removal of the remaining culverts, removal of all salvageable material from the site, and disposal of the rest of the non-salvageable material as per our revised A & R Plan.

APPENDIX 1

Water Quality Data
Thermistor Data
Field Data

CULLATON GOLD MINES LTD.

EFFLUENT WATER QUALITY REQUIREMENTS
(LICENCE N6L2-0940)

All wastes discharged by the Licensee from the Tailings Containment Area shall meet the following effluent quality requirements:

Parameter	Maximum Average Concentration	Maximum Concentration of Any Grab Sample
Total Arsenic	0.30 mg/L	0.60 mg/L
Total Copper	0.20 mg/L	0.40 mg/L
Total Cyanide	0.80 mg/L	1.60 mg/L
Total Lead	0.20 mg/L	0.40 mg/L
Total Nickel	0.30 mg/L	0.60 mg/L
Total Zinc	0.30 mg/L	0.60 mg/L
Total Suspended Solids	25 mg/L	50 mg/L

The waste discharged shall have a pH between 6.0 and 9.5, and no visible sheen of oil and grease.

HOMESTAKE CANADA INC.
Cullaton lake Water Quality
1997

STATION: 940-2: POND #1 DISCHARGE

Date	LAB PH pH unit	SUSPENDED SOLIDS mg/l	TOTAL CYANIDE mg/l	TOTAL ARSENIC mg/l	TOTAL COPPER mg/l
07/17/1997	7.93	1.6	0.006	<0.1	<0.01
07/17/1997	7.83	1.9	0.006	<0.1	<0.01
07/17/1997	7.86	1.8	0.006	<0.1	<0.01
09/30/1997	7.96	2.3	0.004	<0.1	<0.003
JAN 1997 - DEC 1997					
Mean	7.89	1.9	0.006	0.1	0.008
Minimum Value	7.83	1.6	0.004	0.1	0.003
Maximum Value	7.96	2.3	0.006	0.1	0.010

HOMESTAKE CANADA INC.
Cullaton lake Water Quality
1997

STATION: 940-2: POND #1 DISCHARGE

Date	TOTAL LEAD mg/l	TOTAL NICKEL mg/l	TOTAL MERCURY mg/l	TOTAL ZINC mg/l
07/17/1997	<0.05	<0.05	<0.00005	<0.01
07/17/1997	<0.05	<0.05	<0.00005	<0.01
07/17/1997	<0.05	<0.05	<0.00005	<0.01
09/30/1997	<0.05	<0.02	<0.00005	<0.005
JAN 1997 - DEC 1997				
Mean	0.05	0.04	0.00005	0.009
Minimum Value	0.05	0.02	0.00005	0.005
Maximum Value	0.05	0.05	0.00005	0.010

HOMESTAKE CANADA INC.
Cullaton lake Water Quality
1997

STATION: 940-3: POND #2 DISCHARGE

Date	LAB PH pH unit	SUSPENDED SOLIDS mg/l	TOTAL CYANIDE mg/l	TOTAL ARSENIC mg/l	TOTAL COPPER mg/l
06/27/1997	7.60	1.5	0.001	<0.1	<0.01
06/27/1997	7.64	1.0	0.001	<0.1	<0.01
09/30/1997	7.84	2.2	0.001	<0.1	0.003
09/30/1997	7.88	2.0	0.001	<0.1	<0.003
JAN 1997 - DEC 1997					
Mean	7.74	1.7	0.001	0.1	0.006
Minimum Value	7.60	1.0	0.001	0.1	0.003
Maximum Value	7.88	2.2	0.001	0.1	0.010

HOMESTAKE CANADA INC.
Cullaton lake Water Quality
1997

STATION: 940-3: POND #2 DISCHARGE

Date	TOTAL LEAD mg/l	TOTAL NICKEL mg/l	TOTAL MERCURY mg/l	TOTAL ZINC mg/l
06/27/1997	<0.05	<0.05	<0.00005	<0.01
06/27/1997	<0.05	<0.05	<0.00005	<0.01
09/30/1997	<0.05	<0.02	<0.00005	<0.005
09/30/1997	<0.05	<0.02	<0.00005	<0.005
JAN 1997 - DEC 1997				
Mean	0.05	0.04	0.00005	0.007
Minimum Value	0.05	0.02	0.00005	0.005
Maximum Value	0.05	0.05	0.00005	0.010

HOMESTAKE CANADA INC.
Cullaton lake Water Quality
1997

STATION: 940-18: TAILINGS POND #1 SPILLWAY

Date	LAB PH pH unit	SUSPENDED SOLIDS mg/l	TOTAL CYANIDE mg/l	TOTAL ARSENIC mg/l	TOTAL COPPER mg/l
06/27/1997	7.26	1.1	0.003	<0.1	<0.01
07/17/1997	7.82	1.5	0.003	<0.1	<0.01
09/10/1997	8.09	3.5	0.1	<0.1	0.017
09/10/1997	8.08	5.6	0.09	<0.1	0.019
09/10/1997	8.09	3.7	0.1	<0.1	0.013
JAN 1997 - DEC 1997					
Mean	7.87	3.1	0.059	0.1	0.014
Minimum Value	7.26	1.1	0.003	0.1	0.010
Maximum Value	8.09	5.6	0.100	0.1	0.019

HOMESTAKE CANADA INC.
Cullaton lake Water Quality
1997

STATION: 940-18: TAILINGS POND #1 SPILLWAY

Date	TOTAL LEAD mg/l	TOTAL NICKEL mg/l	TOTAL MERCURY mg/l	TOTAL ZINC mg/l
06/27/1997	<0.05	<0.05	<0.00005	<0.01
07/17/1997	<0.05	<0.05	<0.00005	<0.01
09/10/1997	<0.05	<0.05	<0.00005	<0.005
09/10/1997	<0.05	<0.05	0.00010	<0.005
09/10/1997	<0.05	<0.05	<0.00005	<0.005
JAN 1997 - DEC 1997				
Mean	0.05	0.05	0.00006	0.007
Minimum Value	0.05	0.05	0.00005	0.005
Maximum Value	0.05	0.05	0.00010	0.010

HOMESTAKE CANADA INC.
Cullaton lake Water Quality
1997

STATION: 940-19: TAILINGS POND #1 PIESOMETER

Date	LAB PH pH unit	SUSPENDED SOLIDS mg/l	TOTAL CYANIDE mg/l	TOTAL ARSENIC mg/l	TOTAL COPPER mg/l
06/27/1997	7.39	1.1	0.004	<0.1	<0.01
07/17/1997	7.59	6.6	0.006	<0.1	<0.01
07/17/1997	7.68	6.7	0.005	<0.1	<0.01
09/10/1997	7.99	1.1	0.003	<0.1	<0.003
09/10/1997	7.96	2.6	0.003	<0.1	0.007
09/30/1997	7.93	6.4	0.004	<0.1	<0.003
JAN 1997 - DEC 1997					
Mean	7.76	4.1	0.004	0.1	0.007
Minimum Value	7.39	1.1	0.003	0.1	0.003
Maximum Value	7.99	6.7	0.006	0.1	0.010

HOMESTAKE CANADA INC.
Cullaton lake Water Quality
1997

STATION: 940-19: TAILINGS POND #1 PIESOMETER

Date	TOTAL LEAD mg/l	TOTAL NICKEL mg/l	TOTAL MERCURY mg/l	TOTAL ZINC mg/l
06/27/1997	<0.05	<0.05	<0.00005	<0.01
07/17/1997	<0.05	<0.05	<0.00005	<0.01
07/17/1997	<0.05	<0.05	<0.00005	<0.01
09/10/1997	<0.05	<0.05	<0.00005	<0.005
09/10/1997	<0.05	<0.05	<0.00005	<0.005
09/30/1997	<0.05	<0.02	0.00007	<0.005
JAN 1997 - DEC 1997				
Mean	0.05	0.05	0.00005	0.007
Minimum Value	0.05	0.02	0.00005	0.005
Maximum Value	0.05	0.05	0.00007	0.010

HOMESTAKE CANADA INC.
Cullaton lake Water Quality
1997

STATION: 940-20: EAST SIDE OF TAILINGS POND #1

Date	LAB PH pH unit	SUSPENDED SOLIDS mg/l	TOTAL CYANIDE mg/l	TOTAL ARSENIC mg/l	TOTAL COPPER mg/l
07/08/1997	7.93	2.5	0.004	<0.1	<0.01
07/08/1997	7.95	2.0	0.004	<0.1	<0.01
07/17/1997	7.87	2.0	0.002	<0.1	<0.01
JAN 1997 - DEC 1997					
Mean	7.92	2.2	0.003	0.1	0.01
Minimum Value	7.87	2.0	0.002	0.1	0.01
Maximum Value	7.95	2.5	0.004	0.1	0.01

HOMESTAKE CANADA INC.
Cullaton lake Water Quality
1997

STATION: 940-20: EAST SIDE OF TAILINGS POND #1

Date	TOTAL LEAD mg/l	TOTAL NICKEL mg/l	TOTAL MERCURY mg/l	TOTAL ZINC mg/l
07/08/1997	<0.05	<0.05	<0.00005	<0.01
07/08/1997	<0.05	<0.05	<0.00005	<0.01
07/17/1997	<0.05	<0.05	<0.00005	<0.01
JAN 1997 - DEC 1997				
Mean	0.05	0.05	0.00005	0.01
Minimum Value	0.05	0.05	0.00005	0.01
Maximum Value	0.05	0.05	0.00005	0.01

HOMESTAKE CANADA INC.
Cullaton lake Water Quality
1997

STATION: 940-Q

Date	LAB PH pH unit	SUSPENDED SOLIDS mg/l	TOTAL CYANIDE mg/l	TOTAL ARSENIC mg/l	TOTAL COPPER mg/l
07/08/1997	8.49	39.0	0.003	<0.1	0.02
09/10/1997			0.001	<0.1	0.013
09/10/1997	8.12	0.5	0.001	<0.1	0.010
09/30/1997	7.99	35.6	0.004	<0.1	0.009
JAN 1997 - DEC 1997					
Mean	8.20	25.0	0.002	0.1	0.013
Minimum Value	7.99	0.5	0.001	0.1	0.009
Maximum Value	8.49	39.0	0.004	0.1	0.020

HOMESTAKE CANADA INC.
Cullaton lake Water Quality
1997

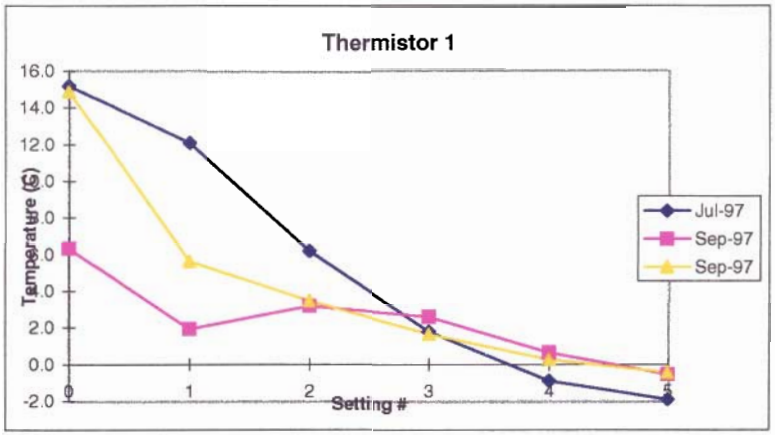
STATION: 940-Q

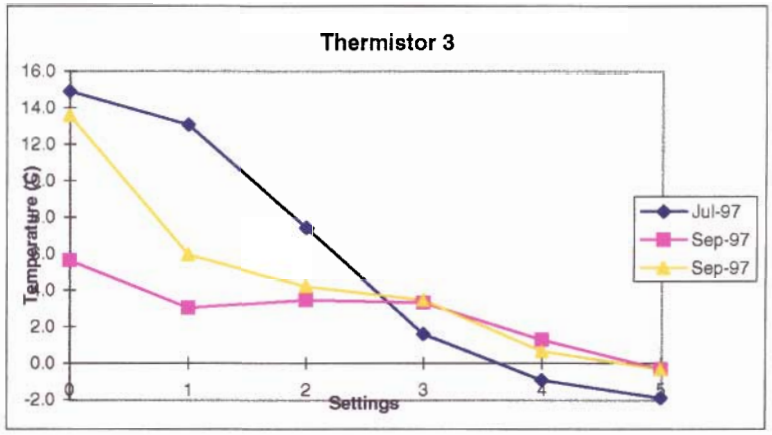
Date	TOTAL LEAD mg/l	TOTAL NICKEL mg/l	TOTAL MERCURY mg/l	TOTAL ZINC mg/l
07/08/1997	<0.05	<0.05	<0.00005	0.09
09/10/1997	<0.05	<0.05	0.00007	0.099
09/10/1997	<0.05	<0.05	<0.00005	0.102
09/30/1997	<0.05	<0.02	<0.00005	0.177
JAN 1997 - DEC 1997				
Mean	0.05	0.04	0.00005	0.117
Minimum Value	0.05	0.02	0.00005	0.090
Maximum Value	0.05	0.05	0.00007	0.177

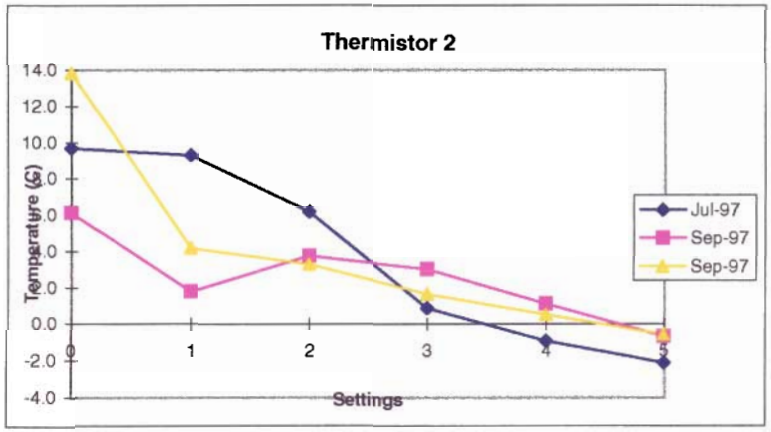
Thermistor Temperatures - 1997 (940-21)

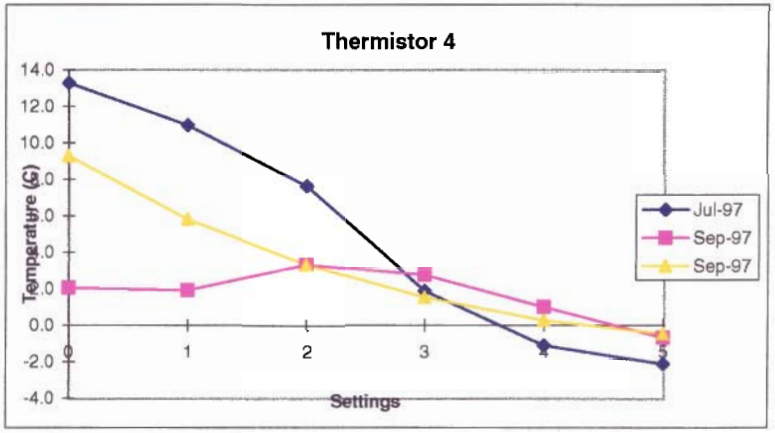
	Date	0	1	2	3	4	5
No. 1							
	Jul-97	15.2	12.1	6.2	1.8	-0.9	-1.9
	Sep-97	6.3	1.9	3.2	2.6	0.7	-0.6
	Sep-97	14.9	5.7	3.5	1.7	0.3	-0.4
No. 2							
	Jul-97	9.7	9.3	6.2	0.9	-0.9	-2.1
	Sep-97	6.2	1.8	3.8	3.1	1.2	-0.7
	Sep-97	13.8	4.2	3.3	1.7	0.5	-0.6
No. 3							
	Jul-97	14.9	13.1	7.4	1.6	-0.9	-1.9
	Sep-97	5.7	3.1	3.5	3.3	1.3	-0.3
	Sep-97	13.6	6.0	4.2	3.5	0.7	-0.3
No. 4							
	Jul-97	13.3	11.0	7.6	1.9	-1.1	-2.1
	Sep-97	2.1	1.9	3.3	2.8	1.0	-0.7
	Sep-97	9.3	5.8	3.3	1.6	0.3	-0.5

Thermistor Temperatures - 1997









TEMP. A CULLATON LAKE THERMISTORS (1991 TO 1997)

No.1	0	1	2	3	4	5
Aug-91	13.2	12.8	10.8	7.2	5.2	0.8
Sep-91	11.0	11.2	8.8	5.4	3.0	0.5
Jul-92	13.5	13.6	13.5	4.4	-0.9	-2.1
Aug-92	6.2	5.1	5.1	3.6	0.9	-0.4
Jul-93	33.1	16.0	6.8	0.0	-1.3	-2.1
Jul-93	13.7	12.0	7.6	1.5	-1.0	-1.8
Jun-94	15.6	11.3	5.0	-0.2	-2.1	-3.3
Jul-94	15.6	11.3	4.6	-0.7	-2.6	-3.6
Jul-94	19.6	14.0	9.2	4.9	-0.2	-1.3
Sep-94	23.0	14.0	8.4	4.7	1.1	-0.9
Jun-95	36.0	18.5	3.7	-0.8	-2.2	-3.1
Sep-95	7.4	5.3	3.0	1.4	0.3	-0.3
Oct-95	3.4	1.6	1.7	1.3	0.4	-0.3
Jun-96	12.1	7.4	2.1	-0.3	-2.0	-3.2
Sep-96	7.9	6.4	7.7	4.8	1.8	-0.2
Sep-96	10.1	8.6	5.3	4.5	2.2	-0.1
Jul-97	15.2	12.1	6.2	1.8	-0.9	-1.9
Sep-97	6.3	1.9	3.2	2.6	0.7	-0.6
Sep-97	14.9	5.7	3.5	1.7	0.3	-0.4

No.2	0	1	2	3	4	5
Aug-91	13.0	13.0	13.2	10.2	6.0	0.5
Sep-91	10.8	11.0	10.0	5.2	3.0	0.4
Jul-92	13.3	13.6	13.4	6.2	-0.5	-2.0
Aug-92	6.5	5.5	5.2	4.7	2.3	-0.2
Jul-93	34.5	29.4	12.4	5.2	-0.5	-1.8
Jul-93	13.7	13.4	12.3	7.8	0.6	-1.4
Jun-94	15.4	15.3	9.3	2.4	-1.1	-3.0
Jul-94	15.4	15.2	8.0	1.7	-1.8	-3.4
Jul-94	20.2	19.3	11.1	9.1	2.2	-1.0
Sep-94	16.9	9.4	7.7	5.5	2.6	-0.2
Jun-95	29.4	7.1	0.6	-1.2	-2.2	-3.4
Sep-95	7.5	3.3	2.2	0.8	0.1	-0.6
Oct-95	3.1	1.2	1.5	0.8	-0.4	-0.6
Jun-96	11.8	3.1	1.2	-0.7	-2.2	-3.6
Sep-96	8.1	6.9	5.9	3.3	0.7	-0.6
Sep-96	14.4	4.7	4.9	3.5	1.1	-0.6
Jul-97	9.7	9.3	6.2	0.9	-0.9	-2.1
Sep-97	6.2	1.8	3.8	3.1	1.2	-0.7
Sep-97	13.8	4.2	3.3	1.7	0.5	-0.6

No.3	0	1	2	3	4	5
Aug-91	12.8	13.0	12.8	11.0	6.5	0.8
Sep-91	9.8	9.2	8.4	5.8	3.2	0.5
Jul-92	12.8	12.6	12.5	5.2	-0.6	-1.9
Aug-92	6.2	4.7	4.6	4.1	2.0	-0.2
Jul-93	32.5	22.0	9.2	1.2	-0.9	-1.9
Jul-93	13.8	13.1	10.0	3.4	-0.6	-1.5
Jun-94	15.3	13.6	7.0	0.1	-1.7	-3.3
Jul-94	15.3	13.6	6.8	0.0	-1.8	-3.5
Jul-94	20.2	18.5	10.1	5.7	0.1	-1.3
Sep-94	21.3	10.0	7.3	4.5	1.6	-0.4
Jun-95	32.4	8.7	-0.2	-1.9	-3.2	-4.2
Sep-95	7.5	4.3	2.3	0.9	0.1	-0.5
Oct-95	3.5	1.8	1.6	1.0	0.1	-0.4
Jun-96	11.7	4.9	1.3	-0.8	-2.5	-3.8
Sep-96	8.5	7.5	6.5	3.3	0.7	-0.5
Sep-96	13.3	6.4	5.2	3.7	1.1	-0.4
Jul-97	14.9	13.1	7.4	1.6	-0.9	-1.9
Sep-97	5.7	3.1	3.5	3.3	1.3	-0.3
Sep-97	13.6	6.0	4.2	3.5	0.7	-0.3

No.4	0	1	2	3	4	5
Aug-91	15.0	14.2	16.8	12.0	6.2	1.0
Sep-91	11.0	11.5	11.0	6.8	4.0	0.6
Jul-92	12.9	13.3	12.7	5.2	-0.7	-1.7
Aug-92	6.0	4.8	4.6	4.5	2.0	-0.2
Jul-93	32.9	22.0	9.2	1.0	-1.0	-1.0
Jul-93	13.4	12.9	10.5	-3.0	-0.7	-1.5
Jun-94	15.4	13.3	6.7	-0.1	-2.0	-3.1
Jul-94	15.4	13.2	6.7	-0.2	-2.0	-3.2
Jul-94	19.5	14.5	6.8	4.2	-0.4	-1.5
Sep-94	23.1	17.5	6.8	4.5	1.0	-0.6
Jun-95	36.3	25.0	5.8	-1.0	-2.4	-3.5
Sep-95	7.3	4.8	3.4	1.1	0.2	-0.4
Oct-95	3.6	2.2	1.3	1.0	0.2	-0.4
Jun-96	11.6	9.2	3.2	-0.5	-2.1	-3.4
Sep-96	9.3	7.8	7.2	4.2	1.3	-0.4
Sep-96	14.1	10.5	5.0	3.9	1.6	-0.4
Jul-97	13.3	11.0	7.6	1.9	-1.1	-2.1
Sep-97	2.1	1.9	3.3	2.8	1.0	-0.7
Sep-97	9.3	5.8	3.3	1.6	0.3	-0.5

Cullaton Lake Field Data 1997

Station	Date	pH	Temperature C°
940-2	July	8.0	15.0
	September	8.0	11.2
940-3	July	7.9	15.2
	September	8.0	11.4
940-18	July	8.0	13.6
	September	8.2	10.2
940-19	July	8.2	13.0
	September	8.2	10.0
940-20	July	7.9	12.6
	September	no seepage	no seepage
940-22	July	no seepage	no seepage
	September	no seepage	no seepage
Quarry Pit	July	8.4	13.8
	September	8.0	11.6

STORAGE BUILDING

BUNKHOUSE COMPLEX

MILL BUILDING

TBM
ASSUMED ELEVATION 100.00 m

ROCK CRUSHER
BUILDING

UNFINISHED ADDITION

DRAINAGE SWALE

T-4
EL. 96.38

T-1
EL. 95.5

T-3
EL. 96.09

T-2
EL. 95.49

MONITORING
WELL A

93
93.5
94
94.5
95
95.5
94.5
93.5
93
92.5
92
91.5
92.5
92

C
C

89.5
90

Part 2

TROW CONSULTING ENGINEERS LTD.

Thunder Bay, Ontario, Canada

LEGEND

MONITORING WELL

BENCHMARK

THERMOSTERS

NOTES:

TAILINGS POND No. 1
WATER ELEVATION: 94.00 m +/-
JUNE 27/94
WATER SURFACE AREA(APPROX.)=101641 sq. metres

CONTOUR LINES BELOW WATER SURFACE

TAILINGS DAM No. 1

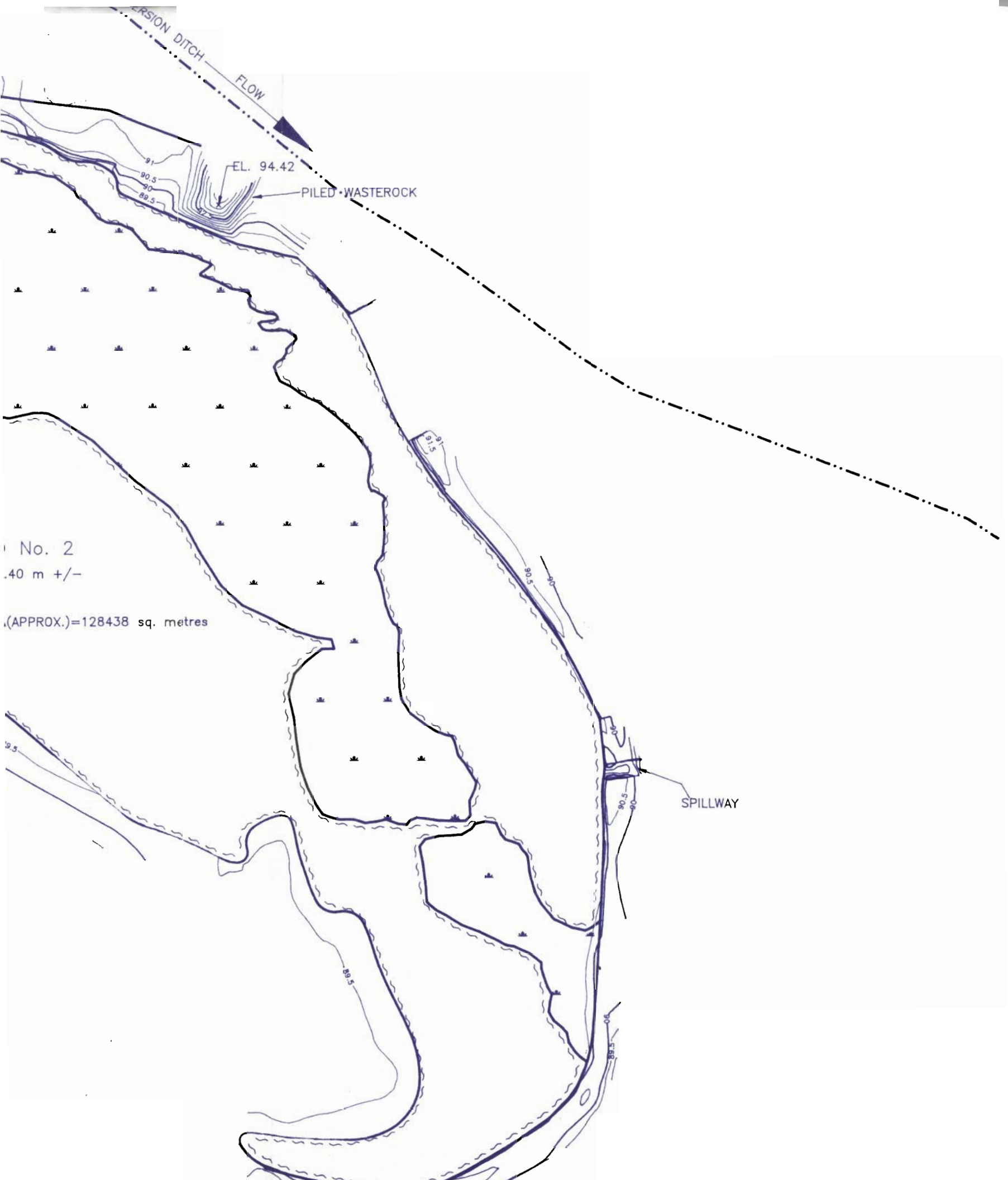
SURFACE WATER EL. 93.71
SEPT. 26/90

QUARRY

TAILING
WATER E
JUNE 27
WATER SU

100 50 0 100 200

SCALE IN METRES



2. BENCH MARK IS LOCATED ON CONCRETE SLAB AT NORTH EAST CORNER OF MILL BUILDING. ASSUMED ELEVATION: 100.00m

3. ALL ELEVATIONS ARE SHOWN IN METRES.

REVISIONS

No:	Date:	Revision

Client: HOMESTAKE CANADA

Project: CULLATON LAKE MINE CLOSURE

Title: TAILINGS POND SURVEY
CULLATON LAKE, N.W.T.

Project No.	Dwg. No.:
F-90132-A/G	1

Drawn By:	Reviewed By:
PW/DT	DK

Date: JANUARY 30, 1995

Part 4