ECHO BAY MINES LTD.

a subsidiary of

KINROSS
Gold Corporation

2004
ANNUAL REPORT
LUPIN OPERATIONS

Submitted under

WATER LICENCE NWB1LUP0008
NUNAVUT WATER BOARD

Date: March 31, 2005
Prepared by: C. Michael Tansey
Reclamation Manager, Lupin

INDEX

APPENDIX A

INTRODUCTION

This report is submitted to fulfil requirements under Part B, Item 5 of Water Licence NWB1LUP0008 granted by the Nunavut Water Board pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*.

The Annual Report for 2004 contains the following information that is required under Part B, Items 5(a) through (k).

a) the monthly and annual quantity in cubic metres of water pumped from Contwoyto Lake at Station 925-01;

b) the monthly and annual quantities in cubic metres of treated tailings effluent discharged at Station 925-10

c) the monthly and annual quantity in cubic metres of minewater discharged at Station 925-11;

d) the monthly and annual quantity in cubic metres of treated sewage effluent discharged at Station 925-14;

e) tabular summaries of all data generated under the Surveillance Network Program;

f) a summary of modifications and/or major maintenance work carried out on the water supply and the waste disposal facilities including all associated structures;

g) a list of unauthorized discharges and follow-up action taken;

h) revisions to the Contingency Plan;

i) revisions to the Abandonment and Restoration Plan;

j) a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year; and

k) any other details on water use or waste disposal requested by the Board by November 1st of the year being reported.

A. FRESH WATER INTAKE VOLUME: Station 925-01

The quantity of fresh water pumped on a monthly basis from Contwoyto Lake is shown in Table No.1, 2004 Pumping Report (Appendix A). The yearly total was 689,742 m^3 as determined by flowmeter. Of this volume, 619,364 m^3 was used for industrial purposes with the remaining 70,378 m^3 being used as potable water.

The volume of water obtained from Contwoyto Lake is measured through a main raw water flowmeter, located in the mill. The raw water that is sent to the potable water system for UV treatment is metered, as well as excess raw water that is sent to the TCA. This excess water is a result of the minimum volume capacity of the lake pumps, the need for continued flow in the pipeline and maintenance of the fire protection water level within the mill raw water tank. The amount of process water used, including the excess raw water, is calculated by subtracting the volume of potable water from the total volume pumped.

As reported in Section J, a major program was carried out during the summer of 2004 to cover exposed tails in the TCA with esker material obtained from the nearby Fingers Lake esker. In order to suppress dust on the haul roads, approximately 5,746 cubic metres of water was drawn from End Lake, which is located in the southeast corner of the TCA, and placed on the haul roads by use of a water truck.

B. TREATED TAILINGS EFFLUENT: Station 925-10

Discharge of treated tailings effluent from Pond 2 (station 925-10) did not take place in 2004. An adequate storage volume was achieved during the 2002 discharge and the mine was on care and maintenance between August 2003 and February 2004, reducing the storage volume required. As such, the release of water from the TCA in 2004 was not considered essential to the operation of the facility. Additional storage time was also viewed as being beneficial to the quality of all waters within the containment.

The Pond No.1 syphons on J Dam were operated from July 2 to July 22, 2004, transferring approximately 773,968 m^3 of water to Pond No.2. There was no requirement for treatment in 2004, given the excellent water quality of Pond No.1.

Initial water level surveys were carried out on June 26, 2004. Pond 1 water elevation was 484.6 metres, and Pond 2 water elevation was 481.4 metres. Another water level survey was done on September 25th, well after the completion of water transfer between ponds. Pond 1 elevation was 482.7 metres, and Pond 2 elevation was 482.4 metres. The elevation of Pond 2 provides over 3 metres of freeboard on the lowest elevation dam within Pond No.2.

C. MINEWATER: Station 925-11

The monthly and annual quantity of water pumped from the mine is included in Pumping Report, Table 1. For the whole of 2004, all minewater was directed to the TCA via the tailings line. For the first 2 months of the year, while the property was still on care and maintenance, fresh water had to be added to supplement the volume of mine water pumped to tails. The total quantity of water pumped from underground in 2004 was 47,049 m^3.

D. SEWAGE EFFLUENT: Station 925-14

The monthly and annual quantity of sewage effluent discharged to the environment from the second sewage lake at Station 925-14 is listed in the Pumping Report, Table No.1. Total flow for the seasonal discharge was approximately 315,573 m^3, between June 26 and September 29, 2004. The syphon was shut down from July 4 to 12 while pH levels stabilized to within discharge limits. The discharge volume is calculated from an ultrasonic flow meter on the single 8" syphon line. In April, 2004, the lower sewage lake was treated with quicklime, as has been the practice for several years. The contents of two 1.4 tonne bags of quicklime were spread on the ice for natural mixing during spring melt. All licence parameters were maintained within limits during the period of discharge.

E. SURVEILLANCE NETWORK PROGRAM DATA

Tabular summaries of data required under the Surveillance Network Program annexed to Water Licence NWB1LUP0008 are presented in Tables 1 and 2. Table No.1 summarizes the water use, waste disposal volumes and the monthly ore milled, recorded in dry tonnes. Table No.2 summarizes the water quality data collected at stations 925-01 and 925-14.

There was no decant from the TCA in 2004, therefore no results are presented for station 925-10.

The annual sample of freshwater was obtained at the pump house on October 27, 2004.

Located in Appendix B are copies of the 2004 analytical reports and QC data for the analysis of reference materials, requested of Norwest labs under the SNP QA/QC plan.

In addition to the freshwater use, mine water pumped from underground and the sewage lakes discharge volumes, the Pumping Report also includes the data for waste discharged to the tailings pond and tonnage used in the Paste Backfill process. These are calculated figures obtained from the mill daily statistics report.

F. MAINTENANCE WORK

Some pin-hole leaks were repaired on the 8-inch diameter insulated water line that runs from

the pumphouse on Contwoyto Lake to the water handling facilities in the mill. Otherwise, only routine maintenance work was carried out on the water supply and sewage disposal facilities in 2004.

Other maintenance items completed were as follows:

- All recommended maintenance work was completed as specified in the 2004 Geotechnical Inspection of the Tailings Containment Perimeter Embankments carried out by BGC Engineering Inc. There are currently no other outstanding issues with respect to the 2004 or previous geotechnical inspections.

G. LIST OF UNAUTHORIZED DISCHARGES

There was one recorded unauthorized discharge during 2004 under Water Licence NWB1LUP0008.

- Spill Report No. 04-380. June 13, 2004. An estimated 2 tonnes of mill tailings backfill (pastefill) was spilled onto a roadway in front of the headframe when a coupling in the surface pastefill line came apart. The pastefill was being pumped to a surface crown pillar stope at the time. The contaminated area was cleaned up within 24 hours. The pastefill and contaminated road material was scraped up and removed to the tailings area for disposal Please see Photos 1 and 2 in the Appendix.

H. REVISIONS TO THE CONTINGENCY PLAN

No revisions to the Contingency Plan submitted to the Board in March 2004 have been requested.

I. REVISIONS TO THE ABANDONMENT AND RESTORATION PLAN

The 2004 Abandonment and Restoration Plan was submitted to the Board for approval on February 28, 2005.

J. SUMMARY OF ABANDONMENT AND RESTORATION ACTIVITIES

2004 Abandonment and Restoration Activities

Esker Cover

Progressive reclamation activities in the TCA during 2004 saw a major portion of Cell 3, the

remainder of Cell 2, and a small portion of Cell 5 covered by a minimum of 1.0 metre of esker gravel. The work was carried out between July 6 and September 19, 2004, with a total area covered of approximately 328,794 square metres. The esker material is an effective cover medium that serves to eliminate wind dispersal of dry tailings, and the embedded moisture layer prevents oxidation of the underlying tails and provides support for plant growth. Examples of the tailings cover activity undertaken in 2004 can be seen in photos 3 through 8. Figure 1 shows the extent of the covered cells in the TCA at the end of 2004.

Saturated Granular Zone Cover

In 2004, additional site information was accumulated in support of the "Saturated Granular Zone Cover" program for tails reclamation. Monitoring of pore water quality and the saturation status of the esker cover in Cell 1 continued from the previous 2 years. Further to this work, a series of 9 pits were excavated through the esker cover in Cells 1, 1A, 2 and 3 to check for cover thickness, moisture content, and condition of tails/cover interface. This work confirmed that a saturated zone exists at the base of the esker cover (see photos 9 and 10), which effectively isolates the underlying tailings from an oxidizing environment. A detailed description of this program is contained in the 2004 Abandonment and Restoration Plan, previously submitted to the Board.

Ground Temperature Monitoring

Collection of data from thermistor strings that were installed during 1995 (esker cover of Cells No.1 and in Dam 4), in 2000 (Dam 1a, Dam 2 and Fingers Lake Esker), and in 2003 (Dam 6) continued through 2004. As well, in June 2004, 4 new thermistors were installed in K Dam, Cell 3B, Dam 3D and Cell 1 (near Dam 3D). A review of the containment dam temperature data was completed during data review of the 2004 Geotechnical Inspection of the TCA, carried out by BGC Engineering Inc. The information to date indicates that subzero temperatures are maintained at depth with no indications of warming.

At Dam 1a, Graph 1 indicates that foundation temperatures continue to decrease over time. The active layer from the surface of the dam appears to be between 2.5 and 3 metres (with the exception of anomalous data from 2001, which indicated nearly a 4 metre active layer).

At the Dam 2 locations it was noted that the foundation zone appears to be cooling over the longer term with the downstream station being noticeably cooler than the upstream (Graph No.2). This is possibly due to the warming influence of the upstream water, although the same phenomenon is not evident in the Dam1a data. The active layer of the dam section remains at about 2-2.5m. The temperature information demonstrates that the core of the dam remains frozen and that the foundation of the dam is maintained below freezing year round.

Temperature monitoring in Dam 4 began with installation of 4 thermistors in 1995. These strings were all installed along the downstream crest; one at each abutment and one in each of

the “low” points of the foundation. Thermistor D-2 was damaged in 2003 and no longer functions. The data indicates an active layer of approximately 2 to 3 metres at the downstream crest, as shown in Graphs 4, 5 and 6. The profiles in the appendix are single date graphs for 1997-2004, using a date (October) that coincides with what are typically the warmest temperatures at a 2-3 metre depth, whereas the temperatures closer to surface are normally beginning to cool at this time.

It must be noted that the indicated active layer of the dams is not necessarily a true representation of the active surface layer as most thermistors that are currently in use on the dams have been installed near one of the crest slopes, not through the centre line of the dam. Therefore, there is some influence upon the active layer measured due to the slope of the dam (widening with vertical depth). This allows some warming to the dam crest (where the thermistor is located) from the slope side of the dam indicating a deeper active layer penetration than if the thermistor string was installed at the centre line. The temperature profile graphs for Dam 1a and Dam 2 (see Graphs 1 and 2) illustrate this further with the upstream thermistors (with a 1:2.5 embankment slope) indicating a slightly shallower active layer than the downstream thermistors (with a 1:1.5 embankment slope).

The data obtained from the Fingers Lake thermistor string gives a better representation of the true active layer. Prior to the summer of 2004, this thermistor was installed on a large, flat esker plain. The data obtained monthly from 2000 to 2004 shows that subzero temperatures persist below the 1.3 metre depth and extend through to the bedrock, which is encountered at approximately 12.3m and is maintained at approximately –6° to –7°C. A depth of approximately 3 metres maintains the temperature below -2°C. During the summer of 2004, approximately 1.5 metres of material was removed from the esker, for use as a cover on the exposed tailings cells. The thermistor is still active, however it now sits on a “pedestal” of sand, about 1.5 metres high and 8 metres in diameter (see Photo 11). Prior to Aug 1, 2004, the node at the 1.3 metre depth had never shown a thaw condition. This was obviously affected by the removal of the surrounding sand. See Graph No.3 ‘Fingers Lake Esker Temperature Profile’ in the appendix. It is likely that this thermistor will be permanently removed in 2005, as more of the esker will be excavated.

Temperature monitoring in Cell No.1 has been ongoing since installation of the original thermistor strings in 1995, when the cell was covered with 1 metre of esker gravel. String TC1-3, at the north east end of the cell near Dam 3C, is the only remaining active thermistor from that group. Graph No.4 shows the temperature profile at TC1-3 for the month of October during the years of monitoring. October is usually the month when the active layer has penetrated the deepest and significant cooling has begun at surface. There is still some warming that occurs further at depth, however the temperatures at these locations remain below 0°C year round. As with the esker thermistor, temperature readings below the 1.25-metre depth are consistently below the freezing point. Two other thermistors are installed in Cell 1: the test pad thermistor installed in 2003 and located about 75 metres northwest of the TC1-3 thermistor, and thermistor TC1-7, installed in 2004 at the south end of the cell near Dam 3D. Graphs 5 and 6 show the temperature profiles for these thermistors since installation.

The test pad thermistor, installed through 1 metre of esker cover placed in 1995, shows that sub-zero temperatures persist below 1.5 metres depth.

The Dam 6 thermistor, installed in 2003, was buried in snow for the winter of 2004, then snowmelt in the spring. It became accessible in June 2004, but all the nodes down to 6 metres in depth no longer functioned. Although readings were taken for the remainder of the year, this thermistor will be abandoned in 2005 as the data it provides is no longer of value. The temperature profile for this thermistor can be seen in Graph 13.

The temperature profiles for the thermistors installed in 2004 can be seen in Graphs 9 to 12.

- Thermistor DK-1 is located on the upstream crest of K Dam, on the northwest side of Cell 3. Initial thaw depth is indicated to be between 3 and 4 metres.
- Thermistor TC3-1 is located in the esker covered (1-metre thick) portion of Cell 3, about 115 metres to the southwest of DK-1 and about 50 metres from K Dam. Thaw depth is indicated at between 1.25 and 1.5 metres below surface, consistent with the other thermistors that are installed in esker-covered tails.
- Thermistor D3D-1 is installed in the upstream crest of Dam 3D, on the southwest edge of Cell 1. Thaw depth in this location appears to be just below 2.0 metres.
- Thermistor TC1-7 is installed approximately 60 metres north of D3D-1, inside the esker-covered (1-metre thick) Cell 1. Again, thaw depth is indicated to be just above the 1.5 metre depth.

Planned Abandonment and Restoration Activities: 2005

- Continue to monitor all active thermistor strings installed in the esker cover of Cells 1, 2, and 3, as well as Dams 1A, 2, 3D, 4 and K to add to the database of information regarding the characteristics of the active thaw zone in constructed dams and covered tailings.

- The program to cover the exposed tailings in the TCA will continue. The remainder of Cell 3 and a portion of Cell 5, including the area bounded by N Dam, will be covered with 1.0 metre of esker gravel.

- The West Zone Crown Pillar will be prepared to permit the eventual disposal of non-hazardous waste materials into the underground stope.

- A Phase 2 environmental site assessment will be carried out.

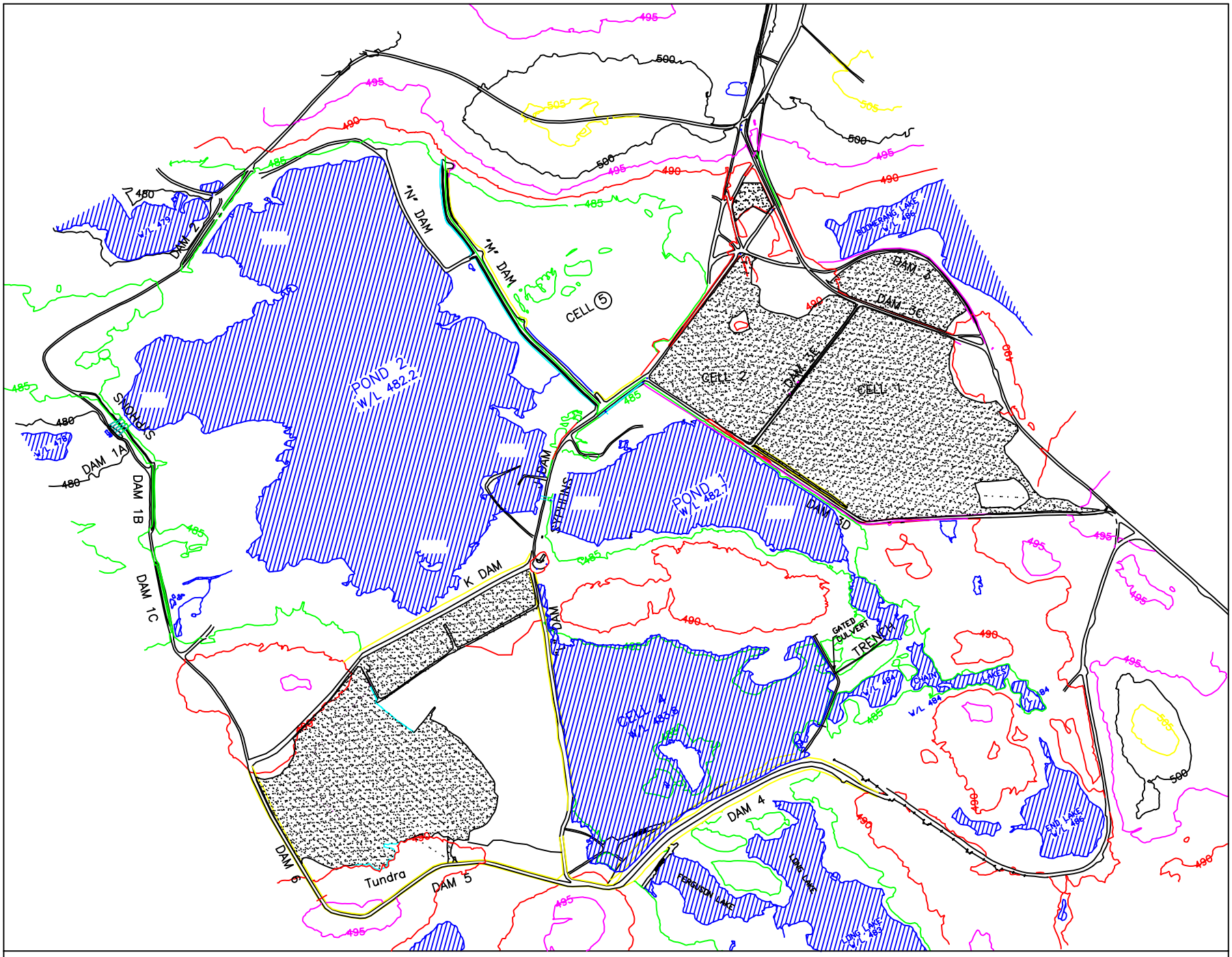
- Unneeded roads around the site will be reclaimed by removing culverts, re-sloping the road edges (where required) and scarifying the road surface to promote natural revegetation.

K. ANY OTHER DETAILS ON WATER USE OR WASTE DISPOSAL REQUESTED BY THE BOARD BY NOVEMBER 1st OF THE YEAR BEING REPORTED

There were no requests received from the Board prior to November 1, 2004 for additional information to be included in this annual report.

APPENDIX A

FIGURES
TABLES
GROUND TEMPERATURE GRAPHS
PHOTOS



Lupin Mine TCA 2004	MAP SCALE 0 50 100 200 METERS	KINROSS GOLD CORPORATION EBM – LUPIN MINE	LUPIN MINE TAILINGS AREA
	REVISIONS: No. 6 Aug/04 CMT Cell 4 water; 3 Jun/04 CMT Pond 1,2 water levels; 4 Oct/03 CMT Updated Cell 3a, 3b; 5 Feb/98 S.B.L. Updated 1997 work		
	DATE: 2004 Lupin TCA.dwg; DRAWN BY; CHECKED; APPROVED	OFFICE: LUPIN; DEPARTMENT: DEVELOPMENT	MAP INDEX NUMBER; SCALE; DRAWING NUMBER

ECHO BAY MINES LTD.

LUPIN GOLD MINE, Nunavut

WATER LICENCE NWB1LUP0008

2004

PUMPING REPORT

(CUBIC METERS)

TABLE NO.1

	FRESHWATER FROM CONTWOYTO LAKE (METERED)				WASTE DISCHARGED TO TAILINGS POND (CALCULATED)						
MONTH	TOTAL m3	PROCESS m3	POTABLE m3	CUM. POTABLE m3	TOTAL m3	SOLUTION m3	SOLIDS m3	ORE MILLED tonnes	BACKFILL SOLIDS m3	MINEWATER TO TAILS (METERED)	SEWAGE (CALC.) m3
January-04	19,529	16,653	2,876	2,876	0	0	0	0	0	4,222	0
February-04	23,555	19,262	4,293	7,169	0	0	0	0	0	9,599	0
March-04	57,586	51,425	6,161	13,330	58,174	52,239	5,935	25,806	2,908	2,455	0
April-04	56,860	51,658	5,202	18,532	67,652	62,927	4,725	30,283	6,445	2,193	0
May-04	64,712	58,961	5,751	24,283	70,266	64,257	6,009	31,868	5,047	3,165	0
June-04	68,998	62,297	6,701	30,984	58,039	49,471	8,568	34,127	3,053	3,514	17,532
July-04	65,347	57,158	8,189	39,173	57,329	49,422	7,907	35,805	4,496	5,049	112,035
August-04	72,343	65,033	7,310	46,483	59,220	52,597	6,623	37,542	6,598	4,626	95,649
September-04	71,444	65,139	6,305	52,788	61,307	54,201	7,106	35,899	5,490	4,070	90,357
October-04	66,525	60,798	5,727	58,516	67,423	61,515	5,908	33,020	5,793	3,141	0
November-04	61,761	55,690	6,071	64,587	57,796	51,394	6,402	27,724	3,179	3,093	0
December-04	61,082	55,290	5,792	70,378	55,919	49,052	6,867	24,214	1,338	1,922	0
TOTAL (m^3)	689,742	619,364	70,378		613,125	547,075	66,050	316,288 t	44,347	47,049	315,573

NOTE: "ore milled" is reported in tonnes

ECHO BAY MINES LTD.

LUPIN GOLD MINE, Nunavut

WATER LICENCE NWB1LUP0008

2004 ANNUAL REPORT **Table 2**

SURVEILLANCE NETWORK PROGRAM
MONTHLY REPORT - MONTHLY SUMMARY

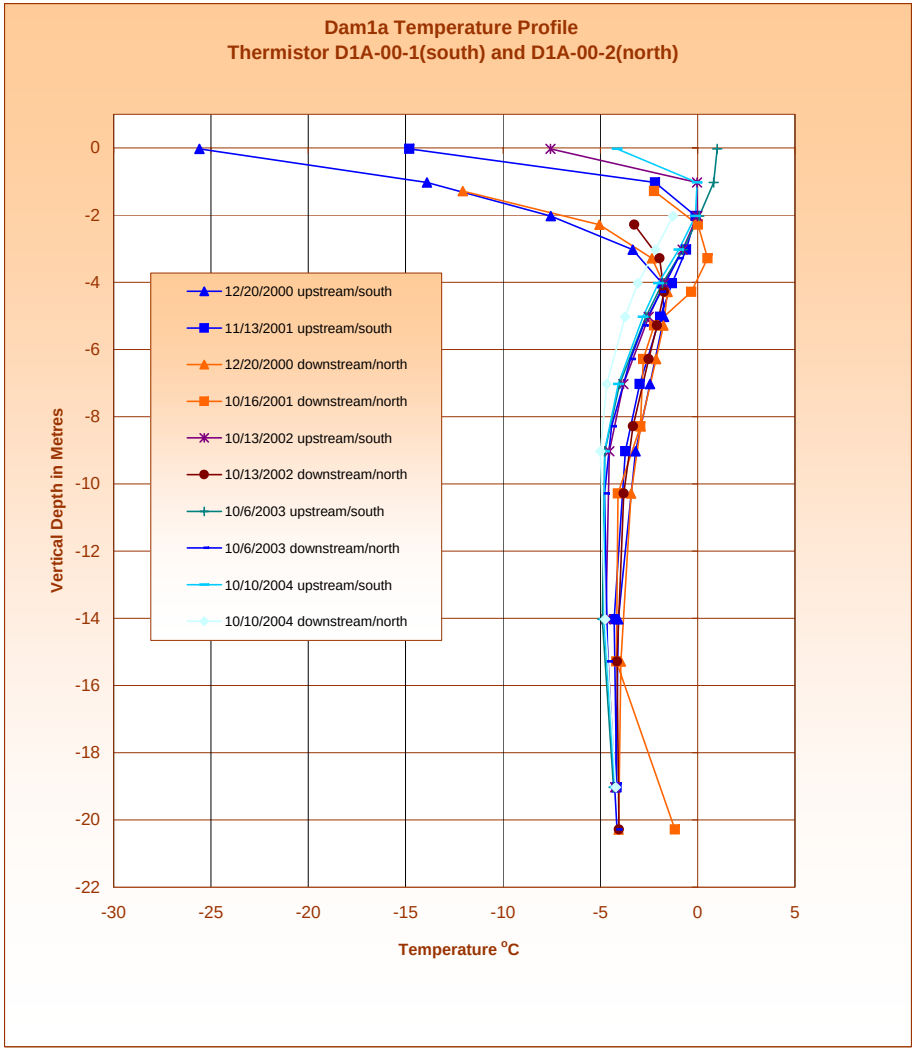
2004
WATER QUALITY DATA

- all units are in mg/L except pH which is unitless and where otherwise indicated.

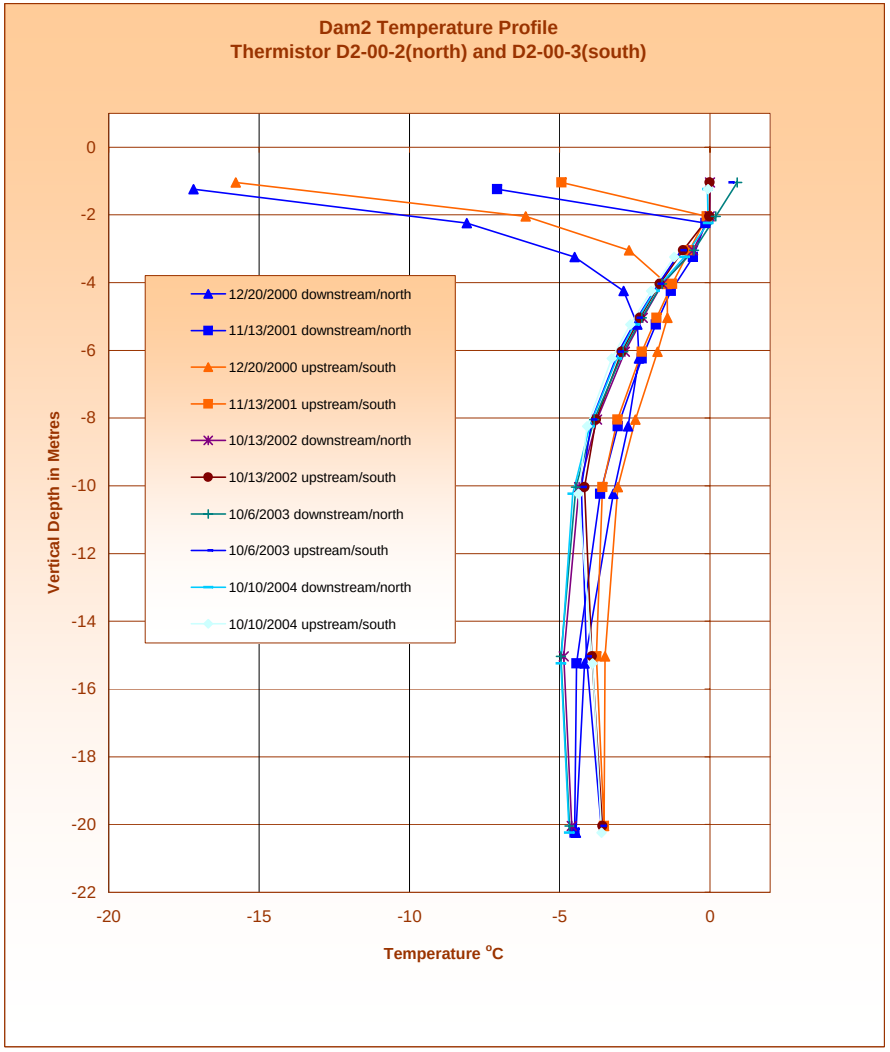
DATE	SAMPLING STATION	TEMP ^0C	pH	TSS	Total CN	Total As	TOTAL METALS Cd	Cu	Hg	Ni	Pb	Fe	Zn	TEMP ^0C	F-col #/100mL	T-Alk	BOD_5
27-Apr-04	925-01		7.06	<2	0.002	0.0004	0.00002	0.001		0.0012	0.0002		0.004				
5-May-04	925-01	0.9	6.86	<5		0.0083	0.00001	0.001		0.0011	0.0004		0.006				
30-Jun-04	925-14		7.00	9		0.0112	0.00007	0.004		0.0123	0.0035		0.037		<1		<4
4-Aug-04	925-14		7.20	<2		0.0118	0.00009	0.005		0.0193	0.0003		0.056		24		<4
1-Sep-04	925-14		7.10	<2		0.0166	0.00008	0.005		0.0250	0.0005		0.039		<1		5
22-Sep-04	925-14		7.20	<2		0.0096	0.00009	0.004		0.0222	0.0002	0.3	0.031		<1		<4
27-Oct-04	925-01		6.65	<1		0.0003	0.00003	0.001	<0.0002	0.0007	0.0004		0.003		<1		

DATE	SAMPLING STATION	Total Nitrate-N	Total Nitrite-N	TK-N	NH4-N	Total Ortho-P	Total Phosph.	Total O&G	Alk.	Hard.	uS/cm Cond.
27-Apr-04	925-01										19.8
5-May-04	925-01									4	
30-Jun-04	925-14	3.8	0.05	1.62	0.30	<0.05	0.14		15	231	1010
4-Aug-04	925-14	5.6	<0.05	1.14	0.17	<0.05	0.14		14	358	1580
1-Sep-04	925-14	7.6	<1	0.97	0.09	<0.05	0.10		12	492	2000
22-Sep-04	925-14	6.2	<0.2	1.07	0.06	<0.05	0.14		15	435	1970
27-Oct-04	925-01										14

Graph No.1



Graph No.2



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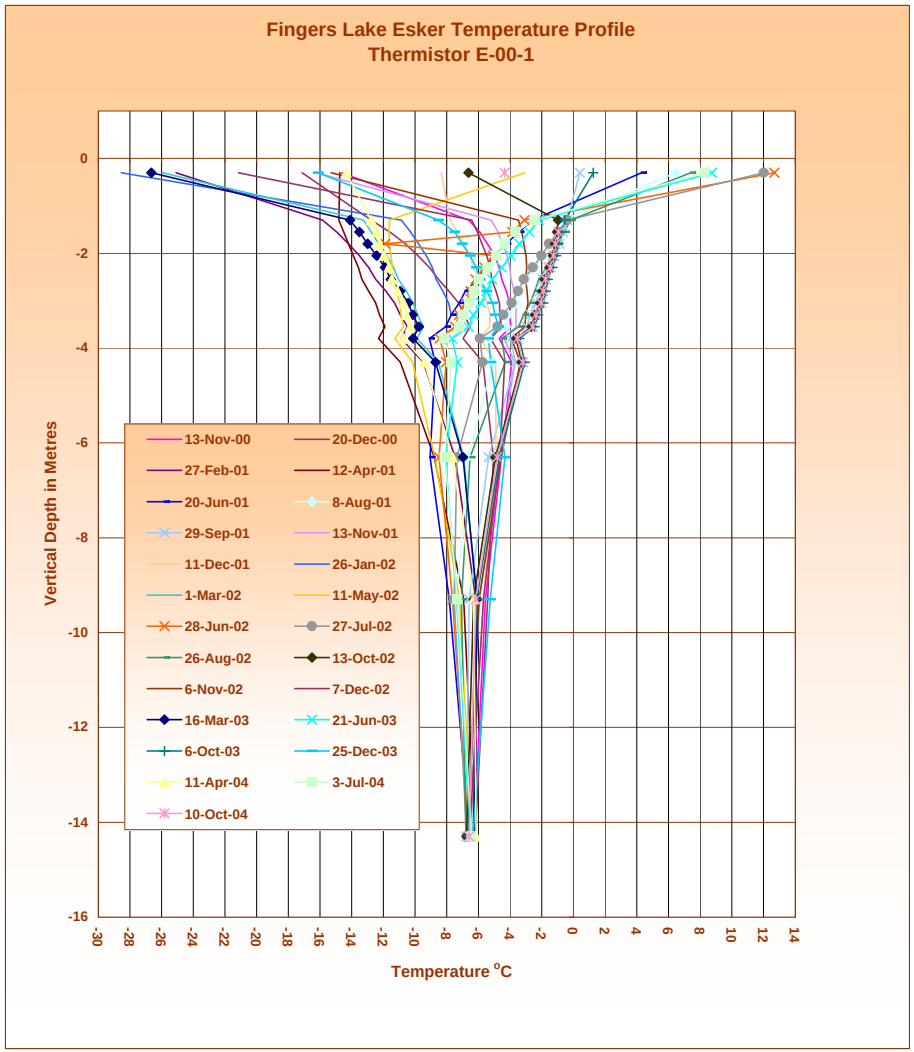

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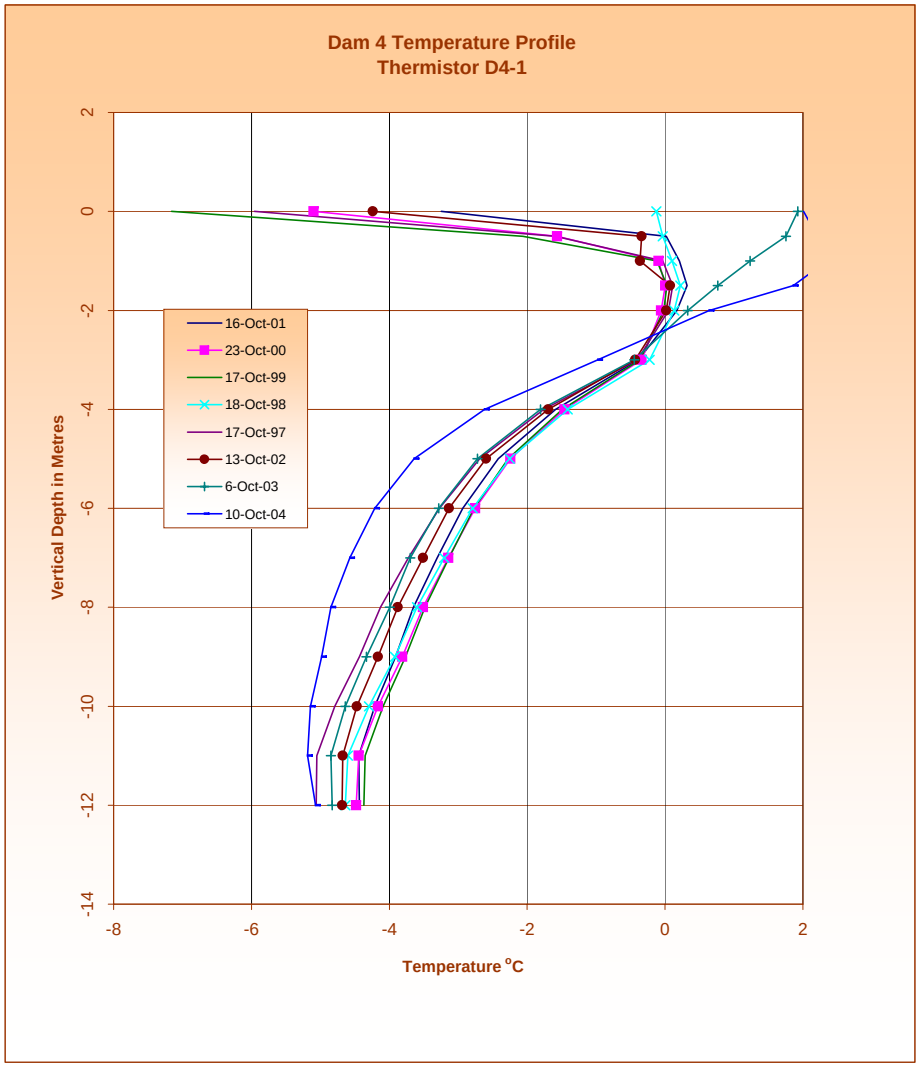

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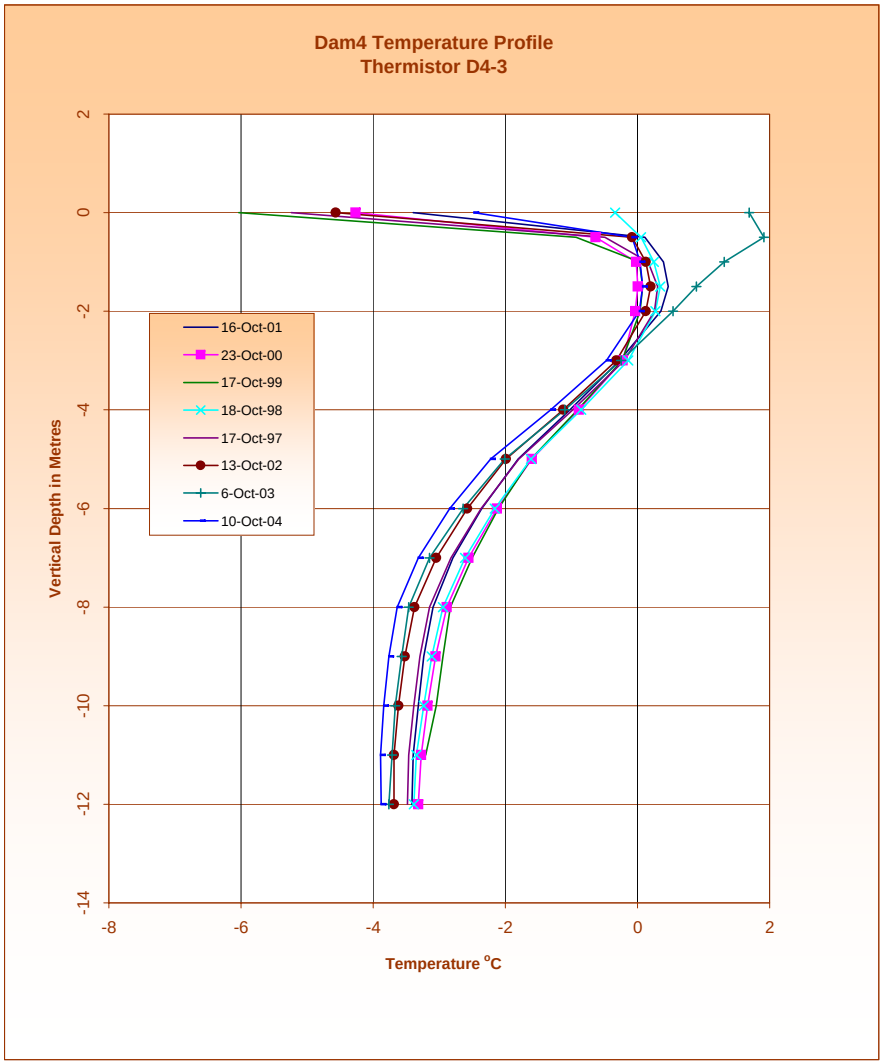

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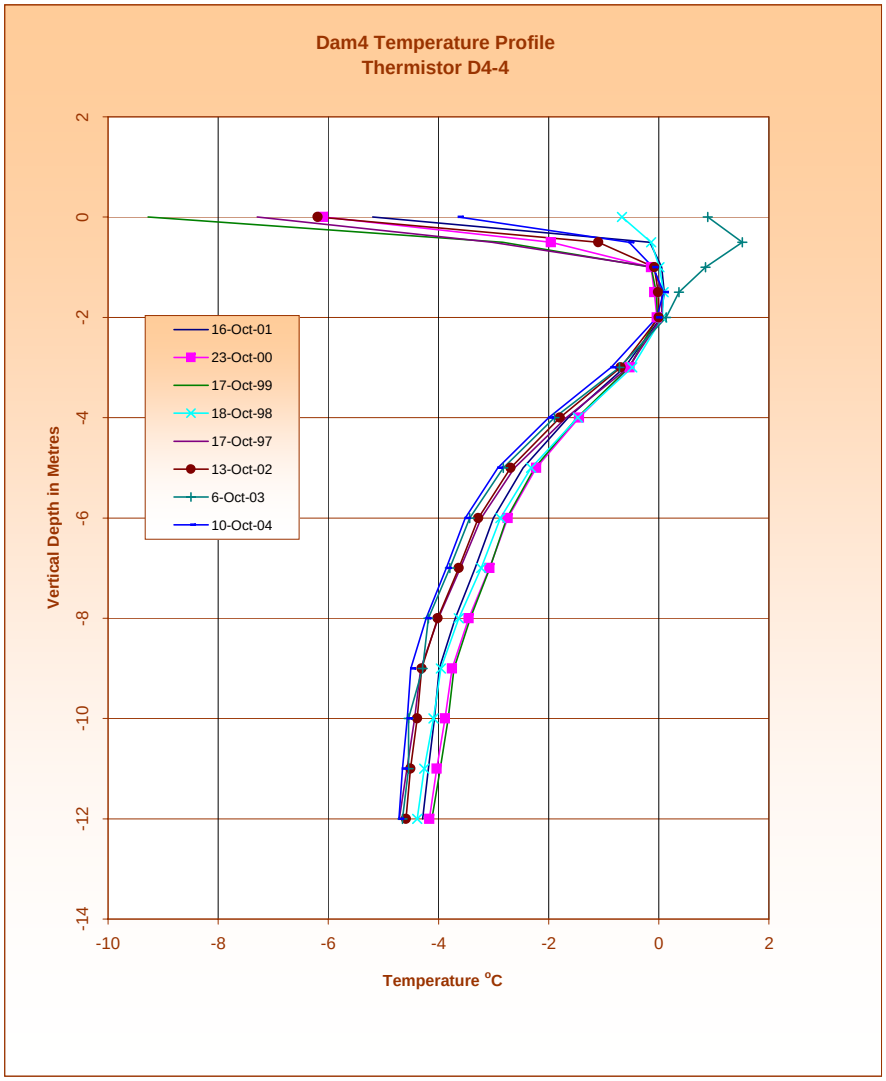

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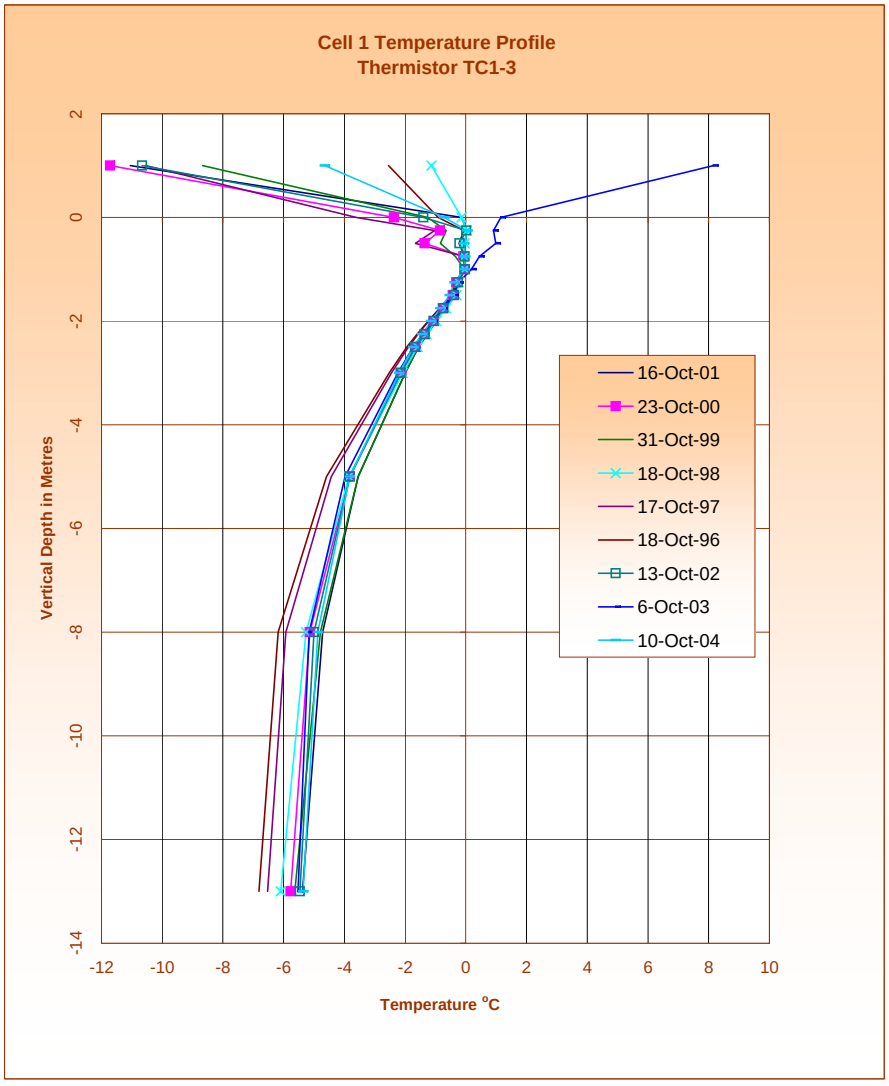

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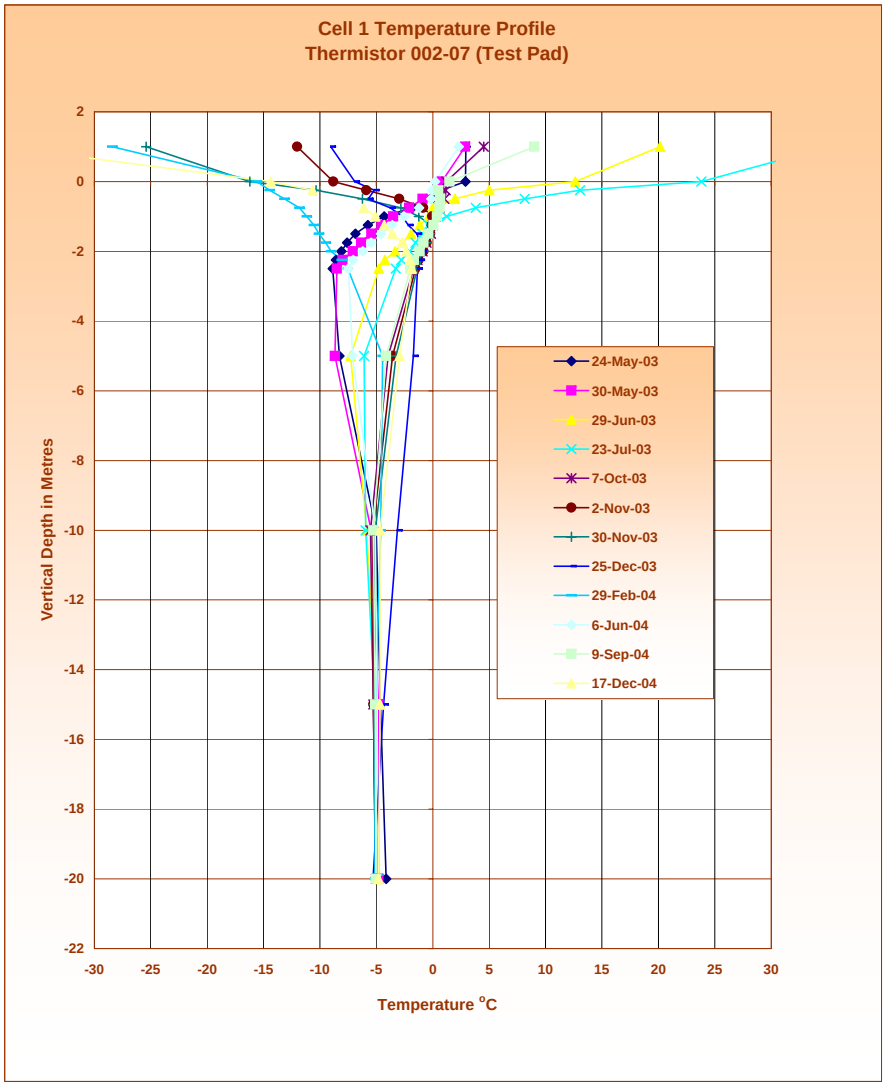

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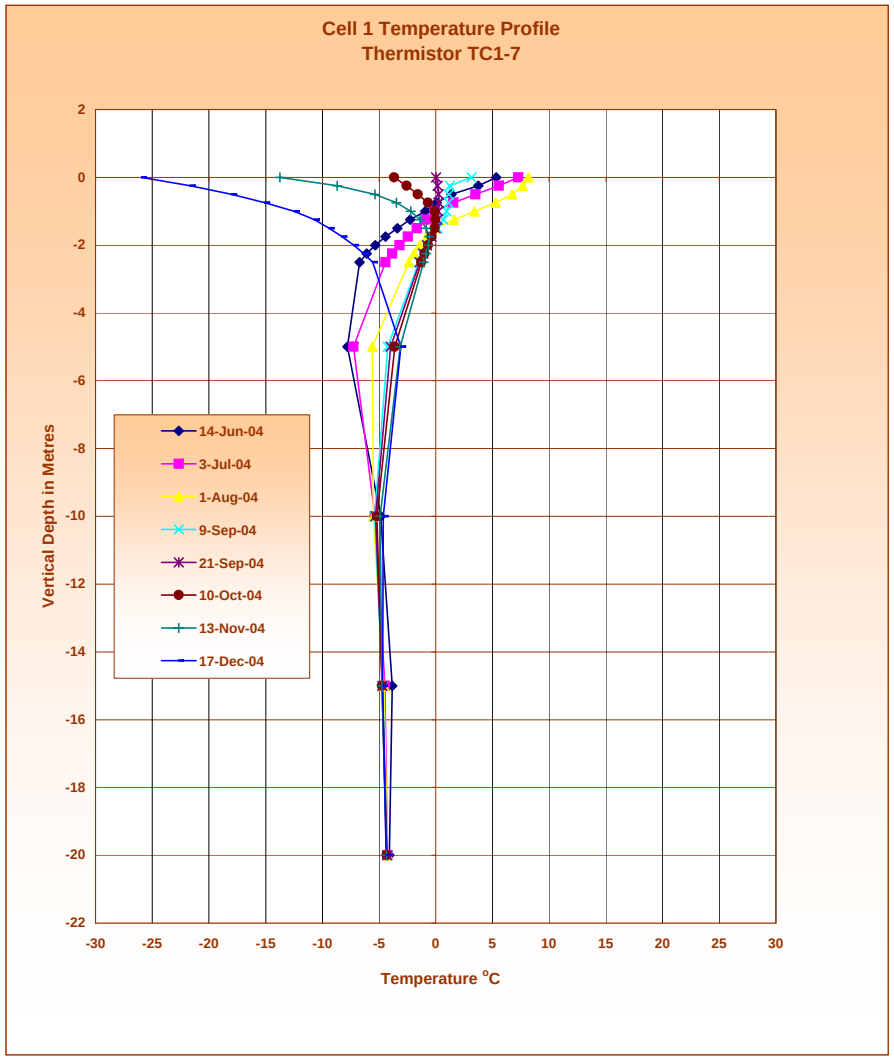

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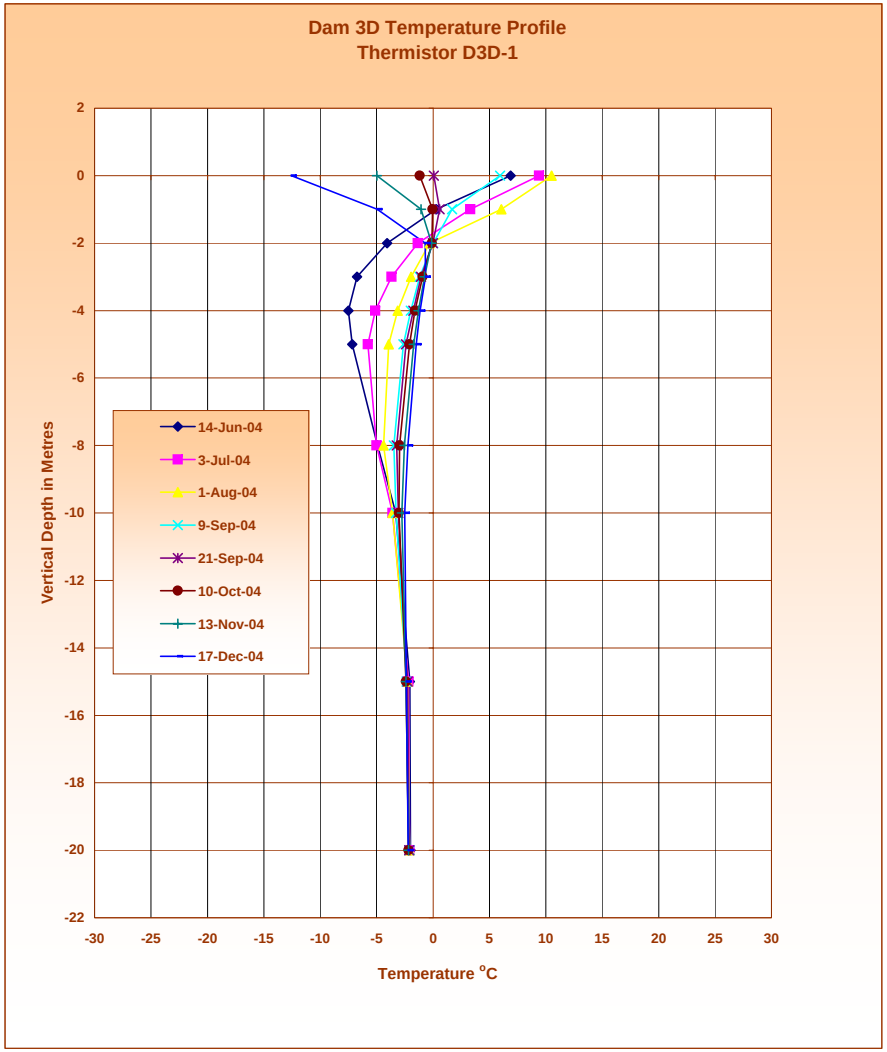

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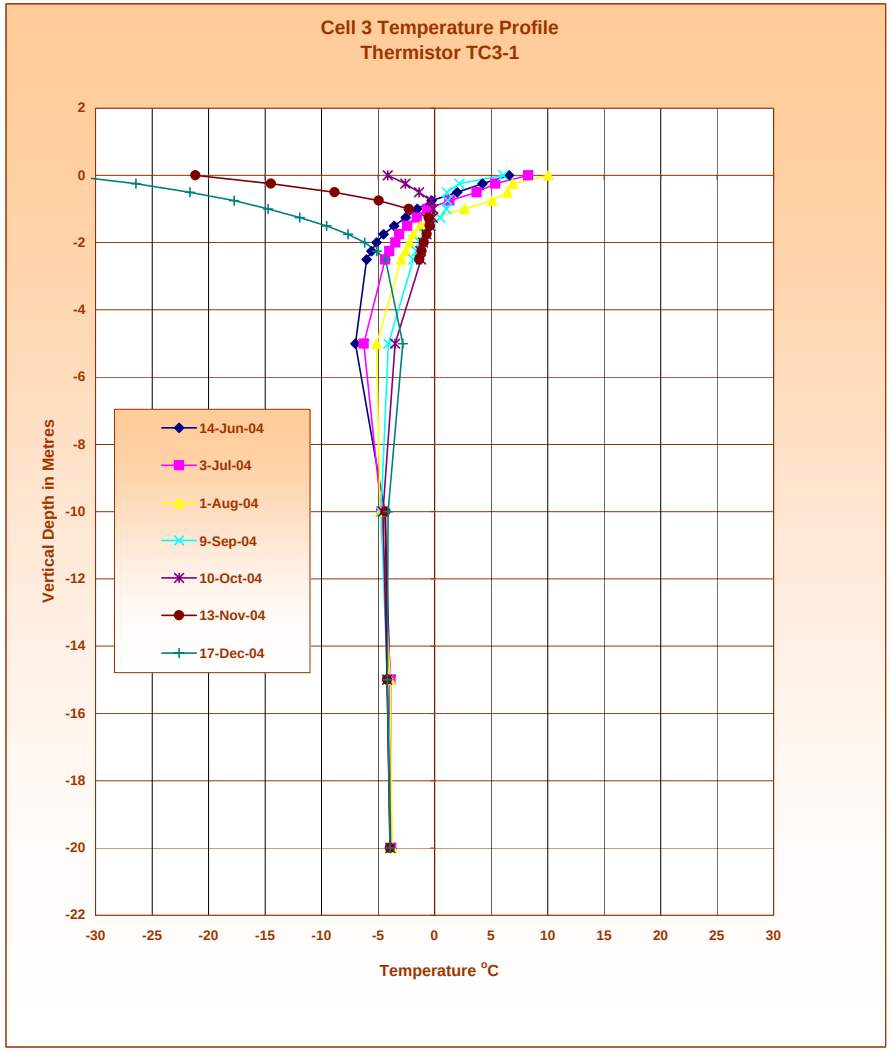
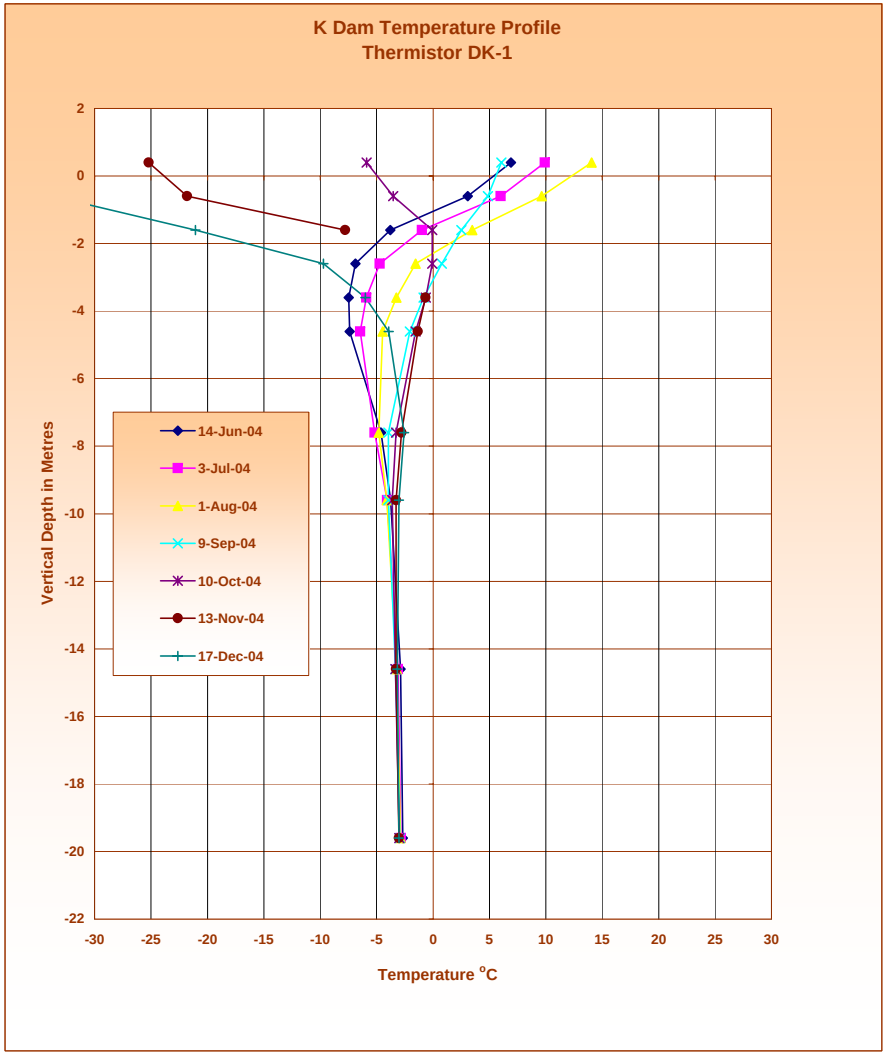


Graph No.12



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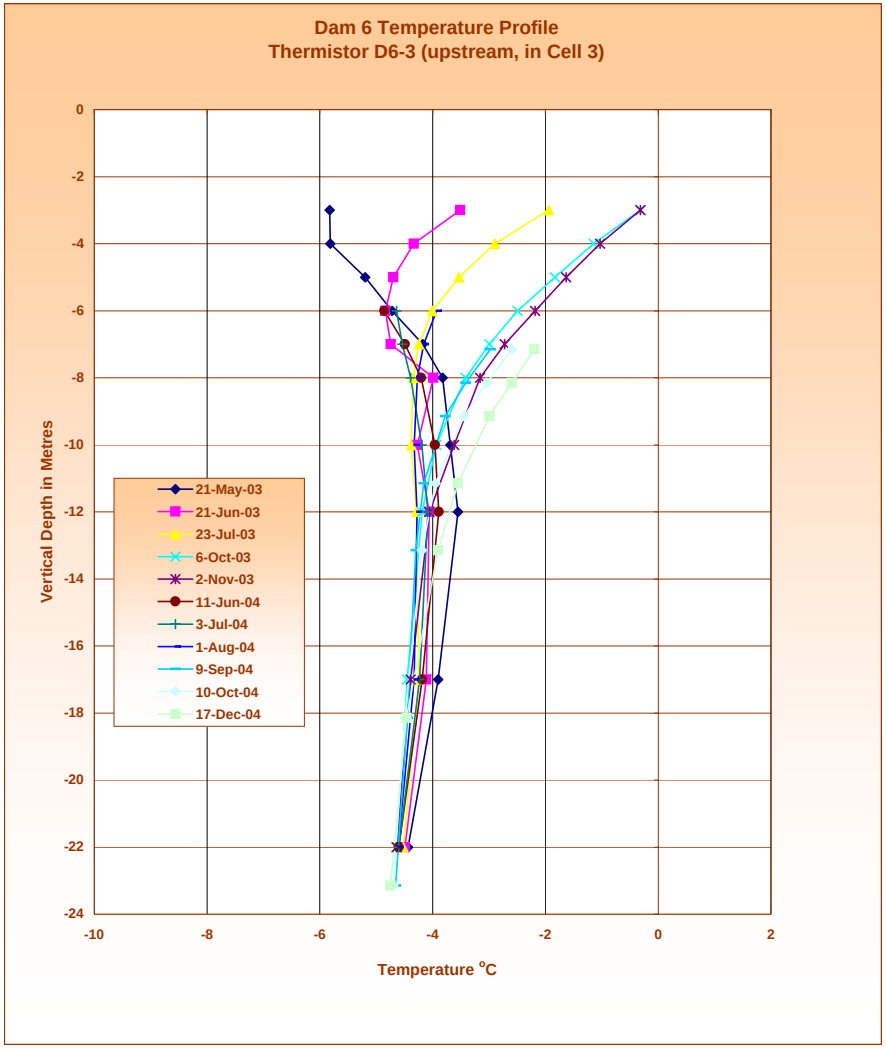
Dam 6 Temperature Profile
Thermistor D6-3 (upstream, in Cell 3)
Vertical Depth in Metres
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-10
-8
-6
-4
-2
0
2
Temperature °C
21-May-03
21-Jun-03
23-Jul-03
6-Oct-03
2-Nov-03
11-Jun-04
3-Jul-04
1-Aug-04
9-Sep-04
10-Oct-04
17-Dec-04

Photo 1 - Paste backfill spill 04-380. June 13, 2004.

Photo 2 – Paste backfill spill cleaned up. June 14, 2004

Photo 3 – Cell 5 east. Beginning to cover cell.

Photo 4 – Cell 5 east. Esker cover completed.

Photo 5 – Cell 3, by Dam 6 prior to placement of esker cover. View to south.

Photo 6 – Cell 3, by Dam 6 during cover placement. View to south.

Photo 7 – Placing esker cover on Cell 3. Stakes are 1 metre high.

Photo 8 – Placing esker cover on Cell 3.

Photo 9 – Test Pit 1A-1, through the esker cover in Cell 1A. Cover was placed in 1988. Note moisture at tails interface.

Photo 10 - Test pit 2-2, through esker cover in Cell 2. Cover was placed 2 months earlier. Note moisture at tails interface.

Photo 11 – Thermistor at Fingers Lake esker. Approximately 1.5 metres of esker material has been removed in a 4 metre radius around the thermistor.

APPENDIX B

Norwest Labs Ltd. Analytical and QC Reports

SNP 925-01	Oct 27/04	NWL # 342827-1	EBM Log # 40051
SNP 925-14	Jun 30/04	NWL # 317711-1	EBM Log # 34 lower lagoon
SNP 925-14	Aug 4/04	NWL # 324234-1	EBM Log # 40028
SNP 925-14	Sep 1/04	NWL # 330035-1	EBM Log # 40049
SNP 925-14	Sep 22/04	NWL # 334332-1	EBM Log # 40050

Norwest Labs
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Fax: (780) 438-0396

Analytical Report

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By:
Company:

Project ID:
Name:
Location:
LSD:
P.O.:
Acct. Code: L48906

NWL Lot ID: 342827
Control Number:
Date Received: Oct 28, 2004
Date Reported: Nov 02, 2004
Report Number: 619322

NWL Number	342827-1
Sample Date	Oct 27, 2004
Sample Description	40051 / 925-1
Matrix	Water - General

Analyte		Units	Results	Results	Results	Detection Limit
Metals Total						
Calcium	Total	mg/L	0.6			0.2
Iron	Total	mg/L	<0.1			0.1
Magnesium	Total	mg/L	0.3			0.1
Manganese	Total	mg/L	<0.005			0.005
Potassium	Total	mg/L	0.4			0.4
Silicon	Total	mg/L	0.09			0.05
Sodium	Total	mg/L	0.6			0.4
Sulfur	Total	mg/L	0.62			0.05
Mercury	Total	mg/L	<0.0002			0.0002
Aluminum	Total	mg/L	0.008			0.005
Antimony	Total	mg/L	<0.0002			0.0002
Arsenic	Total	mg/L	0.0003			0.0002
Barium	Total	mg/L	0.003			0.001
Beryllium	Total	mg/L	<0.0001			0.0001
Bismuth	Total	mg/L	<0.0005			0.0005
Boron	Total	mg/L	0.002			0.002
Cadmium	Total	mg/L	0.00003			0.00001
Chromium	Total	mg/L	<0.0005			0.0005
Cobalt	Total	mg/L	<0.0001			0.0001
Copper	Total	mg/L	0.001			0.001
Lead	Total	mg/L	0.0004			0.0001
Lithium	Total	mg/L	0.001			0.001
Molybdenum	Total	mg/L	<0.001			0.001
Nickel	Total	mg/L	0.0007			0.0005
Selenium	Total	mg/L	<0.0002			0.0002
Silver	Total	mg/L	<0.0001			0.0001
Strontium	Total	mg/L	0.006			0.001
Thallium	Total	mg/L	<0.00005			0.00005
Tin	Total	mg/L	<0.001			0.001
Titanium	Total	mg/L	<0.0005			0.0005
Uranium	Total	mg/L	<0.0005			0.0005
Vanadium	Total	mg/L	<0.0001			0.0001
Zinc	Total	mg/L	0.003			0.001
Zirconium	Total	mg/L	<0.001			0.001
Microbiological Analysis						

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Analytical Report

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Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By:
Company:

Project ID:
Name:
Location:
LSD:
P.O.:
Acct. Code: L48906

NWL Lot ID: **342827**
Control Number:
Date Received: Oct 28, 2004
Date Reported: Nov 02, 2004
Report Number: 619322

NWL Number	342827-1
Sample Date	Oct 27, 2004
Sample Description	40051 / 925-1
Matrix	Water - General

Analyte		Units	Results	Results	Results	Detection Limit
Microbiological Analysis - Continued						
Total Coliforms	Membrane Filtration	CFU/100 mL	<1			1
Fecal Coliforms	Membrane Filtration	CFU/100 mL	<1			1
Physical and Aggregate Properties						
Temp. of observed pH and EC		°C	20.8			
Solids	Total Suspended	mg/L	<1			1
Routine Water						
pH			6.65			
Electrical Conductivity		µS/cm at 25 C	14			1

Approved by:

Darren Crichton, BSc, PChem
Operations Chemist

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Quality Control

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By:
Company:

Project
ID:
Name:
Location:
LSD:
P.O.:
Acct. Code: L48906

NWL Lot ID: 342827
Control Number:
Date Received: Oct 28, 2004
Date Reported: Nov 02, 2004
Report Number: 619322

Metals Total

Blanks	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Calcium	mg/L	<0.2	0.0	0.0	0.1	✓
Iron	mg/L	<0.1	0.0	0.0	0.0	✓
Magnesium	mg/L	<0.1	0.0	0.0	0.0	✓
Manganese	mg/L	<0.005	0.000	-0.001	0.001	✓
Potassium	mg/L	<0.4	0.0	-0.1	0.1	✓
Silicon	mg/L	0.09	0.02	-0.04	0.09	✓
Sodium	mg/L	<0.4	0.1	-0.2	0.3	✓
Sulfur	mg/L	<0.05	0.01	-0.03	0.04	✓
Mercury	mg/L	<0.0002	0.0000	0.0000	0.0000	✓

Material Used: Edmonton Method Blank
Date Acquired: Oct 29, 2004
Acquired By: To Thong

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Quality Control

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By:
Company:

Project
ID:
Name:
Location:
LSD:
P.O.:
Acct. Code: L48906

NWL Lot ID: 342827
Control Number:
Date Received: Oct 28, 2004
Date Reported: Nov 02, 2004
Report Number: 619322

Metals Total (Continued...)

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
Calcium	mg/L	10.7	10.6	10.0	0.6	✓
Iron	mg/L	<0.1	<0.1	10.0	0.0	✓
Magnesium	mg/L	1.3	1.3	10.0	0.2	✓
Manganese	mg/L	<0.005	<0.005	9.990	0.001	✓
Potassium	mg/L	<0.4	<0.4	10.0	1.2	✓
Silicon	mg/L	3.14	3.08	9.99	0.01	✓
Sodium	mg/L	4.8	4.7	10.0	1.2	✓
Sulfur	mg/L	0.64	0.63	9.99	0.03	✓
Aluminum	ug/L	<5	<5	10	11	✓
Antimony	ug/L	<0.2	<0.2	10.0	0.4	✓
Arsenic	ug/L	1.7	1.8	10.0	0.4	✓
Barium	ug/L	19	19	10	2	✓
Beryllium	ug/L	<0.1	<0.1	10.0	0.2	✓
Bismuth	ug/L	<0.5	<0.5	10.0	1.1	✓
Boron	ug/L	38	37	10	4	✓
Cadmium	ug/L	<0.01	<0.01	9.99	0.02	✓
Chromium	ug/L	<0.5	<0.5	10.0	1.1	✓
Cobalt	ug/L	<0.1	<0.1	10.0	0.2	✓
Copper	ug/L	1	1	10	2	✓
Lead	ug/L	0.7	0.7	10.0	0.2	✓
Lithium	ug/L	<1	<1	10	2	✓
Molybdenum	ug/L	<1	<1	10	2	✓
Nickel	ug/L	1.5	1.5	10.0	1.1	✓
Selenium	ug/L	<0.2	<0.2	10.0	0.4	✓
Silver	ug/L	<0.1	<0.1	10.0	0.2	✓
Strontium	ug/L	222	221	10	2	✓
Thallium	ug/L	<0.05	<0.05	9.99	0.11	✓
Tin	ug/L	<1	<1	10	2	✓
Titanium	ug/L	<0.5	<0.5	10.0	1.1	✓
Uranium	ug/L	<0.5	<0.5	10.0	1.1	✓
Vanadium	ug/L	0.5	0.5	10.0	0.2	✓
Zinc	ug/L	3	2	10	2	✓
Zirconium	ug/L	<1	<1	10	2	✓

Material Used: Edmonton Duplicate
Date Acquired: Oct 29, 2004
Acquired By: To Thong

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Quality Control

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By:
Company:

Project
ID:
Name:
Location:
LSD:
P.O.:
Acct. Code: L48906

NWL Lot ID: 342827
Control Number:
Date Received: Oct 28, 2004
Date Reported: Nov 02, 2004
Report Number: 619322

Metals Total (Continued...)

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Calcium	mg/L	52.2	49.6	45.6	53.7	✓
Iron	mg/L	2.1	2.0	1.8	2.2	✓
Magnesium	mg/L	20.7	20.3	18.6	22.0	✓
Manganese	mg/L	0.504	0.479	0.451	0.507	✓
Potassium	mg/L	48.9	47.8	43.5	52.1	✓
Silicon	mg/L	4.91	5.00	4.50	5.50	✓
Sodium	mg/L	50.0	49.1	44.4	53.8	✓
Sulfur	mg/L	10.1	9.68	8.74	10.62	✓
Mercury	mg/L	0.0007	0.0008	0.0007	0.0010	✓
Material Used:	Edmonton Digestion Check					
Date Acquired:	Oct 29, 2004					
Acquired By:	To Thong					
Calcium	mg/L	250	253	232	274	✓
Iron	mg/L	9.7	9.7	9.1	10.3	✓
Magnesium	mg/L	97.9	102	92	112	✓
Manganese	mg/L	2.39	2.45	2.27	2.63	✓
Potassium	mg/L	252	253	226	280	✓
Silicon	mg/L	24.6	25.0	22.5	27.5	✓
Sodium	mg/L	257	251	221	281	✓
Sulfur	mg/L	49.2	50.0	46.3	53.7	✓
Mercury	mg/L	0.0031	0.0030	0.0025	0.0034	✓
Material Used:	Metals High					
Date Acquired:	Oct 29, 2004					
Acquired By:	To Thong					

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Quality Control

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Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By:
Company:

Project
ID:
Name:
Location:
LSD:
P.O.:
Acct. Code: L48906

NWL Lot ID: 342827
Control Number:
Date Received: Oct 28, 2004
Date Reported: Nov 02, 2004
Report Number: 619322

Metals Total (Continued...)

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Calcium	mg/L	4.7	4.7	4.3	5.2	✓
Iron	mg/L	0.2	0.2	0.2	0.2	✓
Magnesium	mg/L	1.9	1.9	1.7	2.1	✓
Manganese	mg/L	0.048	0.048	0.043	0.052	✓
Potassium	mg/L	4.9	5.0	4.4	5.6	✓
Silicon	mg/L	0.47	0.50	0.45	0.55	✓
Sodium	mg/L	4.9	5.2	4.4	6.1	✓
Sulfur	mg/L	0.90	0.98	0.82	1.13	✓
Mercury	mg/L	0.0008	0.0008	-0.0016	0.0032	✓
Aluminum	ug/L	963	1000	850	1150	✓
Antimony	ug/L	41.9	40.0	34.0	46.0	✓
Arsenic	ug/L	40.8	40.0	34.0	46.0	✓
Barium	ug/L	198	200	170	230	✓
Beryllium	ug/L	20.4	20.0	17.0	23.0	✓
Bismuth	ug/L	109	100	85	115	✓
Boron	ug/L	368	400	340	460	✓
Cadmium	ug/L	1.82	2.00	1.70	2.30	✓
Chromium	ug/L	100	100	85	115	✓
Cobalt	ug/L	20.2	20.0	17.0	23.0	✓
Copper	ug/L	194	200	170	230	✓
Lead	ug/L	20.7	20.0	17.0	23.0	✓
Lithium	ug/L	180	200	170	230	✓
Molybdenum	ug/L	202	200	170	230	✓
Nickel	ug/L	94.9	100	85	115	✓
Selenium	ug/L	40.6	40.0	34.0	46.0	✓
Silver	ug/L	21.9	20.0	17.0	23.0	✓
Strontium	ug/L	200	200	170	230	✓
Thallium	ug/L	10.9	10.0	8.5	11.5	✓
Tin	ug/L	193	200	170	230	✓
Titanium	ug/L	94.7	100	85	115	✓
Uranium	ug/L	106	100	85	115	✓
Vanadium	ug/L	18.1	20.0	17.0	23.0	✓
Zinc	ug/L	193	200	170	230	✓
Zirconium	ug/L	193	200	170	230	✓

Material Used: Metals Low
Date Acquired: Oct 29, 2004
Acquired By: To Thong

NORWEST LABS

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7217 Roper Road NW
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Phone: (780) 438-5522
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Quality Control

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By:
Company:

Project
ID:
Name:
Location:
LSD:
P.O.:
Acct. Code: L48906

NWL Lot ID: **342827**
Control Number:
Date Received: Oct 28, 2004
Date Reported: Nov 02, 2004
Report Number: 619322

Metals Total (Continued...)

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Aluminum	ug/L	54	50	43	58	✓
Antimony	ug/L	2.1	2.0	1.7	2.3	✓
Arsenic	ug/L	2.1	2.0	1.7	2.3	✓
Barium	ug/L	11	10	9	12	✓
Beryllium	ug/L	1.1	1.0	0.9	1.2	✓
Bismuth	ug/L	5.2	5.0	4.3	5.8	✓
Boron	ug/L	20	20	17	23	✓
Cadmium	ug/L	0.09	0.10	0.09	0.12	✓
Chromium	ug/L	5.5	5.0	4.3	5.8	✓
Cobalt	ug/L	1.1	1.0	0.9	1.2	✓
Copper	ug/L	11	10	9	12	✓
Lead	ug/L	1.1	1.0	0.9	1.2	✓
Lithium	ug/L	10	10	9	12	✓
Molybdenum	ug/L	11	10	9	12	✓
Nickel	ug/L	5.1	5.0	4.3	5.8	✓
Selenium	ug/L	2.1	2.0	1.7	2.3	✓
Silver	ug/L	1.0	1.0	0.9	1.2	✓
Strontium	ug/L	11	10	9	12	✓
Thallium	ug/L	0.54	0.50	0.43	0.58	✓
Tin	ug/L	10	10	9	12	✓
Titanium	ug/L	5.3	5.0	4.3	5.8	✓
Uranium	ug/L	5.0	5.0	4.3	5.8	✓
Vanadium	ug/L	1.1	1.0	0.9	1.2	✓
Zinc	ug/L	11	10	9	12	✓
Zirconium	ug/L	10	10	9	12	✓

Material Used: Metals Trace
Date Acquired: Oct 29, 2004
Acquired By: To Thong

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Quality Control

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By:
Company:

Project
ID:
Name:
Location:
LSD:
P.O.:
Acct. Code: L48906

NWL Lot ID: 342827
Control Number:
Date Received: Oct 28, 2004
Date Reported: Nov 02, 2004
Report Number: 619322

Physical and Aggregate Properties

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
Solids	mg/L	241	233	10	15	✓
Material Used:	Edmonton Duplicate					
Date Acquired:	Nov 01, 2004					
Acquired By:	Sheila Nelson					

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Solids	mg/L	203	200	180	220	✓
Material Used:	Water High					
Date Acquired:	Nov 01, 2004					
Acquired By:	Sheila Nelson					
Solids	mg/L	21	20	18	22	✓
Material Used:	Water Low					
Date Acquired:	Nov 01, 2004					
Acquired By:	Sheila Nelson					

Routine Water

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
pH		7.86	7.85	9.99	0.10	✓
Electrical Conductivity	dS/m at 25 C	0.595	0.591	9.990	0.002	✓
Material Used:	Edmonton Duplicate					
Date Acquired:	Oct 29, 2004					
Acquired By:	Amanda Mitchell					

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
pH		9.23	9.23	9.11	9.35	✓
Electrical Conductivity	dS/m at 25 C	2.76	2.73	2.61	2.85	✓
Material Used:	Water High					
Date Acquired:	Oct 29, 2004					
Acquired By:	Amanda Mitchell					
pH		6.84	6.90	6.83	6.97	✓
Electrical Conductivity	dS/m at 25 C	0.075	0.076	0.070	0.081	✓
Material Used:	Water Low					
Date Acquired:	Oct 29, 2004					
Acquired By:	Amanda Mitchell					

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Methodology and Notes

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Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By:
Company:

Project ID:
Name:
Location:
LSD:
P.O.:
Acct. Code: L48906

NWL Lot ID: **342827**
Control Number:
Date Received: Oct 28, 2004
Date Reported: Nov 02, 2004
Report Number: 619322

Method of Analysis:

MethodName	Reference		Method	Date Analysis Started	Location
Alkalinity, pH, and EC in water	APHA	*	Conductivity - Laboratory Method, 2510 B	29-Oct-04	Norwest Labs Edmonton
Alkalinity, pH, and EC in water	APHA	*	Electrometric Method, 4500-H+ B	29-Oct-04	Norwest Labs Edmonton
Fecal Coliforms - MF	APHA		Fecal Coliform Membrane Filter Procedure, 9222 D	29-Oct-04	Norwest Labs Calgary
Mercury (Total) in water	MDMES	*	Determination of Mercury in Water by Cold Vapor Atomic Absor, 245.1	29-Oct-04	Norwest Labs Edmonton
Metals ICP-MS (Total) in water	US EPA	*	Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	1-Nov-04	Norwest Labs Edmonton
Metals Trace (Total) in water	APHA	*	Inductively Coupled Plasma (ICP) Method, 3120 B	1-Nov-04	Norwest Labs Edmonton
Solids Suspended (Total, Fixed and Volatile)	APHA	*	Total Suspended Solids Dried at 103-105'C, 2540 D	2-Nov-04	Norwest Labs Edmonton
Total Coliforms - MF	APHA		Standard Total Coliform Membrane Filter Procedure, 9222 B	29-Oct-04	Norwest Labs Calgary

* Norwest method(s) is based on reference method

References:

APHA	Standard Methods for the Examination of Water and Wastewater
MDMES	Mthds for the Determination of Metals in Enviromental Smpls
US EPA	US Environmental Protection Agency Test Methods

Comments:

Sample 1 Insufficient sample volume to reach TSS detection limit of 1mg/L. SP Nov 2/04.

Analytical Report

Norwest Labs
7217 Roper Road
Edmonton, AB. T6B 3J4
Phone: (780) 438-5522
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Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: Greg Budge
Company: Echo Bay Mines Ltd

Project ID:
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **317711**
Control Number:
Date Received: Jun 30, 2004
Date Reported: Jul 13, 2004
Report Number: 571013

NWL Number	317711-1
Sample Date	Jun 29, 2004
Sample Description	34-lower lagoon
Matrix	Water - General

Analyte		Units	Results	Results	Results	Detection Limit
Aggregate Organic Constituents						
Biochemical Oxygen Demand	5 Day	mg/L	<4			4
Inorganic Nonmetallic Parameters						
Ammonium - N		mg/L	0.30			0.05
Kjeldahl Nitrogen	Total	mg/L	1.62			0.05
Phosphorus	Total	mg/L	0.14			0.05
Orthophosphate-P	Dissolved	mg/L	<0.05			0.05
Microbiological Analysis						
Total Coliforms	Membrane Filtration	CFU/100 mL	500			1
Fecal Coliforms	Membrane Filtration	CFU/100 mL	<1			1

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Analytical Report

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: Greg Budge
Company: Echo Bay Mines Ltd

Project ID:
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 317711
Control Number:
Date Received: Jun 30, 2004
Date Reported: Jul 13, 2004
Report Number: 571013

			NWL Number	317711-1	317711-2	317711-3	
			Sample Date	Jun 29, 2004	Jun 29, 2004	Jun 29, 2004	
			Sample Description	34-lower lagoon	35-Tails Box	36-Oc8-Pit	
			Matrix	Water - General	Water - General	Water - General	
Analyte		**Units**		**Results**	**Results**	**Results**	**Detection Limit**
Metals Total							
Calcium	Total	mg/L		81.1	968	13.2	0.2
Iron	Total	mg/L		1.2	11600	0.2	0.1
Magnesium	Total	mg/L		7.0	977	4.9	0.1
Manganese	Total	mg/L		0.228	18.1	0.091	0.005
Potassium	Total	mg/L		5.1	110	1.7	0.4
Silicon	Total	mg/L		0.66	620	1.37	0.05
Sodium	Total	mg/L		91.0	420	1.3	0.4
Sulphur	Total	mg/L		21.8	1440	17.0	0.05
Mercury	Total	mg/L		-	<0.0002	<0.0002	0.0002
Aluminum	Total	mg/L		-	2330	0.158	0.005
Antimony	Total	mg/L		-	<0.05	<0.0002	0.0002
Arsenic	Total	mg/L		0.0112	1230	0.0073	0.0002
Barium	Total	mg/L		-	23.8	0.008	0.001
Beryllium	Total	mg/L		-	0.046	0.0003	0.0001
Bismuth	Total	mg/L		-	<0.1	<0.0005	0.0005
Boron	Total	mg/L		-	0.56	0.011	0.002
Cadmium	Total	mg/L		-	0.013	0.00040	0.00001
Chromium	Total	mg/L		-	6.72	<0.0005	0.0005
Cobalt	Total	mg/L		-	1.69	0.0362	0.0001
Copper	Total	mg/L		-	12.0	0.024	0.001
Lead	Total	mg/L		-	31.7	0.0016	0.0001
Lithium	Total	mg/L		-	5.88	0.005	0.001
Molybdenum	Total	mg/L		-	0.46	<0.001	0.001
Nickel	Total	mg/L		-	5.99	0.134	0.0005
Selenium	Total	mg/L		-	<0.05	<0.0002	0.0002
Silver	Total	mg/L		-	<0.02	0.0003	0.0001
Strontium	Total	mg/L		-	15.8	0.034	0.001
Thallium	Total	mg/L		-	0.026	<0.00005	0.00005
Tin	Total	mg/L		-	<0.2	<0.001	0.001
Titanium	Total	mg/L		-	53.9	0.0036	0.0005
Uranium	Total	mg/L		-	0.16	<0.0005	0.0005
Vanadium	Total	mg/L		-	4.26	0.0004	0.0001
Zinc	Total	mg/L		-	46.4	0.103	0.001
Zirconium	Total	mg/L		-	0.32	<0.001	0.001
Routine Water							

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Fax: (780) 438-0396

Analytical Report

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: Greg Budge
Company: Echo Bay Mines Ltd

Project ID:
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 317711
Control Number:
Date Received: Jun 30, 2004
Date Reported: Jul 13, 2004
Report Number: 571013

			NWL Number	317711-1	317711-2	317711-3	
			Sample Date	Jun 29, 2004	Jun 29, 2004	Jun 29, 2004	
			Sample Description	34-lower lagoon	35-Tails Box	36-Oc8-Pit	
			Matrix	Water - General	Water - General	Water - General	
Analyte		**Units**		**Results**	**Results**	**Results**	**Detection Limit**
Routine Water - Continued							
pH	Water	pH		7.0	-	-	0.1
pH				-	-	6.31	
Electrical Conductivity		µS/cm at 25C		1010	-	136	1
Calcium	Dissolved	mg/L		81.1	212	13.2	0.2
Magnesium	Dissolved	mg/L		7.0	4.7	4.9	0.1
Sodium	Dissolved	mg/L		-	372	1.3	0.4
Potassium	Dissolved	mg/L		-	28.0	1.6	0.4
Iron	Dissolved	mg/L		-	16.0	0.01	0.01
Manganese	Dissolved	mg/L		-	<0.02	0.089	0.005
Nitrate - N		mg/L		3.8	-	<0.1	0.1
Nitrite - N		mg/L		0.05	-	<0.05	0.05
Sulphate (SO4)	Dissolved	mg/L		-	-	51.2	0.2
Hydroxide		mg/L		<5	-	<5	5
Carbonate		mg/L		<6	-	<6	6
Bicarbonate		mg/L		18	-	<5	5
P-Alkalinity	as CaCO3	mg/L		<5	-	<5	5
T-Alkalinity	as CaCO3	mg/L		15	-	<5	5
Hardness	Dissolved as CaCO3	mg/L		231	-	53.0	

			NWL Number	317711-1	317711-3	317711-4	
			Sample Date	Jun 29, 2004	Jun 29, 2004	Jun 29, 2004	
			Sample Description	34-lower lagoon	36-Oc8-Pit	37-PG-Lake#1	
			Matrix	Water - General	Water - General	Water - General	
Analyte		**Units**		**Results**	**Results**	**Results**	**Detection Limit**
Physical and Aggregate Properties							
Turbidity		NTU		4.0	-	-	0.1
Temp. of observed pH and EC		°C		-	20.0	19.7	
Solids	Total Suspended	mg/L		9	-	-	1

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Methodology and Notes

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: Greg Budge
Company: Echo Bay Mines Ltd

Project ID:
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **317711**
Control Number:
Date Received: Jun 30, 2004
Date Reported: Jul 13, 2004
Report Number: 571013

Method of Analysis:

MethodName	Reference		Method	Date Analysis Started	Location
(Ortho)Phosphate in Water	APHA	*	Automated Ascorbic Acid Reduction Method, 4500-P F	13-Jul-04	Norwest Labs Edmonton
Alkalinity, pH, and EC in water	APHA	*	Conductivity - Laboratory Method, 2510 B	5-Jul-04	Norwest Labs Edmonton
Alkalinity, pH, and EC in water	APHA	*	Electrometric Method, 4500-H+ B	5-Jul-04	Norwest Labs Edmonton
Alkalinity, pH, and EC in water	APHA	*	Titration Method, 2320 B	5-Jul-04	Norwest Labs Edmonton
Ammonium in Water	APHA	*	Automated Phenate Method, 4500-NH3 G	6-Jul-04	Norwest Labs Edmonton
Anions (Routine) by Ion Chromatography	APHA		Ion Chromatography with Chemical Suppression of Eluent Cond., 4110 B	5-Jul-04	Norwest Labs Edmonton
Anions (Routine) by Ion Chromatography	APHA		Ion Chromatography with Chemical Suppression of Eluent Cond., 4110 B	13-Jul-04	Norwest Labs Edmonton
BOD in water	APHA	*	5 Day, 5210 B	5-Jul-04	Norwest Labs Surrey
Fecal Coliforms - MF	APHA		Fecal Coliform Membrane Filter Procedure, 9222 D	3-Jul-04	Norwest Labs Calgary
Kjeldahl Nitrogen & Phosphorus (Total) in Water	Alberta Research Council	*	Nitrogen, Total Kjeldahl, 07021 626	5-Jul-04	Norwest Labs Edmonton
Kjeldahl Nitrogen & Phosphorus (Total) in Water	APHA	*	Automated Ascorbic Acid Reduction Method, 4500-P F	5-Jul-04	Norwest Labs Edmonton
Mercury (Total) in water	MDMES	*	Determination of Mercury in Water by Cold Vapor Atomic Absor, 245.1	5-Jul-04	Norwest Labs Edmonton
Mercury (Total) in water	MDMES	*	Determination of Mercury in Water by Cold Vapor Atomic Absor, 245.1	6-Jul-04	Norwest Labs Edmonton
Metals ICP-MS (Dissolved) in water	US EPA	*	Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	6-Jul-04	Norwest Labs Edmonton
Metals ICP-MS (Dissolved) in water	US EPA	*	Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	6-Jul-04	Norwest Labs Edmonton
Metals ICP-MS (Total) in water	US EPA	*	Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	2-Jul-04	Norwest Labs Edmonton
Metals ICP-MS (Total) in water	US EPA	*	Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	2-Jul-04	Norwest Labs Edmonton
Metals ICP-MS (Total) in water	US EPA	*	Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	13-Jul-04	Norwest Labs Edmonton
Metals Trace (Dissolved) in water	APHA	*	Inductively Coupled Plasma (ICP) Method, 3120 B	6-Jul-04	Norwest Labs Edmonton

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Results relate only to samples as submitted

Norwest Labs
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Methodology and Notes

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: Greg Budge
Company: Echo Bay Mines Ltd

Project ID:
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **317711**
Control Number:
Date Received: Jun 30, 2004
Date Reported: Jul 13, 2004
Report Number: 571013

Metals Trace (Dissolved) in water	APHA	*	Inductively Coupled Plasma (ICP) Method, 3120 B	6-Jul-04	Norwest Labs Edmonton
Metals Trace (Total) in water	APHA	*	Inductively Coupled Plasma (ICP) Method, 3120 B	2-Jul-04	Norwest Labs Edmonton
pH in water	APHA	*	Electrometric Method, 4500-H+ B	7-Jul-04	Norwest Labs Surrey
Solids Suspended (Total, Fixed and Volatile)	APHA	*	Total Suspended Solids Dried at 103-105'C, 2540 D	6-Jul-04	Norwest Labs Edmonton
Solids Suspended (Total, Fixed and Volatile)	APHA	*	Total Suspended Solids Dried at 103-105'C, 2540 D	7-Jul-04	Norwest Labs Surrey
Total Coliforms - MF	APHA		Standard Total Coliform Membrane Filter Procedure, 9222 B	3-Jul-04	Norwest Labs Calgary
Turbidity in Water	APHA	*	Nephelometric Method, 2130 B	2-Jul-04	Norwest Labs Edmonton

* Norwest method(s) is based on reference method

References:

Alberta Research Council	Methods Manual for Chemical Analysis of Water and Wastes
APHA	Standard Methods for the Examination of Water and Wastewater
MDMES	Mthds for the Determination of Metals in Enviromental Smpls
US EPA	US Environmental Protection Agency Test Methods

Comments:

Received after 5pm on Wed, tat starts today 02/07/06 AG
Report # 571013 is supplementary to report # 567951 and includes repeated arsenic, additional nitrate and nitrite on sample 1 as per Michael Tansey. llg 04/07/12

Sample	3	Insufficient sample to complete TSS. DL July 7 04.
	4	Insufficient sample to complete TSS. DL July 7 04.
	5	Insufficient sample to complete TSS. DL July 7 04.
	6	A detection limit of 1 mg/L could not be obtained because of insufficient sample volume. July 6/04 AR
	7	A detection limit of 1 mg/L could not be obtained because of insufficient sample volume. July 6/04 AR
	9	A detection limit of 1 mg/L could not be obtained because of insufficient sample volume. July 6/04 AR
	11	A detection limit of 1 mg/L could not be obtained because of insufficient sample volume. July 6/04 AR
	15	A detection limit of 1 mg/L could not be obtained because of insufficient sample volume. July 6/04 AR

Analytical Report

Norwest Labs
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Phone: (780) 438-5522
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Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: M. Tansey
Company: Echo Bay Mines

Project ID: Requsition No. L48906
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **324234**
Control Number:
Date Received: Aug 04, 2004
Date Reported: Aug 12, 2004
Report Number: 579709

NWL Number	324234-1
Sample Date	Aug 04, 2004
Sample Description	40028 / 925-14
Matrix	Water - General

Analyte		Units	Results	Results	Results	Detection Limit
Aggregate Organic Constituents						
Biochemical Oxygen Demand	5 Day	mg/L	<4			4
Inorganic Nonmetallic Parameters						
Ammonium - N		mg/L	0.17			0.05
Kjeldahl Nitrogen	Total	mg/L	1.14			0.05
Phosphorus	Total	mg/L	0.14			0.05
Orthophosphate-P	Dissolved	mg/L	<0.05			0.05
Metals Total						
Calcium	Total	mg/L	126			0.2
Iron	Total	mg/L	0.2			0.1
Magnesium	Total	mg/L	11.4			0.1
Manganese	Total	mg/L	0.251			0.005
Potassium	Total	mg/L	8.7			0.4
Silicon	Total	mg/L	0.17			0.05
Sodium	Total	mg/L	154			0.4
Sulphur	Total	mg/L	34.9			0.05
Aluminum	Total	mg/L	0.069			0.005
Antimony	Total	mg/L	0.0005			0.0002
Arsenic	Total	mg/L	0.0118			0.0002
Barium	Total	mg/L	0.038			0.001
Beryllium	Total	mg/L	<0.0001			0.0001
Bismuth	Total	mg/L	<0.0005			0.0005
Boron	Total	mg/L	0.057			0.002
Cadmium	Total	mg/L	0.00009			0.00001
Chromium	Total	mg/L	<0.0005			0.0005
Cobalt	Total	mg/L	0.0094			0.0001
Copper	Total	mg/L	0.005			0.001
Lead	Total	mg/L	0.0003			0.0001
Lithium	Total	mg/L	0.499			0.001
Molybdenum	Total	mg/L	0.002			0.001
Nickel	Total	mg/L	0.0193			0.0005
Selenium	Total	mg/L	<0.0002			0.0002
Silver	Total	mg/L	0.0002			0.0001
Strontium	Total	mg/L	2.55			0.001
Thallium	Total	mg/L	<0.00005			0.00005
Tin	Total	mg/L	<0.001			0.001

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Analytical Report

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: M. Tansey
Company: Echo Bay Mines

Project ID: Requsition No. L48906
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 324234
Control Number:
Date Received: Aug 04, 2004
Date Reported: Aug 12, 2004
Report Number: 579709

NWL Number	324234-1
Sample Date	Aug 04, 2004
Sample Description	40028 / 925-14
Matrix	Water - General

Analyte		Units	Results	Results	Results	Detection Limit
Metals Total - Continued						
Titanium	Total	mg/L	0.0033			0.0005
Uranium	Total	mg/L	<0.0005			0.0005
Vanadium	Total	mg/L	<0.0001			0.0001
Zinc	Total	mg/L	0.056			0.001
Zirconium	Total	mg/L	<0.001			0.001
Microbiological Analysis						
Total Coliforms	Membrane Filtration	CFU/100 mL	100			1
Fecal Coliforms	Membrane Filtration	CFU/100 mL	24			1
Physical and Aggregate Properties						
Solids	Total Suspended	mg/L	<2			1
Routine Water						
pH	Water	pH	7.2			
Electrical Conductivity		µS/cm at 25 C	1580			1
Calcium	Dissolved	mg/L	124			0.2
Magnesium	Dissolved	mg/L	11.4			0.1
Nitrate - N		mg/L	5.6			0.1
Nitrite - N		mg/L	<0.05			0.05
Hydroxide		mg/L	<5			5
Carbonate		mg/L	<6			6
Bicarbonate		mg/L	17			5
P-Alkalinity	as CaCO3	mg/L	<5			5
T-Alkalinity	as CaCO3	mg/L	14			5
Hardness	Dissolved as CaCO3	mg/L	358			

Approved by:

Randy Neumann, BSc
Vice President, Environmental

Norwest Labs
7217 Roper Road
Edmonton, AB. T6B 3J4
Phone: (780) 438-5522
Fax: (780) 438-0396

Methodology and Notes

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: M. Tansey
Company: Echo Bay Mines

Project ID: Requsition No. L48906
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **324234**
Control Number:
Date Received: Aug 04, 2004
Date Reported: Aug 12, 2004
Report Number: 579709

Method of Analysis:

MethodName	Reference		Method	Date Analysis Started	Location
Alkalinity, pH, and EC in water	APHA	*	Conductivity - Laboratory Method, 2510 B	5-Aug-04	Norwest Labs Edmonton
Alkalinity, pH, and EC in water	APHA	*	Titration Method, 2320 B	5-Aug-04	Norwest Labs Edmonton
Ammonium-N in Water	APHA	*	Automated Phenate Method, 4500-NH3 G	11-Aug-04	Norwest Labs Edmonton
Anions (Routine) by Ion Chromatography	APHA		Ion Chromatography with Chemical Suppression of Eluent Cond., 4110 B	6-Aug-04	Norwest Labs Edmonton
BOD in water	APHA	*	5 Day, 5210 B	6-Aug-04	Norwest Labs Surrey
Fecal Coliforms - MF	APHA		Fecal Coliform Membrane Filter Procedure, 9222 D	6-Aug-04	Norwest Labs Calgary
Kjeldahl Nitrogen & Phosphorus (Total) in Water	Alberta Research Council	*	Nitrogen, Total Kjeldahl, 07021 626	5-Aug-04	Norwest Labs Edmonton
Kjeldahl Nitrogen & Phosphorus (Total) in Water	APHA	*	Automated Ascorbic Acid Reduction Method, 4500-P F	5-Aug-04	Norwest Labs Edmonton
Metals ICP-MS (Total) in water	US EPA	*	Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	5-Aug-04	Norwest Labs Edmonton
Metals Trace (Dissolved) in water	APHA	*	Inductively Coupled Plasma (ICP) Method, 3120 B	5-Aug-04	Norwest Labs Edmonton
Metals Trace (Total) in water	APHA	*	Inductively Coupled Plasma (ICP) Method, 3120 B	5-Aug-04	Norwest Labs Edmonton
Orthophosphate-P in Water	APHA	*	Automated Ascorbic Acid Reduction Method, 4500-P F	11-Aug-04	Norwest Labs Edmonton
pH in water	APHA	*	Electrometric Method, 4500-H+ B	12-Aug-04	Norwest Labs Surrey
Solids Suspended (Total, Fixed and Volatile)	APHA	*	Total Suspended Solids Dried at 103-105'C, 2540 D	9-Aug-04	Norwest Labs Surrey
Total Coliforms - MF	APHA		Standard Total Coliform Membrane Filter Procedure, 9222 B	6-Aug-04	Norwest Labs Calgary

* Norwest method(s) is based on reference method

References:

Alberta Research Council	Methods Manual for Chemical Analysis of Water and Wastes
APHA	Standard Methods for the Examination of Water and Wastewater
US EPA	US Environmental Protection Agency Test Methods

Comments:

Please direct any inquiries regarding this report to our Client Services group.
Results relate only to samples as submitted

Norwest Labs
7217 Roper Road
Edmonton, AB. T6B 3J4
Phone: (780) 438-5522
Fax: (780) 438-0396

Methodology and Notes

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: M. Tansey
Company: Echo Bay Mines

Project ID: Requsition No. L48906
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **324234**
Control Number:
Date Received: Aug 04, 2004
Date Reported: Aug 12, 2004
Report Number: 579709

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Analytical Report

Norwest Labs
7217 Roper Road
Edmonton, AB. T6B 3J4
Phone: (780) 438-5522
Fax: (780) 438-0396

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: B. Lowe
Company:

Project ID: Req. #: L48906
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **330035**
Control Number:
Date Received: Sep 01, 2004
Date Reported: Sep 09, 2004
Report Number: 590723

NWL Number 330035-1
Sample Date Sep 01, 2004
Sample Description 925-14 / Log # 40049
Matrix Water - General

Analyte		Units	Results	Results	Results	Detection Limit
Aggregate Organic Constituents						
Biochemical Oxygen Demand	5 Day	mg/L	5			4
Inorganic Nonmetallic Parameters						
Ammonium - N		mg/L	0.09			0.05
Kjeldahl Nitrogen	Total	mg/L	0.97			0.05
Phosphorus	Total	mg/L	0.10			0.05
Orthophosphate-P	Dissolved	mg/L	<0.05			0.05
Metals Total						
Calcium	Total	mg/L	172			0.2
Iron	Total	mg/L	<0.5			0.1
Magnesium	Total	mg/L	13.6			0.1
Manganese	Total	mg/L	0.284			0.005
Potassium	Total	mg/L	12			0.4
Silicon	Total	mg/L	<0.2			0.05
Sodium	Total	mg/L	720			0.4
Sulphur	Total	mg/L	48.1			0.05
Aluminum	Total	mg/L	0.058			0.005
Antimony	Total	mg/L	<0.001			0.0002
Arsenic	Total	mg/L	0.0166			0.0002
Barium	Total	mg/L	0.051			0.001
Beryllium	Total	mg/L	<0.0005			0.0001
Bismuth	Total	mg/L	<0.002			0.0005
Boron	Total	mg/L	0.130			0.002
Cadmium	Total	mg/L	0.00008			0.00001
Chromium	Total	mg/L	0.0039			0.0005
Cobalt	Total	mg/L	0.0095			0.0001
Copper	Total	mg/L	0.005			0.001
Lead	Total	mg/L	0.0005			0.0001
Lithium	Total	mg/L	0.886			0.001
Molybdenum	Total	mg/L	<0.005			0.001
Nickel	Total	mg/L	0.025			0.0005
Selenium	Total	mg/L	<0.0010			0.0002
Silver	Total	mg/L	<0.0005			0.0001
Strontium	Total	mg/L	3.25			0.001
Thallium	Total	mg/L	<0.0002			0.00005
Tin	Total	mg/L	<0.005			0.001

Norwest Labs
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Analytical Report

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: B. Lowe
Company:

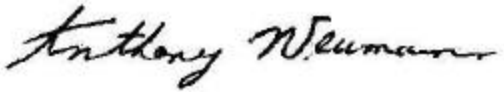
Project ID: Req. #: L48906
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 330035
Control Number:
Date Received: Sep 01, 2004
Date Reported: Sep 09, 2004
Report Number: 590723

NWL Number	330035-1
Sample Date	Sep 01, 2004
Sample Description	925-14 / Log # 40049
Matrix	Water - General

Analyte		Units	Results	Results	Results	Detection Limit
Metals Total - Continued						
Titanium	Total	mg/L	0.0055			0.0005
Uranium	Total	mg/L	<0.002			0.0005
Vanadium	Total	mg/L	<0.0005			0.0001
Zinc	Total	mg/L	0.039			0.001
Zirconium	Total	mg/L	<0.005			0.001
Microbiological Analysis						
Total Coliforms	Membrane Filtration	CFU/100 mL	28			1
Fecal Coliforms	Membrane Filtration	CFU/100 mL	<1			1
Physical and Aggregate Properties						
Solids	Total Suspended	mg/L	<2			1
Routine Water						
pH	Water	pH	7.1			
Electrical Conductivity		µS/cm at 25 C	2000			1
Calcium	Dissolved	mg/L	174			0.2
Magnesium	Dissolved	mg/L	13.9			0.1
Nitrate - N		mg/L	7.6			0.1
Nitrite - N		mg/L	<1			0.05
Hydroxide		mg/L	<5			5
Carbonate		mg/L	<6			6
Bicarbonate		mg/L	14			5
P-Alkalinity	as CaCO3	mg/L	<5			5
T-Alkalinity	as CaCO3	mg/L	12			5
Hardness	Dissolved as CaCO3	mg/L	492			

Approved by:



Anthony Neumann, MSc
Laboratory Operations Manager

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Fax: (780) 438-0396

Quality Control

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: B. Lowe
Company:

Project
ID: Req. #: L48906
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **330035**
Control Number:
Date Received: Sep 01, 2004
Date Reported: Sep 09, 2004
Report Number: 590723

Aggregate Organic Constituents

Blanks	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Biochemical Oxygen Demand	mg/L	<4	0	-2	2	✓
Material Used:	BOD - Blank					
Date Acquired:	Sep 02, 2004					
Acquired By:	Virginia Thomson					

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
Biochemical Oxygen Demand	mg/L	39	36	30	8	✓
Material Used:	Surrey - Int. Duplicate					
Date Acquired:	Sep 02, 2004					
Acquired By:	Virginia Thomson					

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Biochemical Oxygen Demand	mg/L	198	180	129	231	✓
Material Used:	BOD - G/GA					
Date Acquired:	Sep 02, 2004					
Acquired By:	Virginia Thomson					

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Quality Control

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9818 International Airport
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T5J2T2
Attn: Michael Tansey
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NWL Lot ID: **330035**
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Inorganic Nonmetallic Parameters

Blanks	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Ammonium - N	mg/L	<0.05	0.00	-0.08	0.08	✓
Kjeldahl Nitrogen	mg/L	<0.05	0.00	-0.05	0.05	✓
Phosphorus	mg/L	<0.05	0.00	-0.05	0.05	✓
Orthophosphate-P	mg/L	<0.05	0.00	-0.05	0.05	✓
Material Used:	Edmonton Method Blank					
Date Acquired:	Sep 09, 2004					
Acquired By:	Andrew Jong					

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
Ammonium - N	mg/L	11.7	11.9	9.99	0.10	✓
Kjeldahl Nitrogen	mg/L	17.0	17.2	9.99	0.30	✓
Phosphorus	mg/L	3.17	3.28	9.99	0.05	✓
Orthophosphate-P	mg/L	3.19	3.10	9.99	0.05	✓
Material Used:	Edmonton Duplicate					
Date Acquired:	Sep 09, 2004					
Acquired By:	Andrew Jong					

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Ammonium - N	mg/L	2.96	2.99	2.59	3.39	✓
Kjeldahl Nitrogen	mg/L	15.4	15.3	11.7	18.9	✓
Phosphorus	mg/L	8.22	8.00	7.20	8.80	✓
Material Used:	Water High					
Date Acquired:	Sep 09, 2004					
Acquired By:	Linda Li					
Ammonium - N	mg/L	0.79	0.79	0.66	0.91	✓
Orthophosphate-P	mg/L	0.40	0.41	0.36	0.47	✓
Material Used:	Water Low					
Date Acquired:	Sep 09, 2004					
Acquired By:	Andrew Jong					

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Quality Control

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9818 International Airport
Edmonton, AB, Canada
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Attn: Michael Tansey
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NWL Lot ID: **330035**
Control Number:
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Metals Total

Blanks	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Calcium	mg/L	<0.2	0.0	0.0	0.1	✓
Iron	mg/L	<0.1	0.0	0.0	0.0	✓
Magnesium	mg/L	<0.1	0.0	0.0	0.0	✓
Manganese	mg/L	<0.005	0.000	-0.001	0.001	✓
Potassium	mg/L	<0.4	0.0	-0.1	0.1	✓
Silicon	mg/L	<0.05	0.02	-0.04	0.09	✓
Sodium	mg/L	<0.4	0.1	-0.2	0.3	✓
Sulphur	mg/L	<0.05	0.01	-0.03	0.04	✓
Aluminum	ug/L	<5	0	-5	5	✓
Antimony	ug/L	<0.2	0.0	-0.2	0.2	✓
Arsenic	ug/L	<0.2	0.0	-0.2	0.2	✓
Barium	ug/L	<1	0	-1	1	✓
Beryllium	ug/L	<0.1	0.0	-0.1	0.1	✓
Bismuth	ug/L	<0.5	0.0	-0.5	0.5	✓
Boron	ug/L	<2	0	-2	2	✓
Cadmium	ug/L	<0.01	0.00	-0.01	0.01	✓
Chromium	ug/L	<0.5	0.0	-0.5	0.5	✓
Cobalt	ug/L	<0.1	0.0	-0.1	0.1	✓
Copper	ug/L	<1	0	-1	1	✓
Lead	ug/L	<0.1	0.0	-0.1	0.1	✓
Lithium	ug/L	<1	0	-1	1	✓
Molybdenum	ug/L	<1	0	-1	1	✓
Nickel	ug/L	<0.5	0.0	-0.5	0.5	✓
Selenium	ug/L	<0.2	0.0	-0.2	0.2	✓
Silver	ug/L	<0.1	0.0	-0.1	0.1	✓
Strontium	ug/L	<1	0	-1	1	✓
Thallium	ug/L	<0.05	0.00	-0.05	0.05	✓
Tin	ug/L	<1	0	-1	1	✓
Titanium	ug/L	<0.5	0.0	-0.5	0.5	✓
Uranium	ug/L	<0.5	0.0	-0.5	0.5	✓
Vanadium	ug/L	<0.1	0.0	-0.1	0.1	✓
Zinc	ug/L	<1	0	-1	1	✓
Zirconium	ug/L	<1	0	-1	1	✓

Material Used: Edmonton Method Blank
Date Acquired: Sep 02, 2004
Acquired By: Jesse Dang

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Quality Control

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9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: B. Lowe
Company:

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ID: Req. #: L48906
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NWL Lot ID: **330035**
Control Number:
Date Received: Sep 01, 2004
Date Reported: Sep 09, 2004
Report Number: 590723

Metals Total (Continued...)

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
Iron	mg/L	0.2	0.2	10.0	0.0	✓
Manganese	mg/L	0.148	0.148	9.990	0.001	✓
Silicon	mg/L	3.21	3.14	9.99	0.01	✓
Sulphur	mg/L	238	241	9.99	0.03	✓
Aluminum	ug/L	19	19	10	11	✓
Arsenic	ug/L	0.8	0.9	10.0	0.4	✓
Cadmium	ug/L	0.27	0.27	9.99	0.02	✓
Chromium	ug/L	<0.5	<0.5	10.0	1.1	✓
Copper	ug/L	3	3	10	2	✓
Lead	ug/L	<0.1	<0.1	10.0	0.2	✓
Nickel	ug/L	12.3	12.8	10.0	1.1	✓
Selenium	ug/L	14.2	14.6	10.0	0.4	✓
Silver	ug/L	<0.1	<0.1	10.0	0.2	✓
Zinc	ug/L	19	20	10	2	✓

Material Used: Edmonton Duplicate
Date Acquired: Sep 02, 2004
Acquired By: Jesse Dang

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Quality Control

Bill to: Echo Bay Mines Ltd.
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9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: B. Lowe
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NWL Lot ID: **330035**
Control Number:
Date Received: Sep 01, 2004
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Report Number: 590723

Metals Total (Continued...)

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Calcium	mg/L	48.4	49.6	45.6	53.7	✓
Iron	mg/L	2.0	2.0	1.8	2.2	✓
Magnesium	mg/L	20.0	20.3	18.6	22.0	✓
Manganese	mg/L	0.484	0.479	0.451	0.507	✓
Potassium	mg/L	47.9	47.8	43.5	52.1	✓
Silicon	mg/L	4.50	5.00	4.50	5.50	✓
Sodium	mg/L	48.8	49.1	44.4	53.8	✓
Sulphur	mg/L	8.95	9.68	8.74	10.62	✓
Aluminum	ug/L	344	322	273	371	✓
Antimony	ug/L	11.1	11.5	10.2	12.8	✓
Arsenic	ug/L	10.7	11.5	10.3	12.7	✓
Barium	ug/L	65	61	52	69	✓
Beryllium	ug/L	5.5	5.9	4.9	7.0	✓
Bismuth	ug/L	29.2	30.2	26.0	34.4	✓
Boron	ug/L	123	125	102	148	✓
Cadmium	ug/L	0.73	0.63	0.47	0.78	✓
Chromium	ug/L	35.2	31.8	27.5	36.2	✓
Cobalt	ug/L	6.8	6.4	5.4	7.5	✓
Copper	ug/L	63	63	55	70	✓
Lead	ug/L	6.2	6.2	5.4	7.0	✓
Lithium	ug/L	70	65	53	76	✓
Molybdenum	ug/L	61	61	53	69	✓
Nickel	ug/L	32.4	31.4	27.0	35.8	✓
Selenium	ug/L	10.0	11.0	9.7	12.3	✓
Silver	ug/L	6.1	6.2	5.5	7.0	✓
Strontium	ug/L	60	64	55	72	✓
Thallium	ug/L	3.07	3.14	2.56	3.72	✓
Tin	ug/L	59	59	52	66	✓
Titanium	ug/L	34.1	31.5	27.0	36.0	✓
Uranium	ug/L	31.4	30.8	26.9	34.7	✓
Vanadium	ug/L	6.6	6.5	5.4	7.6	✓
Zinc	ug/L	60	59	49	69	✓
Zirconium	ug/L	58	62	53	72	✓

Material Used: Edmonton Digestion Check
Date Acquired: Sep 02, 2004
Acquired By: Jesse Dang

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Quality Control

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: B. Lowe
Company:

Project
ID: Req. #: L48906
Name:
Location:
LSD:
P.O.:
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NWL Lot ID: **330035**
Control Number:
Date Received: Sep 01, 2004
Date Reported: Sep 09, 2004
Report Number: 590723

Metals Total (Continued...)

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Calcium	mg/L	249	253	232	274	✓
Iron	mg/L	9.9	9.7	9.1	10.3	✓
Magnesium	mg/L	96.9	102	92	112	✓
Manganese	mg/L	2.44	2.45	2.27	2.63	✓
Potassium	mg/L	251	253	226	280	✓
Silicon	mg/L	23.5	25.0	22.5	27.5	✓
Sodium	mg/L	254	251	221	281	✓
Sulphur	mg/L	48.2	50.0	46.3	53.7	✓

Material Used: Metals High
Date Acquired: Sep 02, 2004
Acquired By: To Thong

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Quality Control

Bill to: Echo Bay Mines Ltd.
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9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: B. Lowe
Company:

Project
ID: Req. #: L48906
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NWL Lot ID: **330035**
Control Number:
Date Received: Sep 01, 2004
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Metals Total (Continued...)

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Calcium	mg/L	4.9	4.7	4.3	5.2	✓
Iron	mg/L	0.2	0.2	0.2	0.2	✓
Magnesium	mg/L	1.8	1.9	1.7	2.1	✓
Manganese	mg/L	0.048	0.048	0.043	0.052	✓
Potassium	mg/L	4.9	5.0	4.4	5.6	✓
Silicon	mg/L	0.47	0.50	0.45	0.55	✓
Sodium	mg/L	4.9	5.2	4.4	6.1	✓
Sulphur	mg/L	0.93	0.98	0.82	1.13	✓
Aluminum	ug/L	1010	1000	850	1150	✓
Antimony	ug/L	39.4	40.0	34.0	46.0	✓
Arsenic	ug/L	39.7	40.0	34.0	46.0	✓
Barium	ug/L	200	200	170	230	✓
Beryllium	ug/L	21.0	20.0	17.0	23.0	✓
Bismuth	ug/L	101	100	85	115	✓
Boron	ug/L	423	400	340	460	✓
Cadmium	ug/L	2.05	2.00	1.70	2.30	✓
Chromium	ug/L	100	100	85	115	✓
Cobalt	ug/L	20.6	20.0	17.0	23.0	✓
Copper	ug/L	197	200	170	230	✓
Lead	ug/L	20.2	20.0	17.0	23.0	✓
Lithium	ug/L	203	200	170	230	✓
Molybdenum	ug/L	199	200	170	230	✓
Nickel	ug/L	98.4	100	85	115	✓
Selenium	ug/L	39.1	40.0	34.0	46.0	✓
Silver	ug/L	20.7	20.0	17.0	23.0	✓
Strontium	ug/L	200	200	170	230	✓
Thallium	ug/L	10.0	10.0	8.5	11.5	✓
Tin	ug/L	196	200	170	230	✓
Titanium	ug/L	101	100	85	115	✓
Uranium	ug/L	100	100	85	115	✓
Vanadium	ug/L	19.0	20.0	17.0	23.0	✓
Zinc	ug/L	202	200	170	230	✓
Zirconium	ug/L	199	200	170	230	✓

Material Used: Metals Low
Date Acquired: Sep 02, 2004
Acquired By: Jesse Dang

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Quality Control

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9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: B. Lowe
Company:

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NWL Lot ID: **330035**
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Metals Total (Continued...)

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Aluminum	ug/L	54	50	43	58	✓
Antimony	ug/L	1.9	2.0	1.7	2.3	✓
Arsenic	ug/L	1.9	2.0	1.7	2.3	✓
Barium	ug/L	10	10	9	12	✓
Beryllium	ug/L	1.0	1.0	0.9	1.2	✓
Bismuth	ug/L	5.0	5.0	4.3	5.8	✓
Boron	ug/L	21	20	17	23	✓
Cadmium	ug/L	0.11	0.10	0.09	0.12	✓
Chromium	ug/L	5.1	5.0	4.3	5.8	✓
Cobalt	ug/L	1.1	1.0	0.9	1.2	✓
Copper	ug/L	10	10	9	12	✓
Lead	ug/L	1.0	1.0	0.9	1.2	✓
Lithium	ug/L	11	10	9	12	✓
Molybdenum	ug/L	10	10	9	12	✓
Nickel	ug/L	5.1	5.0	4.3	5.8	✓
Selenium	ug/L	1.9	2.0	1.7	2.3	✓
Silver	ug/L	1.1	1.0	0.9	1.2	✓
Strontium	ug/L	10	10	9	12	✓
Thallium	ug/L	0.54	0.50	0.43	0.58	✓
Tin	ug/L	10	10	9	12	✓
Titanium	ug/L	5.1	5.0	4.3	5.8	✓
Uranium	ug/L	5.1	5.0	4.3	5.8	✓
Vanadium	ug/L	1.0	1.0	0.9	1.2	✓
Zinc	ug/L	10	10	9	12	✓
Zirconium	ug/L	10	10	9	12	✓

Material Used: Metals Trace
Date Acquired: Sep 02, 2004
Acquired By: Jesse Dang

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Quality Control

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T5J2T2
Attn: Michael Tansey
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Physical and Aggregate Properties

Blanks		Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Solids		mg/L	<2	0	-1	1	✓
Material Used:	Surrey Blank						
Date Acquired:	Sep 03, 2004						
Acquired By:	Virginia Thomson						

Replicates		Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
Solids		mg/L	174	176	30	5	✓
Material Used:	Surrey - Int. Duplicate						
Date Acquired:	Sep 03, 2004						
Acquired By:	Virginia Thomson						

Control Sample		Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Solids		mg/L	130	2055	1551	2559	✓
Material Used:	S1004 - SS						
Date Acquired:	Sep 03, 2004						
Acquired By:	Virginia Thomson						

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Quality Control

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9818 International Airport
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Routine Water

Blanks	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Calcium	mg/L	<0.2	0.0	-0.2	0.2	✓
Magnesium	mg/L	<0.1	0.0	-0.1	0.1	✓
Nitrate - N	mg/L	<0.1	0.0	-0.1	0.1	✓
Nitrite - N	mg/L	<0.05	0.00	-0.05	0.05	✓
Material Used:	Edmonton Method Blank					
Date Acquired:	Sep 02, 2004					
Acquired By:	Marc Dzura					

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
pH		8.73	8.73	9.99	0.10	✓
Electrical Conductivity	dS/m at 25 C	5.79	5.77	9.990	0.002	✓
Calcium	mg/L	47.4	47.3	10.0	0.6	✓
Magnesium	mg/L	18.9	18.9	10.0	0.2	✓
Hydroxide	mg/L	<5	<5	10		✓
Carbonate	mg/L	26	26	10		✓
Bicarbonate	mg/L	546	546	10		✓
P-Alkalinity	mg/L	22	22	10	5	✓
T-Alkalinity	mg/L	916	920	10	5	✓
Material Used:	Edmonton Duplicate					
Date Acquired:	Sep 07, 2004					
Acquired By:						

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
pH	pH	7.1	7.0	30.0	0.1	✓
Material Used:	Surrey - Int. Duplicate					
Date Acquired:	Sep 02, 2004					
Acquired By:	Maria Gaborni					

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Quality Control

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9818 International Airport
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T5J2T2
Attn: Michael Tansey
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Date Reported: Sep 09, 2004
Report Number: 590723

Routine Water (Continued...)

Control Sample		Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Calcium		mg/L	248	251	237	265	✓
Magnesium		mg/L	97.8	102	95	109	✓
Material Used:	Metals High						
Date Acquired:	Sep 02, 2004						
Acquired By:	To Thong						
Calcium		mg/L	4.9	4.8	4.3	5.3	✓
Magnesium		mg/L	1.9	2.0	1.7	2.2	✓
Material Used:	Metals Low						
Date Acquired:	Sep 02, 2004						
Acquired By:	To Thong						
pH			9.14	9.23	9.11	9.35	✓
Electrical Conductivity		dS/m at 25 C	2.70	2.73	2.61	2.85	✓
Nitrate - N		mg/L	9.7	10.0	9.6	10.4	✓
Nitrite - N		mg/L	9.75	10.0	9.6	10.4	✓
P-Alkalinity		mg/L	501	520	473	567	✓
T-Alkalinity		mg/L	1010	1005	972	1038	✓
Material Used:	Water High						
Date Acquired:	Sep 07, 2004						
Acquired By:							
pH			6.86	6.90	6.83	6.97	✓
Electrical Conductivity		dS/m at 25 C	0.077	0.076	0.070	0.081	✓
Nitrate - N		mg/L	0.5	0.5	0.4	0.6	✓
Nitrite - N		mg/L	0.47	0.50	0.44	0.55	✓
P-Alkalinity		mg/L	45	57	39	75	✓
T-Alkalinity		mg/L	124	128	119	137	✓
Material Used:	Water Low						
Date Acquired:	Sep 07, 2004						
Acquired By:							

Norwest Labs
7217 Roper Road
Edmonton, AB. T6B 3J4
Phone: (780) 438-5522
Fax: (780) 438-0396

Methodology and Notes

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: B. Lowe
Company:

Project ID: Req. #: L48906
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **330035**
Control Number:
Date Received: Sep 01, 2004
Date Reported: Sep 09, 2004
Report Number: 590723

Method of Analysis:

MethodName	Reference		Method	Date Analysis Started	Location
Alkalinity, pH, and EC in water	APHA	*	Conductivity - Laboratory Method, 2510 B	3-Sep-04	Norwest Labs Edmonton
Alkalinity, pH, and EC in water	APHA	*	Titration Method, 2320 B	3-Sep-04	Norwest Labs Edmonton
Ammonium-N in Water	APHA	*	Automated Phenate Method, 4500-NH3 G	8-Sep-04	Norwest Labs Edmonton
Anions (Routine) by Ion Chromatography	APHA		Ion Chromatography with Chemical Suppression of Eluent Cond., 4110 B	3-Sep-04	Norwest Labs Edmonton
BOD in water	APHA	*	5 Day, 5210 B	8-Sep-04	Norwest Labs Surrey
Fecal Coliforms - MF	APHA		Fecal Coliform Membrane Filter Procedure, 9222 D	2-Sep-04	Norwest Labs Calgary
Kjeldahl Nitrogen & Phosphorus (Total) in Water	Alberta Research Council	*	Nitrogen, Total Kjeldahl, 07021 626	9-Sep-04	Norwest Labs Edmonton
Kjeldahl Nitrogen & Phosphorus (Total) in Water	APHA	*	Automated Ascorbic Acid Reduction Method, 4500-P F	9-Sep-04	Norwest Labs Edmonton
Metals ICP-MS (Total) in water	US EPA	*	Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	2-Sep-04	Norwest Labs Edmonton
Metals Trace (Dissolved) in water	APHA	*	Inductively Coupled Plasma (ICP) Method, 3120 B	7-Sep-04	Norwest Labs Edmonton
Metals Trace (Total) in water	APHA	*	Inductively Coupled Plasma (ICP) Method, 3120 B	2-Sep-04	Norwest Labs Edmonton
Orthophosphate-P in Water	APHA	*	Automated Ascorbic Acid Reduction Method, 4500-P F	9-Sep-04	Norwest Labs Edmonton
pH in water	APHA	*	Electrometric Method, 4500-H+ B	2-Sep-04	Norwest Labs Surrey
Solids Suspended (Total, Fixed and Volatile)	APHA	*	Total Suspended Solids Dried at 103-105'C, 2540 D	3-Sep-04	Norwest Labs Surrey
Total Coliforms - MF	APHA		Standard Total Coliform Membrane Filter Procedure, 9222 B	2-Sep-04	Norwest Labs Calgary

* Norwest method(s) is based on reference method

References:

Alberta Research Council	Methods Manual for Chemical Analysis of Water and Wastes
APHA	Standard Methods for the Examination of Water and Wastewater
US EPA	US Environmental Protection Agency Test Methods

Comments:

Please direct any inquiries regarding this report to our Client Services group.
Results relate only to samples as submitted

Norwest Labs
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Fax: (780) 438-0396

Methodology and Notes

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: B. Lowe
Company:

Project ID: Req. #: L48906
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **330035**
Control Number:
Date Received: Sep 01, 2004
Date Reported: Sep 09, 2004
Report Number: 590723

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Analytical Report

Norwest Labs
7217 Roper Road
Edmonton, AB. T6B 3J4
Phone: (780) 438-5522
Fax: (780) 438-0396

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: M.Tansey
Company: Echo Bay

Project ID: Requisition No. L48906
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **334332**
Control Number:
Date Received: Sep 23, 2004
Date Reported: Oct 01, 2004
Report Number: 598879

NWL Number	334332-1
Sample Date	Sep 22, 2004
Sample Description	40050 / 925-14
Matrix	Water - General

Analyte		Units	Results	Results	Results	Detection Limit
Aggregate Organic Constituents						
Biochemical Oxygen Demand	5 Day	mg/L	<4			4
Inorganic Nonmetallic Parameters						
Ammonium - N		mg/L	0.06			0.05
Kjeldahl Nitrogen	Total	mg/L	1.07			0.05
Phosphorus	Total	mg/L	0.14			0.05
Orthophosphate-P	Dissolved	mg/L	<0.05			0.05
Metals Total						
Calcium	Total	mg/L	159			0.2
Iron	Total	mg/L	0.3			0.1
Magnesium	Total	mg/L	14.8			0.1
Manganese	Total	mg/L	0.226			0.005
Potassium	Total	mg/L	11.0			0.4
Silicon	Total	mg/L	0.05			0.05
Sodium	Total	mg/L	194			0.4
Sulphur	Total	mg/L	44.9			0.05
Aluminum	Total	mg/L	0.050			0.005
Antimony	Total	mg/L	0.0005			0.0002
Arsenic	Total	mg/L	0.0096			0.0002
Barium	Total	mg/L	0.046			0.001
Beryllium	Total	mg/L	<0.0001			0.0001
Bismuth	Total	mg/L	<0.0005			0.0005
Boron	Total	mg/L	0.065			0.002
Cadmium	Total	mg/L	0.00009			0.00001
Chromium	Total	mg/L	<0.0005			0.0005
Cobalt	Total	mg/L	0.0057			0.0001
Copper	Total	mg/L	0.004			0.001
Lead	Total	mg/L	0.0002			0.0001
Lithium	Total	mg/L	0.678			0.001
Molybdenum	Total	mg/L	0.002			0.001
Nickel	Total	mg/L	0.0222			0.0005
Selenium	Total	mg/L	<0.0002			0.0002
Silver	Total	mg/L	<0.0001			0.0001
Strontium	Total	mg/L	3.17			0.001
Thallium	Total	mg/L	<0.00005			0.00005
Tin	Total	mg/L	<0.001			0.001

NORWEST LABS

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Analytical Report

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: M.Tansey
Company: Echo Bay

Project ID: Requisition No. L48906
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **334332**
Control Number:
Date Received: Sep 23, 2004
Date Reported: Oct 01, 2004
Report Number: 598879

NWL Number	334332-1
Sample Date	Sep 22, 2004
Sample Description	40050 / 925-14
Matrix	Water - General

Analyte		Units	Results	Results	Results	Detection Limit
Metals Total - Continued						
Titanium	Total	mg/L	0.0053			0.0005
Uranium	Total	mg/L	<0.0005			0.0005
Vanadium	Total	mg/L	0.0003			0.0001
Zinc	Total	mg/L	0.031			0.001
Zirconium	Total	mg/L	<0.001			0.001
Microbiological Analysis						
Total Coliforms	Membrane Filtration	CFU/100 mL	10			1
Fecal Coliforms	Membrane Filtration	CFU/100 mL	<1			1
Physical and Aggregate Properties						
Solids	Total Suspended	mg/L	<2			1
Routine Water						
pH	Water	pH	7.2			
Electrical Conductivity		µS/cm at 25 C	1970			1
Calcium	Dissolved	mg/L	151			0.2
Magnesium	Dissolved	mg/L	13.9			0.1
Nitrate - N		mg/L	6.2			0.1
Nitrite - N		mg/L	<0.2			0.05
Hydroxide		mg/L	<5			5
Carbonate		mg/L	<6			6
Bicarbonate		mg/L	18			5
P-Alkalinity	as CaCO3	mg/L	<5			5
T-Alkalinity	as CaCO3	mg/L	15			5
Hardness	Dissolved as CaCO3	mg/L	435			

Approved by: Anthony Neumann

Anthony Neumann, MSc
Laboratory Operations Manager

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Methodology and Notes

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J2T2
Attn: Michael Tansey
Sampled By: M.Tansey
Company: Echo Bay

Project ID: Requisition No. L48906
Name:
Location:
LSD:
P.O.:
Acct. Code:

NWL Lot ID: **334332**
Control Number:
Date Received: Sep 23, 2004
Date Reported: Oct 01, 2004
Report Number: 598879

Method of Analysis:

MethodName	Reference		Method	Date Analysis Started	Location
Alkalinity, pH, and EC in water	APHA	*	Conductivity - Laboratory Method, 2510 B	24-Sep-04	Norwest Labs Edmonton
Alkalinity, pH, and EC in water	APHA	*	Titration Method, 2320 B	24-Sep-04	Norwest Labs Edmonton
Ammonium-N in Water	APHA	*	Automated Phenate Method, 4500-NH3 G	1-Oct-04	Norwest Labs Edmonton
Anions (Routine) by Ion Chromatography	APHA		Ion Chromatography with Chemical Suppression of Eluent Cond., 4110 B	25-Sep-04	Norwest Labs Edmonton
BOD in water	APHA	*	5 Day, 5210 B	24-Sep-04	Norwest Labs Surrey
Fecal Coliforms - MF	APHA		Fecal Coliform Membrane Filter Procedure, 9222 D	24-Sep-04	Norwest Labs Calgary
Kjeldahl Nitrogen & Phosphorus (Total) in Water	Alberta Research Council	*	Nitrogen, Total Kjeldahl, 07021 626	30-Sep-04	Norwest Labs Edmonton
Kjeldahl Nitrogen & Phosphorus (Total) in Water	APHA	*	Automated Ascorbic Acid Reduction Method, 4500-P F	30-Sep-04	Norwest Labs Edmonton
Metals ICP-MS (Total) in water	US EPA	*	Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	24-Sep-04	Norwest Labs Edmonton
Metals Trace (Dissolved) in water	APHA	*	Inductively Coupled Plasma (ICP) Method, 3120 B	25-Sep-04	Norwest Labs Edmonton
Metals Trace (Total) in water	APHA	*	Inductively Coupled Plasma (ICP) Method, 3120 B	24-Sep-04	Norwest Labs Edmonton
Orthophosphate-P in Water	APHA	*	Automated Ascorbic Acid Reduction Method, 4500-P F	30-Sep-04	Norwest Labs Edmonton
pH in water	APHA	*	Electrometric Method, 4500-H+ B	27-Sep-04	Norwest Labs Surrey
Solids Suspended (Total, Fixed and Volatile)	APHA	*	Total Suspended Solids Dried at 103-105'C, 2540 D	28-Sep-04	Norwest Labs Surrey
Total Coliforms - MF	APHA		Standard Total Coliform Membrane Filter Procedure, 9222 B	24-Sep-04	Norwest Labs Calgary

* Norwest method(s) is based on reference method

References:

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Methodology and Notes

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Attn: Michael Tansey
Sampled By: M.Tansey
Company: Echo Bay

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NWL Lot ID: **334332**
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