APPENDIX 5

Annual Geotechnical Inspection Report

by

Gartner Lee Limited

Report on Post-closure Geotechnical Inspection for Polaris Mine Site in 2005

Prepared for
TeckCominco Ltd

Submitted by
Gartner Lee Limited

December 2005

Gartner Lee

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Reference: **GLL 50508**

Distribution:
10 Teck Cominco Limited
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December 15, 2005

Mr. Bruce Donald. P.Eng.
Environmental Manager, Polaris Mine,
Teck Cominco Ltd
Bag 2000
Kimberley, BC V1A 3E1

Dear Mr. Donald:

Re: GLL 50508 – Polaris Mine Site –Report on Post-closure Geotechnical Inspection in 2005

Gartner Lee is pleased to present our report on geotechnical inspections conducted at the Polaris Mine Site in July 2005. This report includes eight sections covering Garrow Lake, Little Red Dog Quarry, the Operational Landfill, the dock site shoreline, Frustration Lake water intake and access road, the North Quarry, various portals, and the subsidence area.

This report presents my observations, conclusions and recommendations. Additional related information on field measurements conducted during the summer 2005 season is reported separately.

If you have any questions please contact the undersigned.

Yours very truly,
GARTNER LEE LIMITED

Alistair Kent, P.Eng.
Senior Geotechnical Engineer

AHK:gc

(50508_Geotech_Insp_Report_Final_16Dec05.doc)

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Executive Summary

In July 2005, Alistair Kent, P.Eng., of Gartner Lee Limited accompanied Mr. Bruce Donald to the Polaris mine site. The visit was conducted in generally good weather conditions, affording excellent visibility and coverage of all areas across the mine site.

With few exceptions, the condition of the overall site is good, with no signs of major instability or erosion being observed that pose threats to human health or wildlife. In several areas, erosion was observed in limited areas, which should continue to be monitored. The report includes recommendations for remedial erosion control measures at a limited number of locations, which should be considered and planned for implementation when practical in the coming year.

1. Introduction

Between July 26 and 30, 2005, Alistair Kent, senior geotechnical engineer and practice area leader of Gartner Lee Limited (GLL), visited the Polaris mine site, accompanied by Mr. Bruce Donald, Environmental Manager, Teck Cominco Limited (TCL). The purpose of the visit was primarily to conduct the required annual geotechnical site inspection.

The detailed results of the inspection are presented in an annotated photographic record, which is contained in the eight appendices to this report. A summary of site conditions and its history are presented in section 2, followed by key observations, conclusions and recommendations.

The Polaris mine site, which was decommissioned during 2003 and 2004, is located on Little Cornwallis Island, at 75 deg 23'North, 96 deg 57' West, some 120 km northwest of Resolute, Nunavut. The overall layout of the Polaris site, based on surveys conducted during the closure period, is shown on Figures 1 and 2.

The information in the report is intended to provide a detailed baseline of data to facilitate comparisons of data in future annual inspections.

The site was sub-divided into a number of common areas to facilitate the organized inspection of the site:

- Area 1 - Garrow Lake, Creek and Dam;
- Area 2 - Frustration Lake Jetty and Access Road;
- Area 3 - New Quarry Area;
- Area 4 - Subsidence Area;
- Area 5 - Operational Landfill;
- Area 6 - Little Red Dog (LRD) Quarry Landfill;
- Area 7 - Mine Portals; and
- Area 8 - Marine Foreshore Adjacent to Former Dock.

This inspection was conducted in accordance with requirements under Section H (6) of the Water Licence and under the requirements of the Decommissioning and Reclamation Plan approvals.

2. Site Conditions and History

The Polaris mine site was operated between 1981 and 2002, and decommissioning activities took place in 2003 and 2004. The site facilities comprised an underground mine, concentrator plant, concentrate shed, dock, airstrip, tailings impoundment, water intake on Frustration Lake, various site access roads, a limestone quarry for mine backfilling, a shale quarry, and various items of infrastructure such as fuel storage, camp, warehousing etc. Upon completion of decommissioning and reclamation activities all structures had been demolished, soils contaminated by metals and hydrocarbons had been excavated and disposed of. At this time only the airstrip and a small portable camp and workshop and container storage remains, located adjacent to Loon Lake. Access roads between Garrow Lake, Frustration Lake and in the immediate vicinity of the previously active mining operations remain. The layout of the site is shown in Figure 1.

The shoreline and slope in the vicinity of the main plant and concentrate storage and ship-loading activities, on the west side of the island now comprise relatively gentle uniform slopes, which have been regraded as part of decommissioning. These slopes are interrupted by sloping roads and ramps. The area in the immediate vicinity of the original dock structure is almost flat. The shoreline has now been restored to a consistent gently sloping platform. Portals for the conveyor, the main access, and the original exploration portal, located on the slopes immediately adjacent to this area have been sealed, backfilled and re-graded to match the surrounding slopes.

A small pad originally used to support the fuel tank farm is present at the south end of this area, and measures approximately 100 m by 50 m. It has fill sideslopes inclined at the angle of repose for rockfill, which have a vertical height of approximately 10 m. This area has not been re-sloped, and we understand that Teck Cominco Limited (TCL) intends to conduct this work in 2006.

The Little Red Dog quarry, located at the northwest end of the airstrip was backfilled partially with demolition debris and metals contaminated soils and subsequently capped with rockfill. The remnant quarry walls above the level of the capping layer are benched and serve to catch ravelling material as the slopes gradually weather. Safety berms extend around the pit perimeter, and additional safety measures in the form of a ditch and a high berm exist at the end of the airstrip. Thermistors have been installed through the cap layer and within the underlying landfill material.

The Operational Landfill, located at the south end of the former facility area, has been capped and re-sloped. During operations thermistors had been installed in the landfill at four locations. During the site visit, attempts to replace the thermistors were made with thermistors designed to monitor the new cap. Difficulties were encountered removing the existing thermistors so that only two of the four installations were successfully replaced.

East of the airstrip, the main features of disturbance are the Subsidence Area and the New Quarry. The subsidence area is located over top of underground mine workings and experienced significant deformations during mine operations. Subsequently, the area has been regraded and the magnitude of subsidence has been decreasing since the cessation of mining. Detailed survey measurements across this area are being collected annually and a brief review of current conditions of this area are included in this report. Specialist geotechnical comment is also being provided in a separate report.

The New Quarry area measures some 800 m by 400 m and was partially reclaimed by regrading stripped materials and resloping quarry faces. Much of the floor of the New Quarry remains as exposed shale bedrock.

A network of access roads has been decommissioned (but are still functional) across the project area. As part of the decommissioning all culverts (with the exception of one) have been removed and drainage crossings re-opened. The access roads are important access for ongoing monitoring activities, and are in good condition.

A short causeway, approximately 100 m long and 10 m wide, which supported the project water supply intake, remains at Frustration Lake, some 4.5 km from the main project site.

At Garrow Lake, the former site of submerged tailings deposition, both the main impoundment dam and the wave break embankment structure were breached and reclaimed. The central part of the main dam was removed and replaced with a rip-rap lined channel. The perimeter of Garrow Lake, previously flooded during mining operations by several metres, has now been returned to its former location. Measurements and observations of the condition of the perimeter beach have been conducted since the dams were breached. Now that Garrow Lake has been restored to its original elevation, the perimeter of the lakeshore is in its former location as well. Observations and monitoring of the re-emerging shoreline were undertaken while the lake was being lowered to monitor for any signs of instability of the newly exposed shoreline. Observations of this area continued during 2005.

3. Approach to Site Inspection

The primary purpose of the geotechnical site inspection is to assess site-wide conditions for evidence of instability or erosion that may be potentially hazardous to either humans or wildlife. The visual inspections documented in this report are supplemented by other information including survey measurements, and thermistor records. As the inspection is primarily visual, this report is largely presented as a series of annotated photographs with their locations established using GPS. These locations are shown on Figures 1 and 2, and it is intended that on-going annual inspections conducted

during the post-closure monitoring period will record visual observations from the same locations. Where significant erosional activities have been observed, measurements of depth and width have been recorded at specific locations, facilitating accurate monitoring of the potential rate of progression in subsequent years. This will allow decisions as to whether to intervene or to allow nature to takes its course. Table 1 lists all observation waypoints for use in future annual inspections.

4. Key Observations and Conclusions

4.1 Area 1 – Garrow Lake, Creek and Dam

Garrow Lake

The perimeter beach was inspected, and no evidence of significant instability or erosion has been detected or observed. No significant trend in erosion has been detected through the erosion pin monitoring. As the water levels have been lowered for the past two years, the shorelines have been exposed to normal cycles of summer and winter seasons. Monitoring of erosion pins was conducted in 2003 and 2004, showing little or not trend for loss of soil. Unfortunately, due to a misunderstanding, no measurements were taken in 2005 to confirm this conclusion. Although the inspection in 2005 indicates that the perimeter beach is stable and largely free of erosion, it is recommended that erosion measurement be continued for one more year, and conducted together with the annual visual inspection. Routine monitoring of suspended sediment levels will continue as part of the effluent water quality monitoring program.

Garrow Lake Wave break Structure

The condition of the breached outlet of Garrow Lake was inspected and appears to be stable. Ongoing measurements of lake level each summer after lake ice has thawed should be continued to provide conclusive evidence that the invert of the breach section remains stable.

Garrow Dam

The sideslopes of the breach excavated through the main dam structure are in good condition, free of erosion or signs of major instability. Minor localised slumping was observed and should continue to be checked in subsequent annual inspections. A localised section of the invert of the breach channel has a section of exposed filter fabric that should be covered with rip-rap. While the integrity of the adjacent rip-rap has not so far been affected, remedial measures should be planned and implemented as soon as is practical in 2006.

4.2 Area 2 – Frustration Lake Jetty and Access Road

The embankment forming the intake jetty at Frustration Lake was observed to be in good condition, and no evidence of erosion or significant instability was found. Minor settlement at the end of the embankment should continue to be observed, but is expected to be the result of localised thaw of buried snow or ice.

The access road is generally in good condition, with only localised erosion at drainage crossings. No excessive recent transport of material was detected.

4.3 Area 3 – New Quarry Area

The perimeter sideslopes of the new Quarry are interspersed by several drainages and erosion features. Otherwise the slopes and floor or the quarry area appear to be stable and pose no hazard to human health or wildlife. These features are the result of small drainages exploiting the loose nature of stripped overburden soils. The consequences of these active erosion features are minor as a result of the effect of drainage dispersing across the floor of the quarry and allow sediment to be deposited. However, remedial erosion control measures are recommended at two locations in order to minimise the effort required to stablilize them. Delays in executing repairs, although not resulting in any site hazards, will only result in more work being required in the future.

4.4 Area 4 – Subsidence Area

This area was inspected in detail during the site visit. A detailed topographic survey was conducted by TCL. Inspection of the subsidence area detected one noticeable crack about 30 m long, a few cm wide and minor ponding of water. The results of surveying across the area in 2005, when compared to survey results in 2004, indicate that there have been no significant changes. At most, settlement of approximately 0.3 m was detected in one cross-section in the central part of the subsidence area.. The overall area continues to be safe for humans and wildlife. An assessment of subsurface conditions is being prepared in a separate report by a specialist underground mining consultant.

4.5 Area 5 – Operational Landfill

The Operational Landfill was inspected and found to be in excellent condition. No signs of instability were observed. The results of monitoring thermistors are reported separately by TCL. Erosion and minor seepage in a localised portion of the slope above the operational landfill was observed, but is not expected

to adversely impact the performance of the landfill. Minor ingress of seepage water may in fact promote formation of a less pervious zone at the base of the cap zone. However, the area should continue to be monitored annually for any signs of frost heave. It is possible that drainage may need to be enhanced along the back edge of the landfill by excavation of a shallow ditch grading to one end or the other of the landfill.

4.6 Area 6 – Little Red Dog (LRD) Quarry Landfill

The surface capping of the LRD Quarry Landfill was inspected and found to be free of any signs of instability or settlement. Seepage exiting the mouth of the quarry comes to surface over a short distance, then re-infiltrates into the surrounding slopes below. The seepage was running clear and water quality testing by TCL (reported separately) shows it to be free of metals. The sideslopes of the quarry above the cap do not exhibit signs of instability, and safety berms along the quarry perimeter are in good condition.

4.7 Area 7 – Mine Portals

The Polaris Mine was an underground mining operation. There were four portals used to access the mine and/or to convey ore out of the mine. As part of the mine decommissioning and reclamation activities, the portals were sealed to prevent the public from accessing the underground mine workings.

The objectives of the annual geotechnical inspection were to look for evidence of any settlement, erosion of the mine seals, or instability at the four portal areas, which might present a risk to human health or wildlife. As shown in the following photographs, all of the portals are in good condition, free of signs of instability or erosion.

4.8 Area 8 – Marine Foreshore Adjacent to Former Dock

The shoreline adjacent to and along the former dock structure was inspected and surveyed. No signs of instability or erosion were observed that would signify loss of overall integrity of the shoreline or slope above. Some ongoing localised changes of the shoreline are expected to continue (due to ice action), and a system of observations and survey transects from consistent positions is now in place.

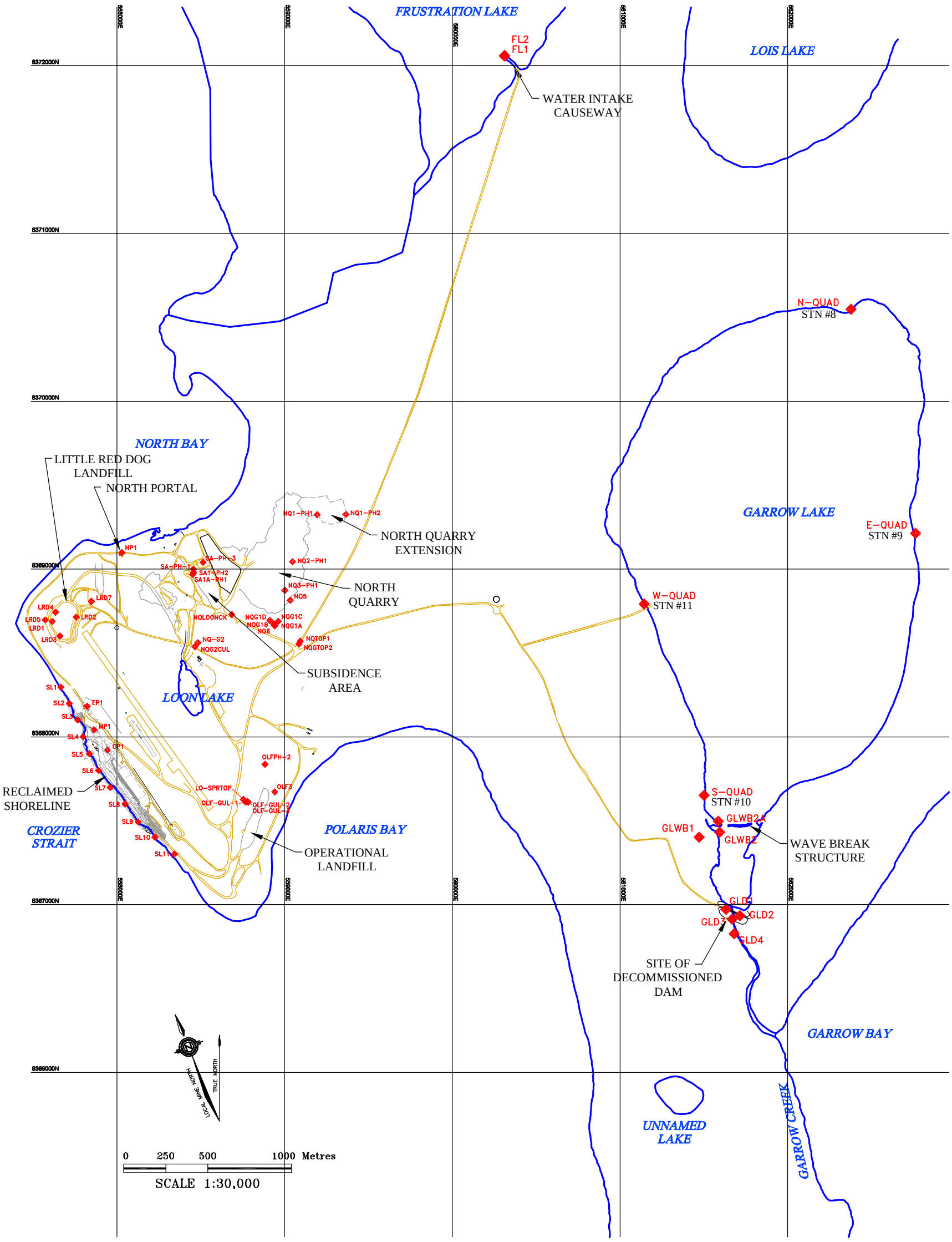
5. Recommendations

The annual geotechnical inspection conducted in July 2005 identified a limited number of relatively minor erosion features that either require ongoing monitoring or remedial action in the coming summer season. These locations are:

- Garrow Lake Dam outlet channel – requires restoration of rip-rip at the downstream outlet; and
- New Quarry Area – requires erosion control measures in two gullies on the southern perimeter.

Monitoring should continue to be conducted of all areas of surface disturbance by the geotechnical engineer in the coming year. Although monitoring of the erosion pins around the perimeter of Garrow Lake have not shown any significant change in the 2003 and 2004 one final check is recommended as part of the annual geotechnical inspection in 2006. Water quality measurements, and survey checking of the level of the lake after spring thaw should be continued.

Figures

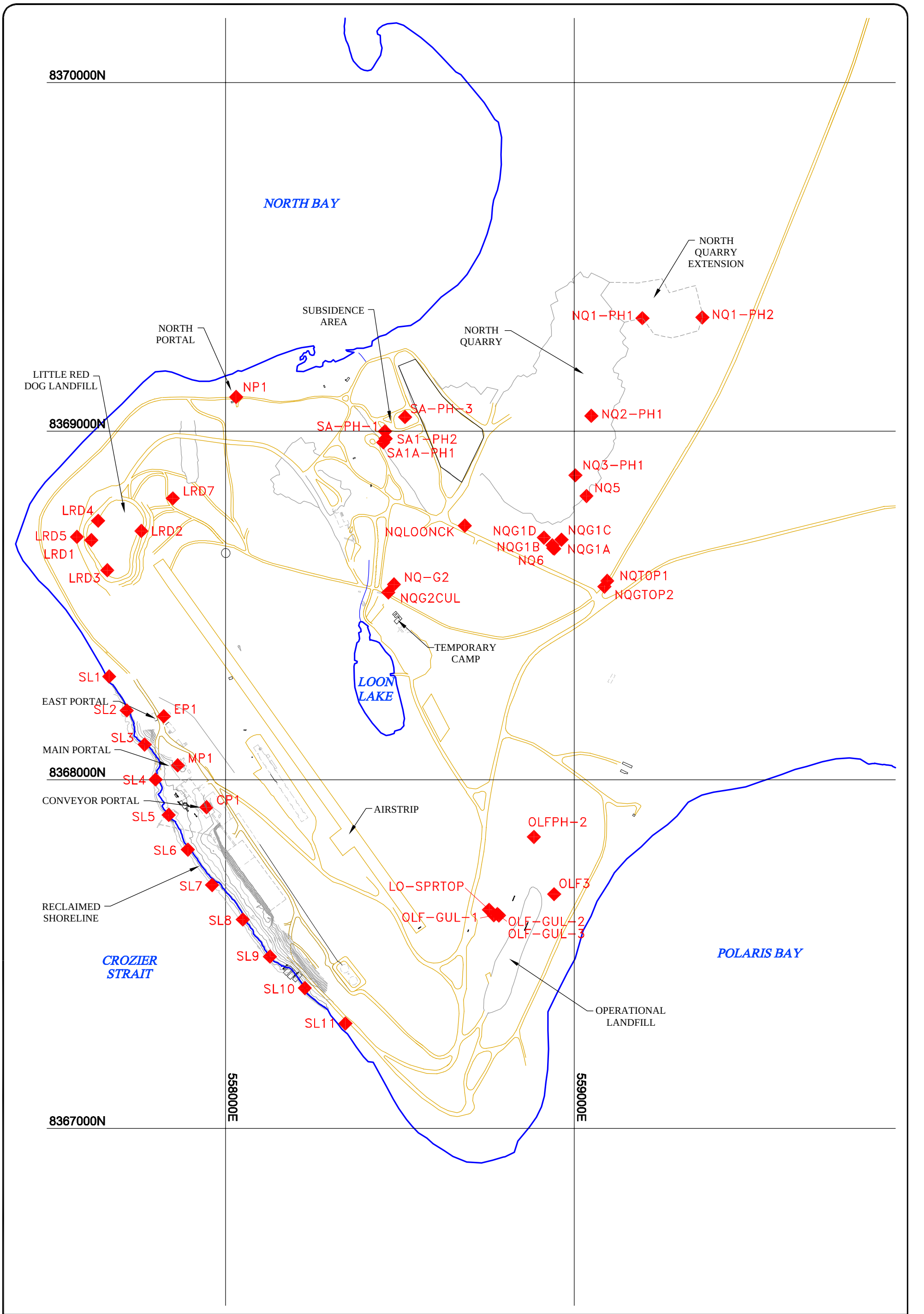


LEGEND:

ROADS

SL11 WAYPOINT – FIELD INSPECTION POINTS, SUMMER 2005 (GLL)

PROJECTION: UTM 83–14	Project: Polaris Mine Location: Nunavut Client: Teck Cominco Limited
REVIEWED BY: DL/AL PREPARED BY: PW/NT DATE ISSUED: NOVEMBER, 2005 PROJECT NUMBER: 50–508 FILE NAME: 50508–1B–01.dwg REVISION: 0	**POLARIS MINE** **2005 GEOTECHNICAL SITE INSPECTION**
teckcominco	Gartner Lee Figure No. 1



LEGEND:

ROADS

SL11 — WAYPOINT – FIELD INSPECTION POINTS, SUMMER 2005 (GLL)

0 50 100 200 300 400 500 Metres

SCALE 1:10,000

PROJECTION: UTM 83–14	Project: Polaris Mine Location: Nunavut Client: Teck Cominco Ltd.
REVIEWED BY: DL/AL	**POLARIS MINE 2005 GEOTECHNICAL INSPECTION - DETAIL OF MINE AREA**
PREPARED BY: PW/NT	
DATE ISSUED: NOVEMBER, 2005	
PROJECT NUMBER: 50–508	
FILE NAME: 50508–1B–01.dwg	
REVISION: 0	Figure No. 2

teckcominco — Gartner Lee

Tables

Table 1. Polaris Geotechnical Inspection
List of Waypoints

AREA	Location	Waypoint	Northing	Easting
1	Station 9	E-QUAD	8,370,547	562,380
1	Dam	GLD1	8,366,973	561,633
1	Dam	GLD2	8,366,935	561,717
1	Dam	GLD3	8,366,914	561,670
1	Dam	GLD4	8,366,827	561,683
1	Wave Break Dam	GLWB1	8,367,402	561,472
1	Wave Break Dam	GLWB2	8,367,433	561,596
1	Wave Break Dam	GLWB2A	8,367,497	561,587
1	Station 8	N-QUAD	8,370,550	562,378
1	Station 10	S-QUAD	8,367,652	561,502
1	Station 11	W-QUAD	8,368,792	561,144
2	Frustration Lk intake	FL1	8,372,061	560,313
2	Frustration Lk intake	FL2	8,372,061	560,312
3	New Quarry	NQG1A	8,368,663	558,943
3	New Quarry	NQG1B	8,368,673	558,937
3	New Quarry	NQG1C	8,368,689	558,964
3	New Quarry	NQG1D	8,368,695	558,913
3	New Quarry	NQ-G2	8,368,561	558,484
3	New Quarry	NQG2CUL	8,368,538	558,467
3	New Quarry	NQGTOP2	8,368,554	559,087
3	New Quarry	NQLOONCK	8,368,730	558,686
3	New Quarry	NQT0P1	8,368,571	559,095
3	New Quarry	NQ1 PH1	8,369,324	559,195
3	New Quarry	NQ1 PH2	8,369,326	559,367
3	New Quarry	NQ2 PH1	8,369,044	559,049
3	New Quarry	NQ3 PH1	8,368,874	559,003
3	New Quarry	NQ5	8,368,814	559,035
3	New Quarry	NQ6	8,368,665	558,940
4	Subsidence Area	SA PH 1	8,369,000	558,457
4	Subsidence Area	SA PH 1	8,369,000	558,457
4	Subsidence Area	SA1 PH2	8,368,979	558,459
4	Subsidence Area	SA1 PH3	8,369,257	559,145
4	Subsidence Area	SA1A PH1	8,368,968	558,452
5	Operational Landfill	LO SPRTOP	8,367,627	558,755
5	Operational Landfill	OLF GUL 1	8,367,611	558,769
5	Operational Landfill	OLF GUL 2	8,367,615	558,780
5	Operational Landfill	OLF GUL 3	8,367,611	558,784
5	Operational Landfill	OLF3	8,367,672	558,942
5	Operational Landfill	OLFPH 2	8,367,836	558,884
6	Little Red Dog Quarry	LRD1	8,368,688	557,616
6	Little Red Dog Quarry	LRD2	8,368,714	557,759
6	Little Red Dog Quarry	LRD3	8,368,602	557,662
6	Little Red Dog Quarry	LRD4	8,368,744	557,635
6	Little Red Dog Quarry	LRD5	8,368,697	557,575
6	Little Red Dog Quarry	LRD6	8,368,690	557,620
6	Little Red Dog Quarry	LRD7	8,368,808	557,850
7	Conveyor Portal	CP1	8,367,922	557,946
7	Exploration Portal	EP1	8,368,183	557,824
7	Main Portal	MP1	8,368,042	557,864
7	North Portal	NP1	8,369,099	558,031
8	Shoreline	SL1	8,368,297	557,667
8	Shoreline	SL10	8,367,403	558,228
8	Shoreline	SL11	8,367,301	558,344
8	Shoreline	SL2	8,368,199	557,717
8	Shoreline	SL3	8,368,102	557,769
8	Shoreline	SL4	8,368,001	557,800
8	Shoreline	SL5	8,367,900	557,838
8	Shoreline	SL6	8,367,800	557,893
8	Shoreline	SL7	8,367,699	557,962
8	Shoreline	SL8	8,367,600	558,050
8	Shoreline	SL9	8,367,493	558,128

Appendices

Appendix A

Area 1 - Garrow Lake, Creek and Dam

Appendix A – AREA 1 – GARROW LAKE, CREEK AND DAM

Background

Decommissioning of Garrow Lake and Garrow Creek was accomplished by lowering the surface of the lake approximately two metres back to its original elevation. After the lake was lowered, the central portion of the dam (located approximately 0.5 km downstream from the former outlet of the lake) was removed. This now allows the lake to discharge naturally for approximately a 10 to 12 week period each summer through the original creek channel. The geotechnical inspection objectives are to assess the stability of the foreshore areas around Garrow lake, the outlet channel of Garrow Lake (i.e., in the area of the wavebreak structure), and the stability of the creek channel and creek slopes in the area of the former dam.

Area 1A – Shoreline Area of Garrow Lake

Decommissioning of the Garrow Dam involved lowering the level of Garrow Lake, exposing shoreline features that were previously submerged during operations. During the process of lowering the lake to its original level, erosion monitoring pins were established at four points evenly distributed around the perimeter of the lake, as shown on Figure 1. The monitoring was conducted to assess stability and erosion as drainage occurs and as the permafrost aggrades back into previously submerged shoreline materials. This monitoring was conducted to ensure that no sediments were being introduced into the lake as result of potential instability of shoreline features. Monitoring in 2003 & 2004 did not identify any stability concerns. The results of the erosion monitoring program are as follows:

	Station 8 Quadrant	Station 9 Quadrant	Station 10 Quadrant	Station 11 Quadrant
July 2003	56.5	45	61.5	50
Aug 2003	56.5	45	61.5	50
Sept 2003	56.5	44	61	50
June 2004	Snow prevented measurement			
July 2004	57.0	n.a.	17.5	50.7
Aug 2004	56.5	45.1	61.5	50.7
Sept 2004	Snow prevented measurement			
June 2005	No measurements available – mostly snow covered			
July 2005	See photographs – no measurements taken due to misunderstanding			
Sept 2005	Snow prevented measurement			

Table of distances in cm from top of pin to ground surface measured along side of pin.

It had been proposed to continue the previously established erosion pin monitoring program for 2005, and then to discontinue the monitoring if no issues are identified, and if recommended by the geotechnical

engineer conducting the 2005 inspection. Due to a misunderstanding no measurements along the side of the monitoring pins were taken at the erosion pins during July and August 2005. The results of the erosion pin measurements, as presented in the table above for 2003 and 2004, and the visual observations documented in various photographs in this and previous reports, indicate that the beach around Garrow Lake is stable and subject to only minor erosion where natural drainages cross. No evidence of mass erosion or instability has been detected. It is apparent that after two years of the lake level being drawn down and the beach re-exposed no adverse effects are occurring. Detailed monitoring by means of erosion pins therefore no longer seems to be justified. However, as a precaution measurements will be taken in 2006 during a snow free period.

In the event that significant erosion does occur in future, this is likely to increase TSS levels that would be identified in the normal weekly sampling of Garrow Lake. Thus, in addition to annual visual inspection, there will still be ongoing monitoring of potential adverse affects on the shoreline.

The following photographs show beach conditions observed in June 2005:

West Quadrant Pin at Station 11 – no measurement is available and the remainder of the shoreline remained snow or ice covered.

View looking north from the West Quadrant Pin at Station 11.

South Quadrant beach at Pin 10 on July 21 2005 – distance to shoreline is 16.4 m.

West Quadrant Pin at Station 11 on July 17 2005 – distance to shoreline is 10.3 m.

North Quadrant Pin at Station 8 on July 18 2005 – distance to shoreline is 30.4 m.

East Quadrant Pin at Station 9 on July 17 2005 – distance to shoreline is 26.7 m.

The following photographs were taken during the July 2005 geotechnical site inspection:

View south from south quadrant pin – Station 10.

View north at south quadrant pin at Station 10.

Small drainage which is in the process of forming a stable channel within silty sands and gravels adjacent to the Pin at South Quadrant Station 10.

Shoreline peg viewed from erosion pin at West Quadrant Station 11.

View north at West Quadrant (Station 11) – shoreline appears generally stable with only occasional erosion of small drainages in the lower part of the beach.

West Quadrant (Station 11) – view south.

View west at North Quadrant Pin at Station 8 – sediments become more coarse and less subject to minor erosion proceeding north and east from the west quadrant.

View east at North Quadrant Pin – Station 8.

View of shoreline at North Quadrant Pin – Station 8.

View south at East Quadrant Pin at Station 9 – sediments exposed are coarser than on west shore and less prone to localized erosion.

View north at East Quadrant Pin – Station 9.

View from pin at East Quadrant (Station 9) where beach has become steeper proceeding southwards along eastern shore, with coarser angular rock fragments.

Area 1B - Wave Break Structure

Garrow Creek is the only flow out of Garrow Lake and therefore controls the elevation of the lake. During operations, a wavebreak structure, consisting of a rockfill embankment approximately 5 m wide and 1 m high, was constructed along the southern edge of Garrow Lake at the entrance to Garrow Creek, as shown on Figure 1. During decommissioning, the wavebreak structure in the channel of Garrow Creek was excavated over a width of approximately 15 m to ensure flow out of the lake was not impeded. The remainder of the wavebreak structure was partially removed for aesthetic purposes.

The annual inspection of the Garrow Creek channel in the area of the wavebreak structure for signs of erosion was conducted. Visual appearances suggest the outflow channel is functioning well, with uniform flow over a width of approximately 15 m, as is illustrated in the following photographs. As per requirements in the Water Licence, annual surveying of the minimum lake elevation is being conducted to provide confirmation that the elevation of the invert of the lake outlet channel is remaining constant, and that the invert of the outlet channel is not being eroded.

In the spring of 2005 an elevation of the water level was taken at the beginning of the discharge season, but due to the presence of water on top of the ice, it is not clear if this actually represents the lake level.

By the time the ice had cleared sufficiently to properly measure the water surface, the lake had been discharging for several weeks, so a reading at this time would not have been representative of the maximum elevation of the lake. Presented below is the proposed chart to track the annual minimum lake elevation upon completion of discharge each year (late August). A reference pin was placed at the shoreline adjacent to the breach in the wave break structure. The results of surveys conducted in June and August 2005 are presented in the following table.

Garrow Lake Elevations (metres)

Date	Survey Station 352 Elev. (m)	Instrument Height	Rod Reading	Lake Elevation	Comments
27-Jun-05	1006.52	0.55	1.96	1005.11	
24-Aug-05	1006.52	0.55	2.00	1005.07	Flow in creek ceased within two weeks after this measurement

Note: Pre-Dam lake elevation at end of discharge season was reported to be 1,005.7 m.
Survey Station #352 location is -878.338, 3679.594 (local grid).

Panoramic view of Garrow Lake at left and wave break structure in the centre from waypoint GLWB1 on the access road on the western valley side slope.

View eastward from waypoint GLWB1 of the channel and drained valley downstream of the wave break structure.

Wider panoramic view from waypoint GLWB1 of valley downstream of wave break structure.

View from waypoint GLWB1.

View north and east from waypoint GLWB2 looks upstream at outlet channel with wave break structure extending to the right. Material in channel is gravel sized and flow is only slightly turbid. Water quality sampling indicates that turbidity levels downstream at the main dam were low, evidenced by TSS measurements of 3 mg/l, at or below detection, on July 24 and July 31st 2005.

View from waypoint GLWB2a looks downstream from a point in the middle of the outlet channel.

View from waypoint GLWB2a looks eastward across outlet channel illustrating uniform flow.

View from waypoint GLWB2a looking west along shoreline, with short remnant section of wavebreak structure in the foreground. Note coarse rock fragments in channel and clarity of shallow flowing water.

AREA 3C - Inspection of the Slopes in the area of the former Garrow Dam

Decommissioning of the Garrow Lake dam was accomplished by removing the centre portion of the dam, which allowed Garrow Creek to resume flowing in its original channel. The decommissioned dam was stabilized by construction of a rip-rap lined channel. The annual inspection focused on assessing the stability and integrity of the reclaimed side slopes of the remaining embankment structure on either abutment and of the associated rip-rap channel in between.

View of the west side of the dam breach from east abutment from waypoint GLD2, showing inlet at right, and rip-rapped channel which is generally in good condition. Opposite side slope, inclined at approximately 12 degrees, appears stable. A minor crack and slight slumping was observed at the left (southern) end of the side slope, about 4 m from the top of the rip-rap, over a length of about 10 m horizontally, and should be watched in subsequent inspections.

View of east side of dam breach from west abutment from waypoint GLD1. Both breach side slopes are inclined at approximately 12 degrees and are generally in good condition.

View northwards at waypoint GLD3, looking upstream along creek channel, showing rip-rap lining, which is in good condition. Flow is moderately uniform across channel, with high clarity.

View from 30 m downstream of waypoint GLD3 at a point where channel gradient increases. Filter fabric underlying the rip-rap material has been exposed over a width of 3 to 4 m and over a length of about 10m. Remedial action to replace rip-rap is recommended. The integrity of surrounding rip-rap does not appear to have been affected.

View looking upstream from waypoint GLD4 of overall breached dam and rip-rapped channel.

View looking downstream from waypoint GLD4 of lower end of outlet channel.

Appendix B

Area 2 - Frustration Lake Jetty and Access Road

Appendix B – AREA 2 – FRUSTRATION LAKE JETTY AND ACCESS ROAD

Decommissioning of the freshwater supply system at Frustration Lake included leaving the jetty largely intact, so as not to remove fish habitat. The primary aspect to be monitored is to confirm that during the open water season no excessive erosion of the jetty embankment is occurring and causing significant sediment generation, which could harm fish habitat. At the time of the inspection on July 28th the lake was ice free in the immediate vicinity of the embankment, except along part of the northern side. Additionally, the road accessing the lake area was inspected to ensure that run-off alongside the road and in drainage channels is not resulting in abnormal erosion of the surrounding land.

As illustrated in the following series of photographs of the intake jetty and the access road, there is no evidence of instability or erosion. The minor settlement and erosion features evident should continue to be observed and reviewed in subsequent annual geotechnical inspections.

Area 2A – Frustration Lake Jetty

No signs of abnormal erosion were observed. A small step in the crest was observed, as shown in the following photographs, having a vertical displacement of about 0.3 m, across a width of 2m, immediately behind the end of the causeway. This did not appear to be a new feature or to correspond with any evident heave of the sideslopes. While this feature should be inspected in following years, it does not appear to be an erosional feature, and may be the result of thaw of buried snow or ice. No remedial measures are required at this time.

View from waypoint FL1 looking towards shoreline – note slight subsidence in foreground.

View from waypoint FL1 looking across end of causeway – note slight subsidence in foreground.

View from waypoint FL2 looking across northern end of causeway – note slight subsidence in foreground, with vertical separation of about 0.3 m over a width of 2 m possibly from melting of snow/ice buried within the fill.

View from waypoint FL2 looking towards shoreline along west side of causeway. No sign of deformation observed along this side.

Area 2B – Frustration Lake Access Road

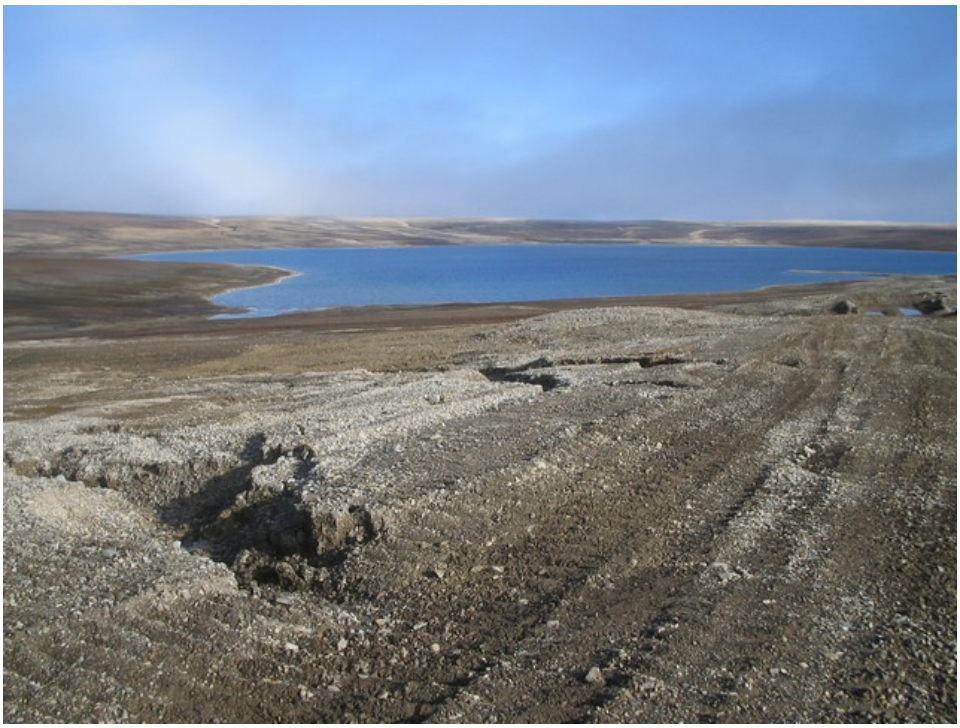
View of segment of road to Frustration Lake looking southwest towards mine site from the highest point of topography. Roadway and sideslope are in good condition, free of significant erosion features.

View to the southwest looking towards topographic high point showing approximately the middle one-third of the access road to Frustration Lake. This section is in good condition.

View to southwest looking up gently sloping section approximately 800 m from the water intake causeway. Roadway is in good condition, with only minor erosion of loose material at drainage crossing.

View northeast from a point about 800 m distant from intake causeway, showing good condition of roadway.

View northeast from about a point 600 m distant from intake causeway, showing a typical drainage swale.



Closer view of minor erosion gully at a point approximately 600 m distant from causeway. There appears to be sufficient coarse fraction so that self-armouring will occur in due course.

A drainage swale at about 500 m distance from intake causeway is in good condition.

Access roadway general view to the northeast at about 300 m distance from intake causeway, which is in good condition.

Appendix C

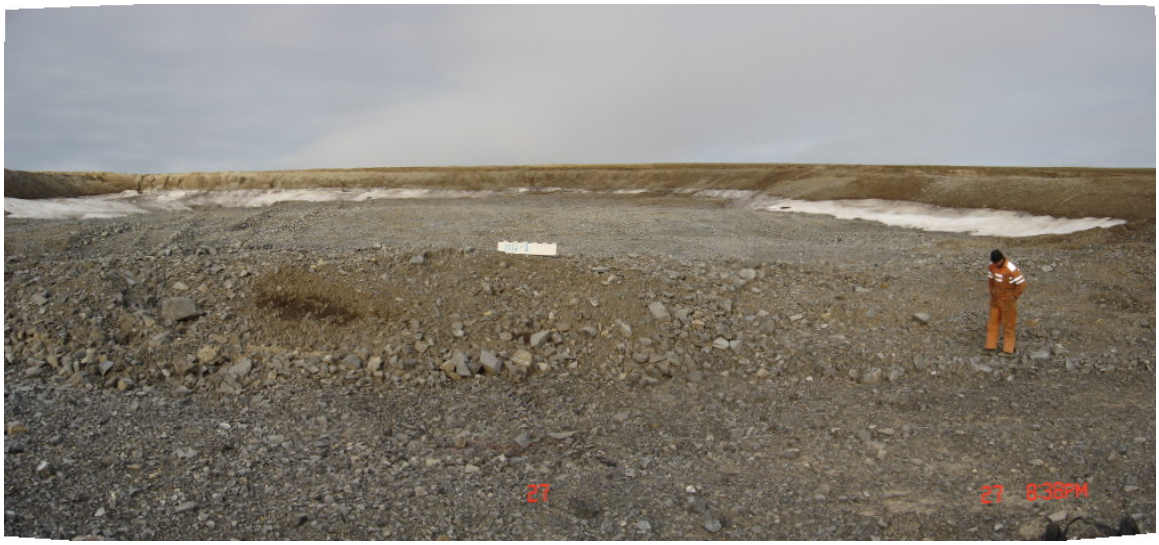
Area 3 - New Quarry Area

Appendix C – AREA 3 – NEW QUARRY AREA

The New Quarry area was a surface quarry where shale was excavated for road maintenance and other uses. At closure the pit walls were re-sloped for public safety and to improve the visual aesthetics.

The annual geotechnical inspection was carried out to assess perimeter slopes for instability or erosion, which might have an impact on human or wildlife safety.

The New Quarry is an area of approximately 800 m by 400 m. During reclamation, an area at the eastern corner was extended to provide material for closure. The floor of the quarry slopes gently and exposes bedrock. The perimeter sideslopes expose rock with a thin veneer of surficial soils, up to about 1 m thick.



View looking east up slope into extension of New Quarry, from waypoint NQ1 PH1, shows stable sideslopes.

Panoramic view looking west down slope into extension of New Quarry, from waypoint NQ1 PH2, shows area of disturbed soil, which appears to be stable.

View looking up west sideslope of New Quarry Extension, where stripped organic surficial soil has been spread. Occasional cracks but no signs of mass movement presenting any hazard to humans or wildlife.

The following photographs show the slopes around the perimeter of the older main part of the new Quarry.

Isolated erosion gully at waypoint NQ2 PH1.

Close-up view of erosion gully at waypoint NQ2 PH1, showing relatively small width, and apparent tendency to be self-armouring.

An isolated erosion gully at waypoint NQ3 PH1.

Area above waypoint NQ5 view looking northeast across area of disturbed surficial soil bordering edge of quarry sideslope. Illustrates typical pattern of surficial deformation caused by seasonal thaw of disturbed surficial soils. This poses no threat to humans or wildlife.

From waypoint NQ5 view west showing stable erosion free nature of surficial soils draped over the top edge of the new Quarry perimeter.

View to northwest at waypoint NQGTOP1 of a thaw/erosion gully on slope between road to Frustration Lake and the new Quarry area. This feature extends down to the top of the fan shown in photographs taken from waypoint NQ6 (see below).

View to northwest from waypoint NQGTOP2 of second thaw/erosion gully adjacent and parallel to the one shown above at waypoint NQGTOP1.

View at waypoint NQ 6 northeast across natural slopes to west of new Quarry area. Thawing and erosive processes have during the life of the project appear to have resulted in two parallel gullies and erosion of surficial weathered rock which has formed a fan as shown. The following photographs show more details of gully that has been eroded in the loosened disturbed materials deposited around the perimeter of the quarry area.

View northwest looking down gully at waypoint NQ6. This appears to be a gradual yet active erosive process, possibly as a result of intermittent storm runoff transporting coarse material from fan upslope, shown in photograph above. This area should continue to be monitored. See measurements of gully size noted in following photographs at known GPS locations to facilitate future comparison of rate of erosion. Localised erosion control measures, likely best implemented by manual labour, to protect surrounding tundra, should be planned for implemented as soon as is practical in 2006.

Photo shows gully through loosened materials around edge of new Quarry, down slope of waypoint NQ6. Following show more detailed measurements and photographs in the vicinity of waypoint NQ6, but labeled at NQG1.

At waypoint NQG1A depth of erosion gully is 72 cm. Signboard has top bars at 10 cm intervals.

At waypoint NQG1B, depth of gully is 1.4 m, and width is 5.6m at base.

At waypoint NQG1C, depth of gully is 51 cm, and width at base is 3.1 m.

At waypoint NQG1D, depth of gully is 52 cm, and width at base is 3.2 m.

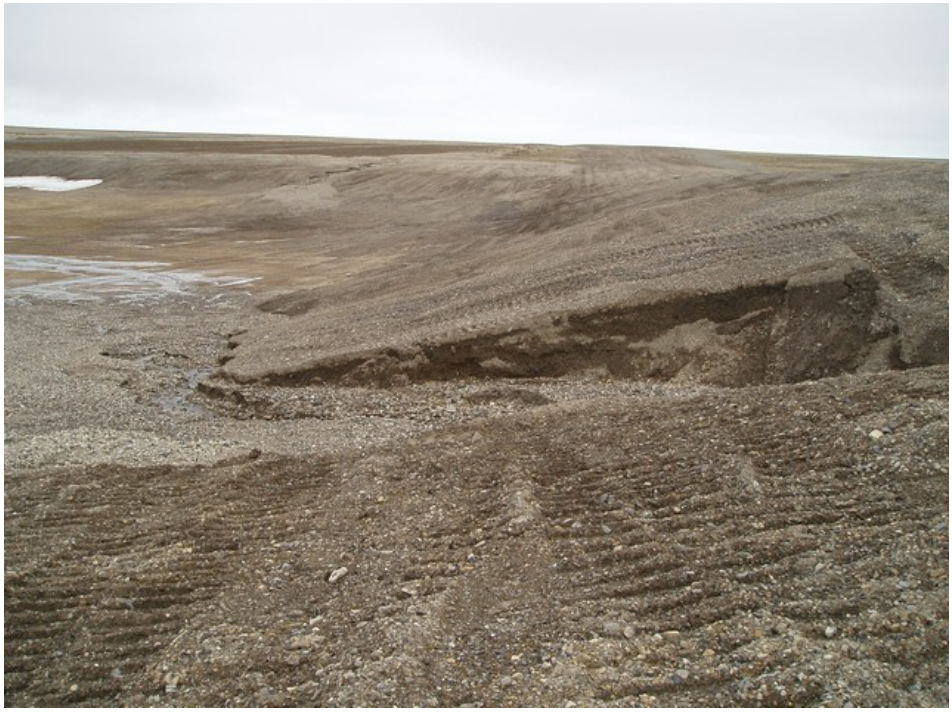
Photo looking west and upstream at waypoint NQG2 shows where drainage from Loon Lake crosses through fill material around the perimeter of the New Quarry area.

Photo looking downstream from waypoint NQG2CUL, where there is an existing collapsing culvert. While channel appears to self-armouring, the culvert should be removed and sideslopes flattened.

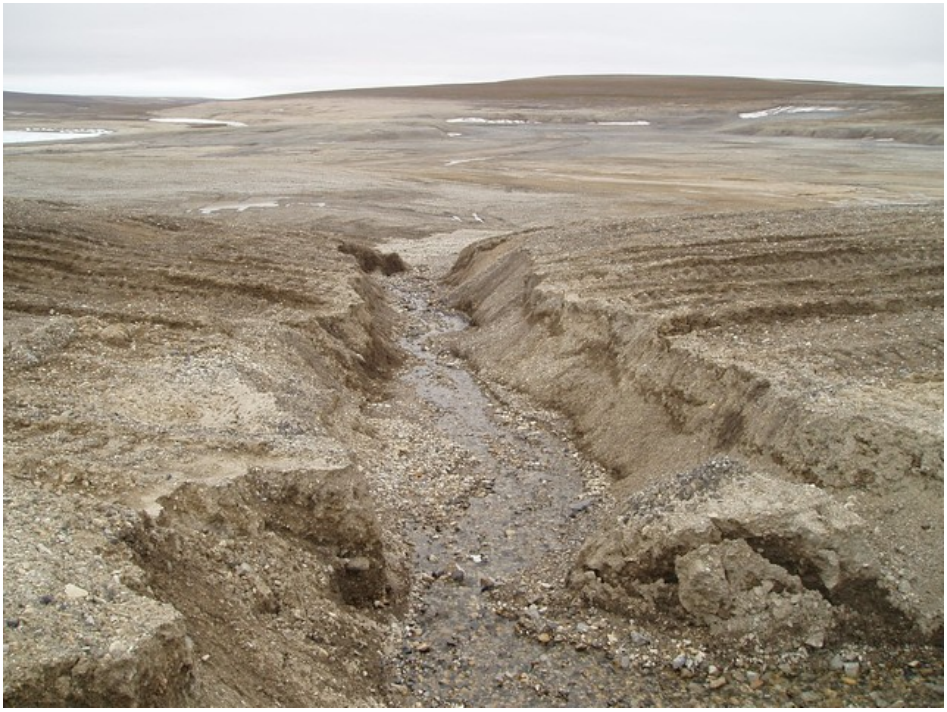
Photo looking upstream from waypoint NQG2CUL.

The following photographs show an area of erosion in the floor of the New Quarry in the vicinity of waypoint NQLOONLK, as located on Figure 1. Although this erosion feature is locally significant, its consequences overall are not. Transported sediment is being deposited across the floor of the new Quarry, as is evident in the photograph below. It is recommended that stabilisation measures be planned and executed as soon as is reasonably practical in 2006, so as to prevent further deepening or widening of the erosion gully

Debris fanning across floor of New Quarry.



View adjacent and immediately to west of view shown above showing significant erosional down cutting of what appears to be quarry strippings of silty sand and gravels.



View upstream of view above. Erosional down cutting of loose silty sand and gravel can be expected to continue if coarse material is not placed here.

View further upstream of above view, at point where drainage channel changes direction and becomes steeper and more active erosion is occurring.

View upstream from view shown above where channel is steepening and deepening.

Further upstream, where drainage is ponding behind stripping fill slope. Downstream of this point (behind the photographer) the channel begins to downcut and steepen.

View to the west shows drainage which has formed a meandering pond across the upper and western part of the New Quarry area.

View eastwards from waypoint NQLOONCK of erosion gully at waypoint NQ6.

Appendix D

Area 4 - Subsidence Area

Appendix D – AREA 4 – SUBSIDENCE AREA

Background

This area overlies a section of underground mine workings that has subsided more aggressively than elsewhere above the mine workings. Concerns related to the physical safety of the public and for wildlife traveling across the land surface in this area are the primary aspect that requires regular monitoring. As part of the annual geotechnical inspection the following tasks were carried out:

- Review of the annual topographic subsidence survey conducted by TCL, comparing the results to the previous survey in 2004; and
- Visual inspection of the area to identify any features that may be of concern related to public and wildlife safety.

The annual geotechnical inspection presented herein is a pictorial view, interpreted in conjunction with survey data from the past three years. Comments are restricted to a discussion of changes to surface profiles, and whether there are any surface features representing a potential safety hazard to the public or animals. The geotechnical aspects of the causes of subsidence are addressed separately in a report prepared by Golder Associates.

Annual GPS Survey

A GPS survey of the subsidence area was conducted in 2005 by Teck Cominco. Between the 2003 and 2004 annual survey's, as part of site reclamation, some re-contouring of this area occurred. Therefore, the 2004 survey data will be used as the baseline to monitor future potential movements of the area. The survey data is presented as a contour plan of the area and as a series of sections running east-west through the area, spaced at 50-metre intervals north-south. This information is shown on TCL Figure No. PM- 2005-Area 8 – s1, dated December 15 2005. A copy of this figure is included at the end of this appendix. The sections provide the profile of the ground as surveyed in 2005 compared to the profile of the ground as surveyed in 2004. The vertical scale of the sections has been exaggerated by a factor of two to enhance any vertical movements. It is noted that the actual area of subsidence extends to the west of the central roadway, i.e. to the west of mine grid line E 1600. The survey was extended further east to provide a baseline. The following is inferred from inspection of the survey information:

1. Slopes in the general subsidence area are generally gentle and no steeper than 1 vertical in 5 horizontal, and are not considered to present any safety hazard for either the public or wildlife;

2. The degree of variation between profiles for 2005 and 2004 is similar across the subsidence area and across the baseline area further to the east, and provides an indication of the overall level of accuracy of the survey;
3. Inspection of the cross-sections indicates that there are no conclusive discernible changes in the surface profiles between the 2004 and the 2005 survey, which indicates that no significant movement of the land surface has occurred during the last year; and
4. The only possible exception is along Section 2150, where between stations 1490 and 1530, settlement of approximately 0.3 m is discernible – this trend is not apparent in the adjacent cross-sections nor from comparison of the contours.

Surface Cracks and Visual Inspection of the Subsidence Area

There are a number of surface cracks evident across the subsidence area. As part of the annual monitoring program, the extent of these cracks was surveyed to establish a baseline for determining if they are growing in either number or in extent. Outlines of the cracks are presented in TCL Figure No. PM- 2005-Area 8 – s1, dated December 15 2005, included at the end of this appendix.

In 2005, the most prominent crack was photographed, as shown later in this appendix. The other cracks, located across the southern part of the subsidence area were of a minor and almost imperceptible and discontinuous nature. No differential movement across the cracks was observed. Photographs taken in 2005 as shown below from known positions will be a baseline for comparison with photographs in subsequent years, together with detailed survey across the area.

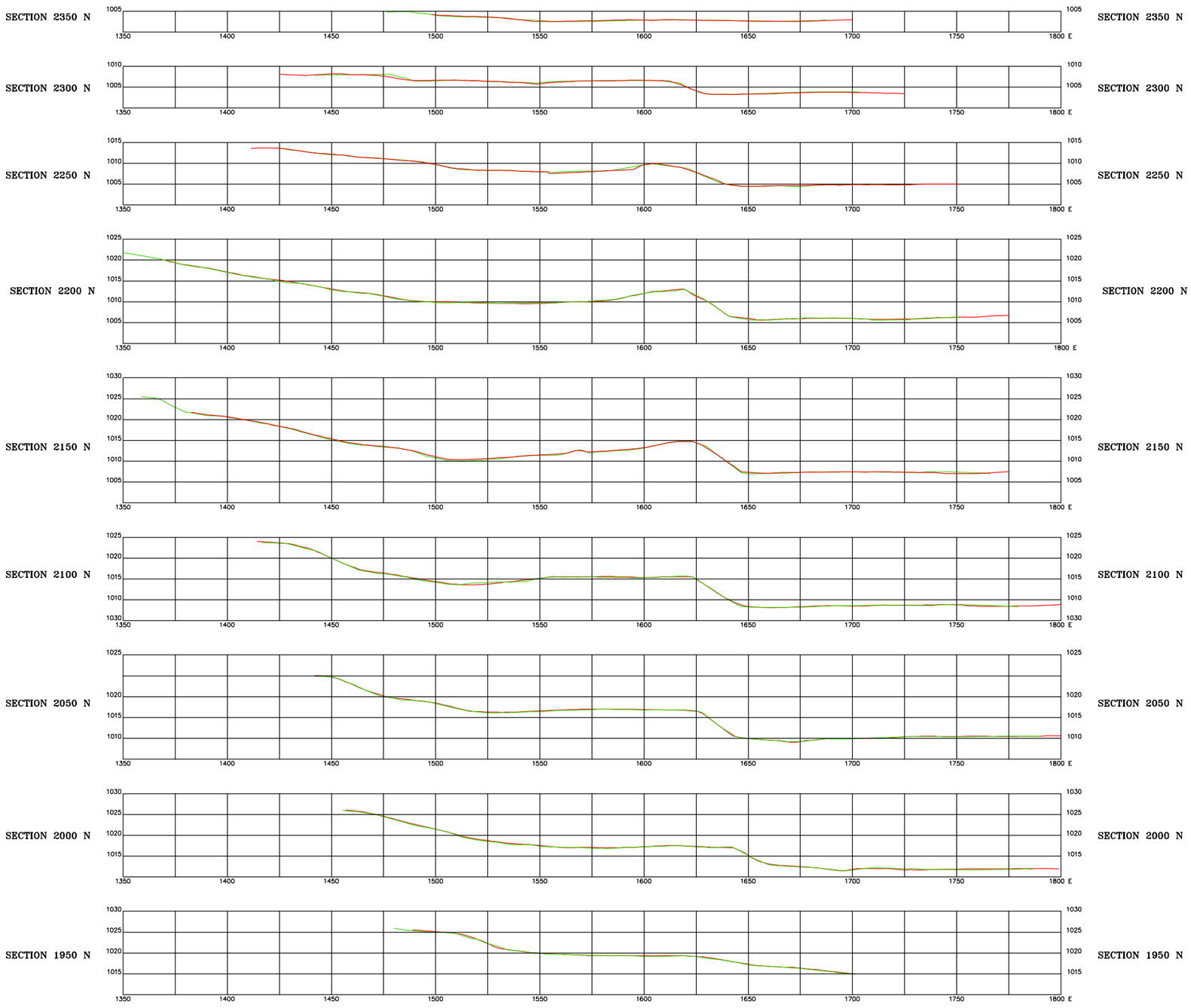
In conclusion, no surface features were observed across the subsidence area that pose a hazard to human health of wildlife.

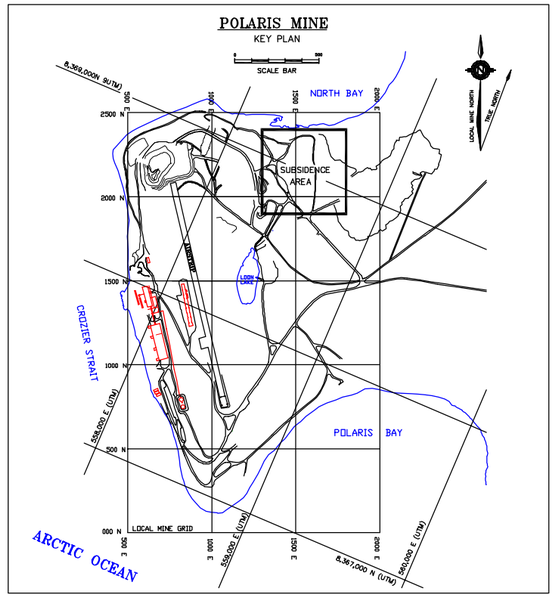
Photo of location SA1 at waypoint SA PH 1, with view looking west. The marker board is positioned adjacent to a tension crack. Other than the ponding in the foreground, this crack is the only distinct feature visible across the entire subsidence area.

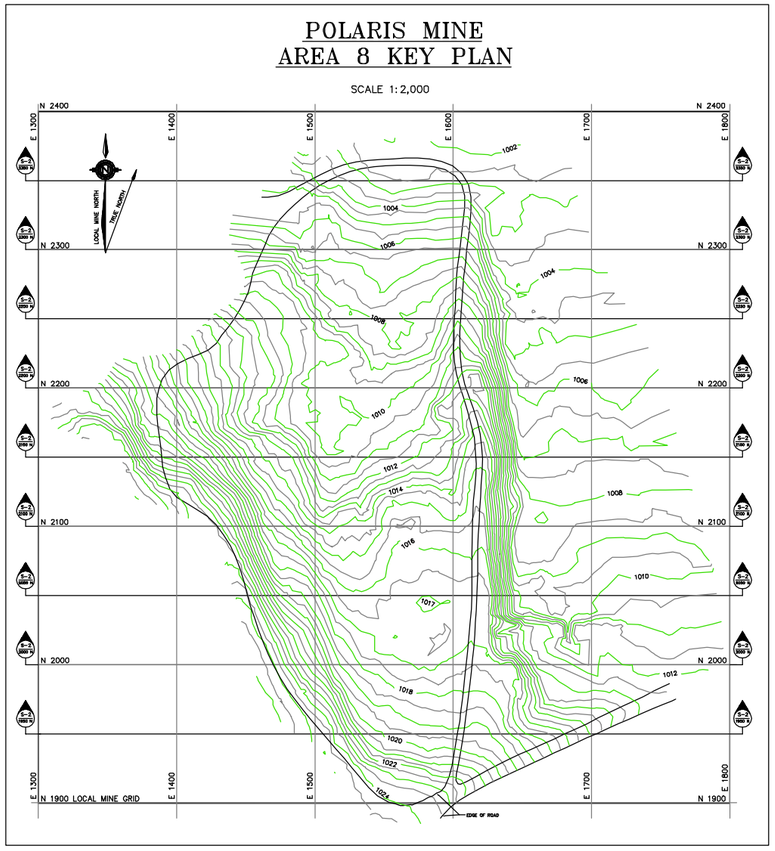
Photo of location SA1 from waypoint SA1 PH2, looking northwest, showing a crack, which is some 30m in length, several cm in width, and no differential displacement. This terrain does not present a hazard to humans or wildlife.

Subsidence Area from waypoint SA PH 3, atop a small road embankment on the eastern margin of the subsidence area.

Photo of Subsidence Area looking west to northwest from location SA PH 3.







NOTES:
1. DATA COLLECTED JULY, 2005 BY TECK COMINCO REPRESENTATIVE.
2. SECTION CO-ORDINATES AND ELEVATIONS REFER TO LOCAL MINE DATUM.
3. CONTOUR INTERVALS = 0.5 m.

LEGEND:
DENOTES 2004 SURFACE.
DENOTES 2005 SURFACE.

No.	REVISION	DATE
5		
4		
3	:	.
2	.	.
1	.	.

PROJECT:

POLARIS MINE POST CLOSURE
2005 ANNUAL SITE INSPECTION

DRAWING:

PLAN & SECTION VIEWS
SUBSIDENCE - AREA 8

DRAWN BY: T. M. TECH SERVICES
5-337/SURVEY3
DATE: DECEMBER 12, 2005
CLIENT: teckcominco
SCALE: 1:1,000 HORZ. 1:500 VERT.
FIGURE No. PM 2005 AREA 8
SHEET: 1 OF 1

Appendix E

Area 5 - Operational Landfill

Appendix E – AREA 5 – OPERATIONAL LANDFILL

The primary reclamation objective for the Operational Landfill is to ensure that the contents in the landfill remain permanently encapsulated in permafrost. To confirm this the physical integrity of the cap must be monitored and the thermal regime of the landfill cover caps is monitored through the use of thermistors. The physical integrity of the cap is monitored as part of the geotechnical inspection, and the results of the thermal monitoring program are reported separately by TCL.

The physical integrity of the cover caps and the landfill as a whole were inspected, as shown in the following photographs:

View southwest from waypoint OLFPH2, showing the northeast end slope, which is in good condition.

View southwest along main sideslope of the Operational Landfill from waypoint OLF3, again showing slopes in good condition, free of any erosion or deformation.

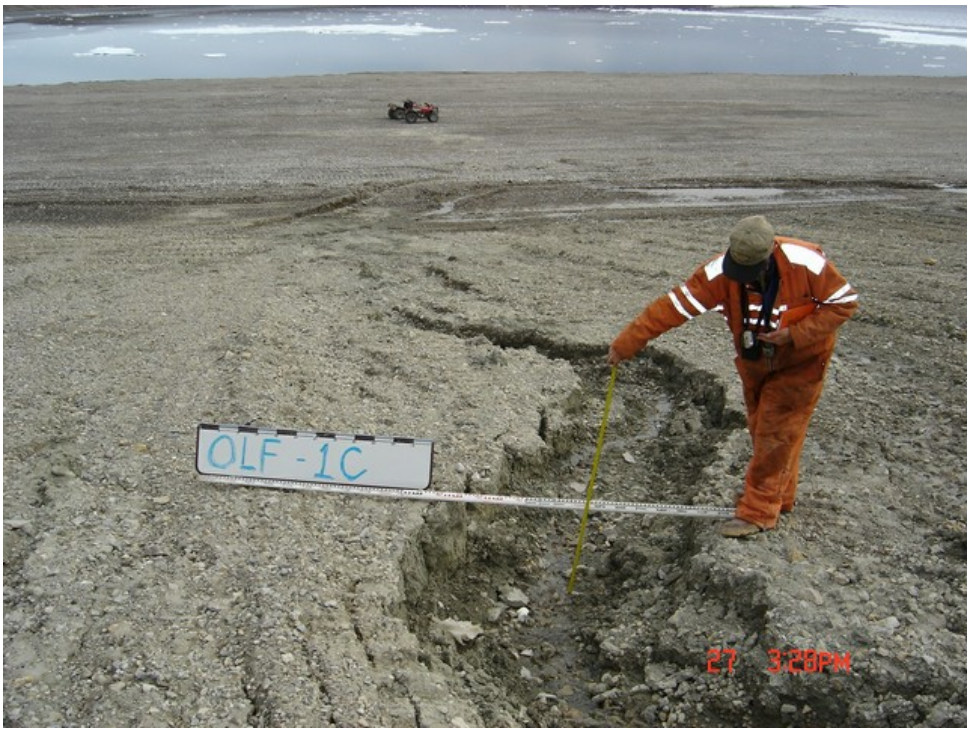
Minor almost imperceptible crack at edge of approach road to northeast end of the operational landfill, viewed from waypoint OLFPH 2. This is not associated with any other signs of settlement of instability in the slope above or below, and poses no hazard to human health or wildlife.

The following photographs show the central part of the slope above the Operational Landfill, which exhibits some moderate erosion activity across a width of some 30 m. This appears to be related to infilling of a natural drainage course, which accumulates shallow groundwater during summer thaw, and which drains towards the slope above the landfill. A small pond has formed as shown in the photograph below at the back, or northern, edge of the landfill. This is a localised feature situated approximately at the mid-point of the northern limit of the landfill. The observed erosion and seepage discharge in the slope above the landfill is not apparently adversely impacting the integrity of the landfill itself. This location is a natural drainage channel and cannot be easily diverted around the landfill. The cap of the operational landfill in this area appears stable and uniform. Annual monitoring of the slope above the landfill is recommended. The following photographs and measurements will facilitate future tracking of the erosion features and effects of seepage flow, if any, on the landfill.

View downslope from waypoint LO SPR TOP. The degree of erosion is not serious and appears to be gradually self-armouring.

Erosion gully at waypoint OLF GUL1 has a depth of 20 cm.

Erosion gully at waypoint OLF GUL2 is 50 cm deep, view upstream.



At waypoint OLF GUL2 looking upstream.

View downslope at waypoint OLF GUL3 - erosion gully is 34 cm deep.

Appendix F

Area 6 – Little Red Dog (LRD) Quarry Landfill

Appendix F – AREA 6 – LITTLE RED DOG (LRD) QUARRY LANDFILL

The primary reclamation objective is to ensure that the contents of the LRD Quarry Landfill remain permanently encapsulated in permafrost.

To confirm this, the annual geotechnical inspection will monitor the physical integrity of the landfill cover cap. Additionally, the temperature profile of the landfill cover cap is being monitored by means of thermistors installed at 4 locations. The purpose of the thermistors is to monitor the establishment of permafrost through the full thickness of the landfill and to verify that the active layer does not extend beneath the base of the cover cap. The thermistors were just installed during the summer of 2005 and were monitored while personnel were on site. The results of monitoring are reported separately by TCL.

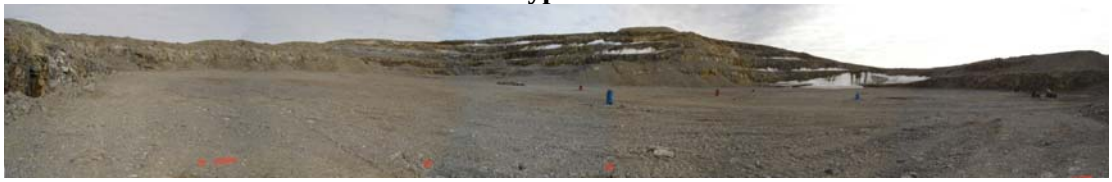
The physical integrity of the cover cap was inspected, together with the condition of the quarry walls. During the site inspection, surface water that was observed flowing from the capping layer at the entrance to the LRD Quarry area was sampled and analyzed for total metals (lead and zinc), as required in the landfill construction approvals, The results of the analyses will be reported by others. No significant metal levels were detected.

The following photographs show panoramic views from several vantage points across the surface of the cap on the LRD landfill. No signs of settlement or instability were observed across the entire area.

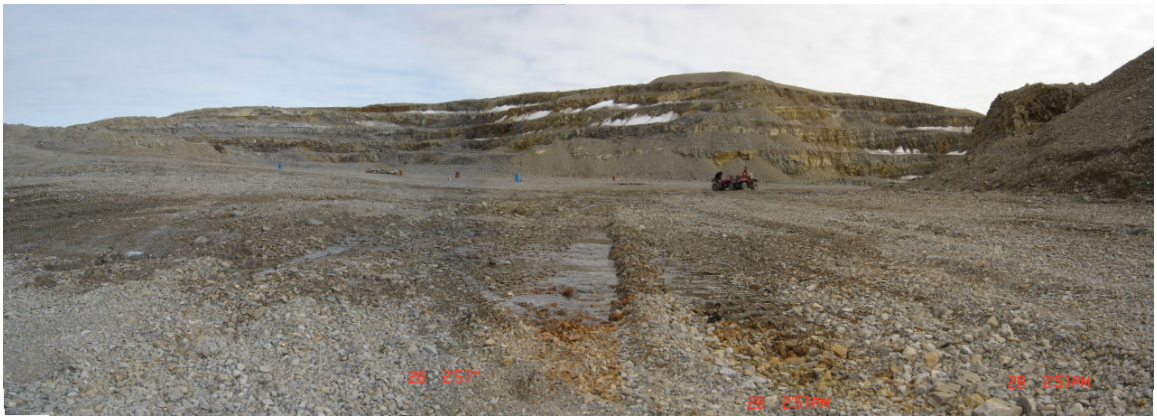
From waypoint LRD1.

From waypoint LRD2.

From waypoint LRD3.



From waypoint LRD4.



View approximately eastwards through the topographic "notch" in the perimeter of the LRD quarry, from waypoint LRD5, where seepage through surficial gravel and rockfill daylights over a distance of some 10m before re-infiltrating. This flow was sampled and was estimate at 1 to 2 litres/sec, exhibiting little to no turbidity. No erosion or instability was observed in the slopes below the notch of the LRD quarry.

View to north from waypoint LRD5 at entrance to LRD quarry landfill. This illustrates perimeter berm about 1.8 m high that borders the top perimeter edge of the LRD quarry sidewalls.

View approximately west from waypoint LRD7 across LRD quarry showing multiple benches of highest part of the quarry sideslopes. No evidence of instability was observed during a tour along the top of the quarry walls. A safety berm is present and is also in good condition.

View of the terrain adjacent to the north end of the airstrip, and of the safety berm around the upper edge of the LRD quarry slopes. The berms are in good condition.

Appendix G

Area 7 - Mine Portals

Appendix G – AREA 7 – MINE PORTALS

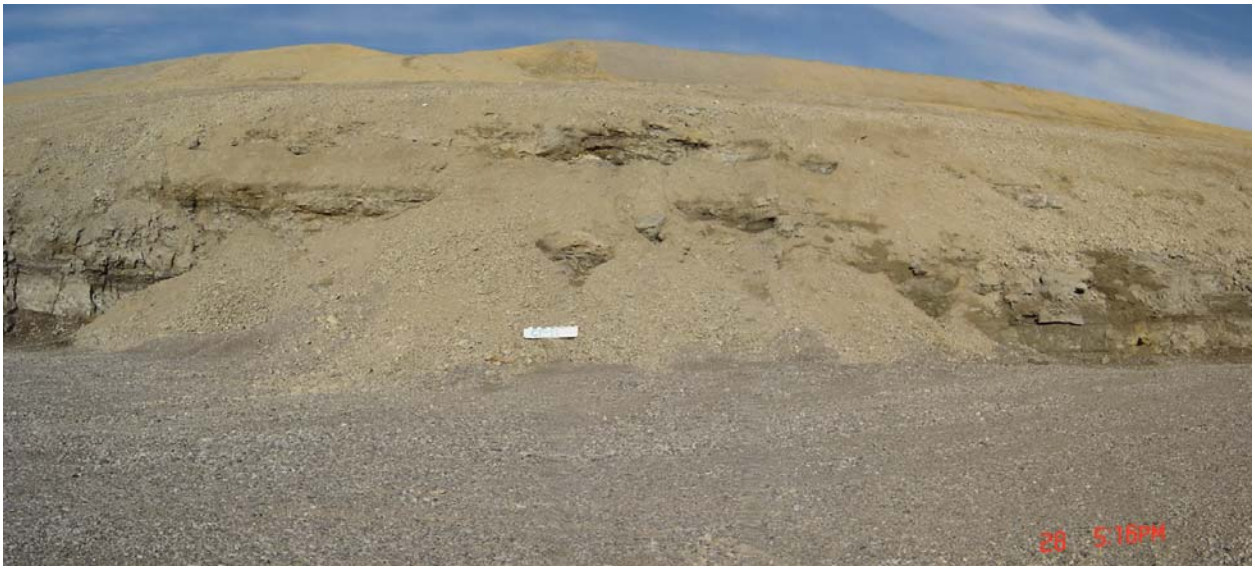
BACKGROUND

The Polaris Mine was an underground mining operation. There were four portals used to access the mine and/or to convey ore out of the mine. As part of the mine decommissioning and reclamation activities, the portals were sealed to prevent the public from accessing the underground mine workings.

The objectives of the annual geotechnical inspection were to look for evidence of any settlement, erosion of the mine seals, or instability at the four portal areas, which might present a risk to human, or wildlife physical safety. As shown in the following photographs, all of the portals are in good condition, free of signs of instability or erosion.

Area 7A - Conveyor Portal

The following photographs document the good condition of the area above and surrounding the Conveyor Portal. No signs of instability or settlement were observed.



Conveyor Portal from waypoint CP1.

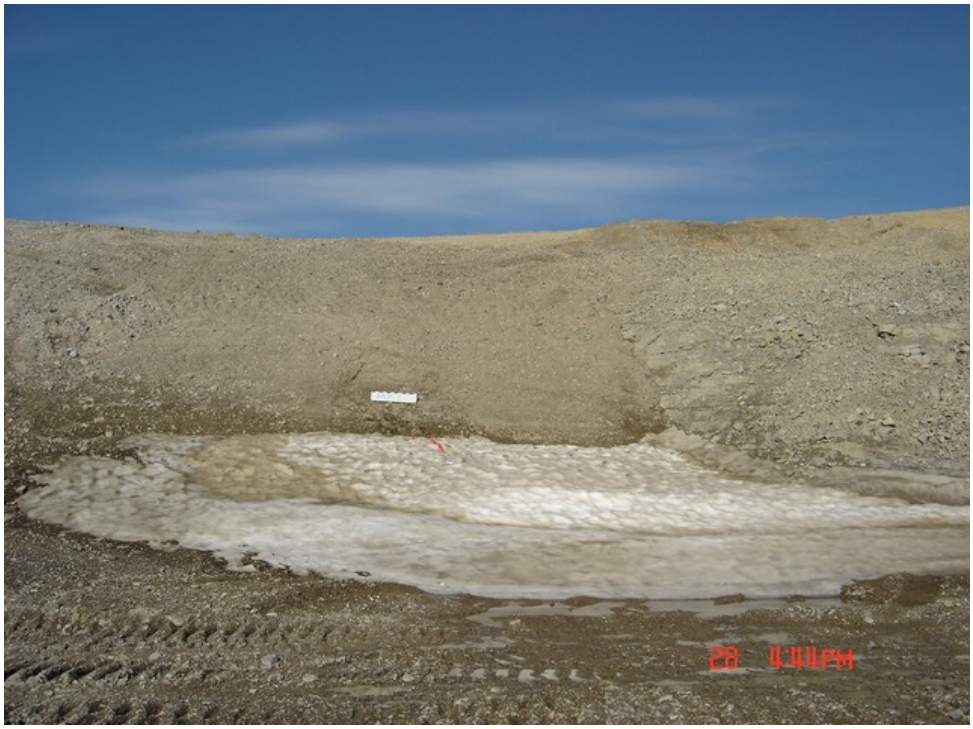
Area 7B - Exploration Portal

The following photographs document the good condition of the area above and surrounding the Exploration Portal. No signs of instability or settlement were observed.

View from waypoint EP1, with no drainage or signs of discharge from vent pipe. Overall slope is approximately 10 degrees and covered in coarse gravel sized rockfill. No signs of instability or hazard to humans or wildlife.

AREA 7C - Main Portal

The following photographs document the good condition of the area above and surrounding the Main Portal. No signs of instability or settlement were observed.

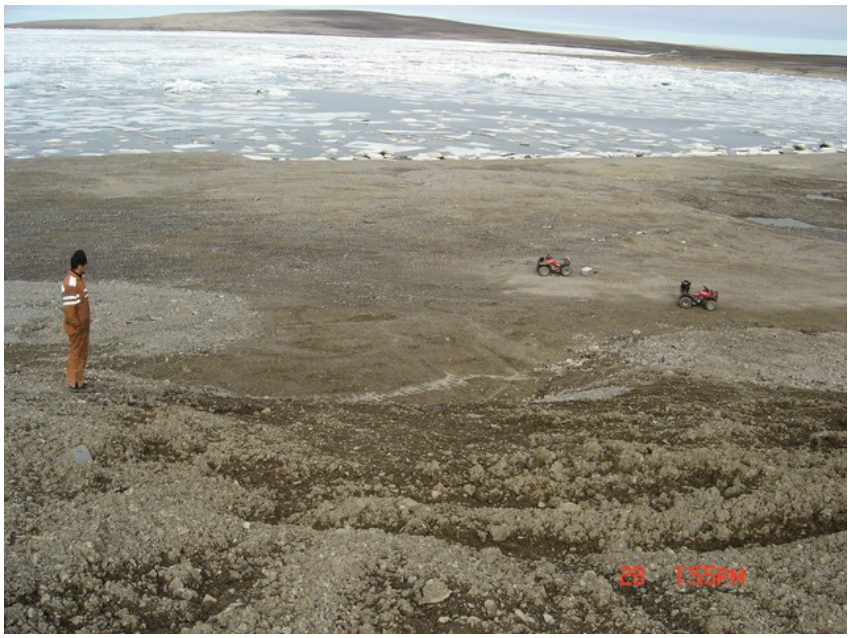


Main Portal from waypoint MP1; no signs of instability or hazards to human or wildlife safety.

Slope above Main Portal area is inclined at about 26 degrees, locally steepening to 35 degrees. Minor slumping was observed, but not considered to present hazard to humans or wildlife.

AREA 7D - North Portal

The following photographs document the good condition of the area above and surrounding the North Portal. No signs of instability or settlement were observed.



North Portal from slope above, which shows no sign of cracks or distress.

North Portal looking west across backfill. This portal accessed a decline and was frozen prior to being backfilled. Thus, the minor drainage along the toe of the cap is considered to be of a surficial nature only.

North Portal from waypoint NP1.

Appendix H

Area 8 - Marine Foreshore Adjacent to Former Dock

Appendix H – AREA 8 – MARINE FORESHORE ADJACENT TO FORMER DOCK

Background

In 2003 and / 2004 the former marine dock cells were removed and the shoreline re-contoured as part of the site's reclamation activities. The marine foreshores both north and south of the former dock were also re-contoured as part of the reclamation process. The objective of the annual geotechnical inspection was to monitor the remediated foreshore and adjacent slopes for signs of abnormal erosion or instability.

The shape and contours of the foreshore are dynamic due to being constantly re-worked by the action of sea ice. Minor ongoing changes to the foreshore topographic features caused by the action of the ice are to be expected. A combination of photographs and surveys has been initiated to monitor conditions. In 2005 a comprehensive set of observation points were set up and photographs taken from each to form a baseline of information for future annual inspections. Additionally, three transects were surveyed in detail to establish a baseline, for comparison of topographic measurements from year to year. The report presents this initial set of observations, which will be compared in future annual inspections. The drawing provided by Teck Cominco, which is included at the end of this appendix, indicates that the slopes along the shoreline are gentle and generally uniform, and are no steeper than 1 vertical in 10 horizontal. The shoreline immediately adjacent to the ocean undulates and is more variable, as shown in the photographs and surveyed sections.

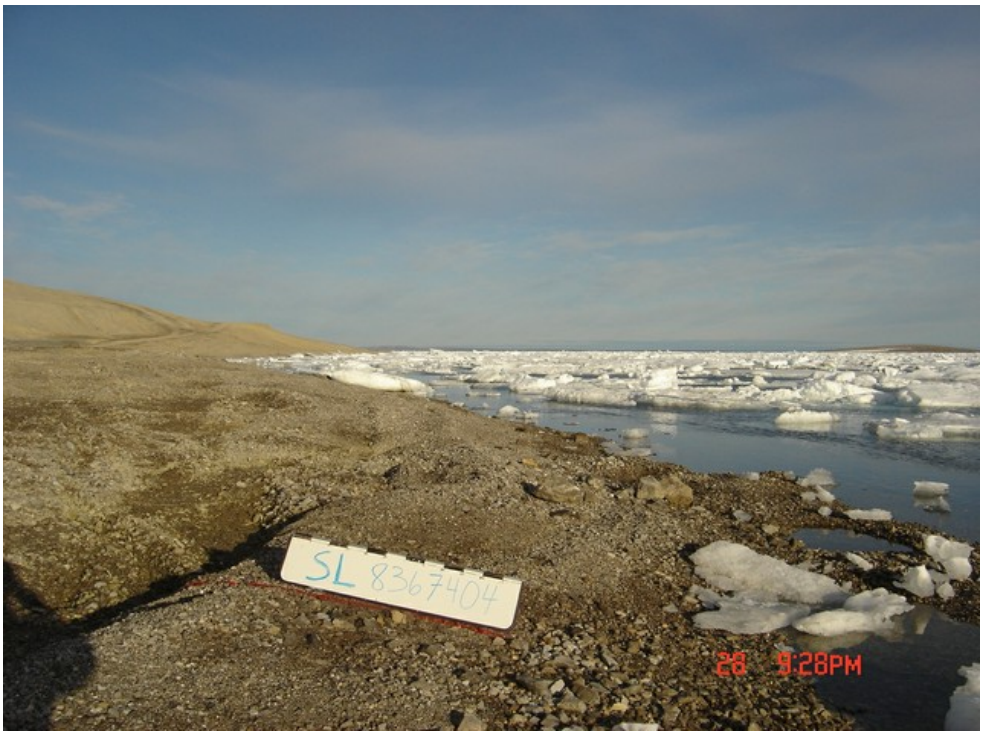
Photographic Monitoring

The following photographs show views along the shoreline and looking east upslope above it from successive points at 100m intervals. The shoreline and adjacent slopes above it are free of signs of settlement, instability or major erosion.

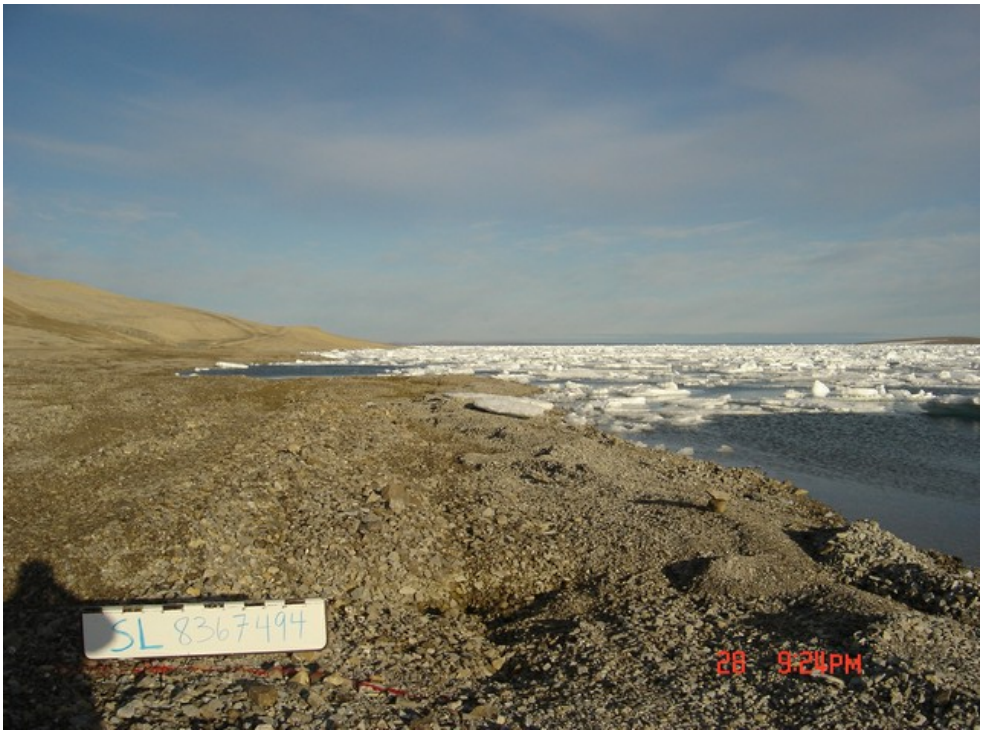
SL-11 North 8 367 300 - View to east.

SL-11 North 8 367 300 view to south.

SL-10 North 8 367 400 view to east.



SL-10 North 8 367 400 view to south.



SL-9 North 8 367 500 view to east.

SL-9 North 8 367 500 view to south.

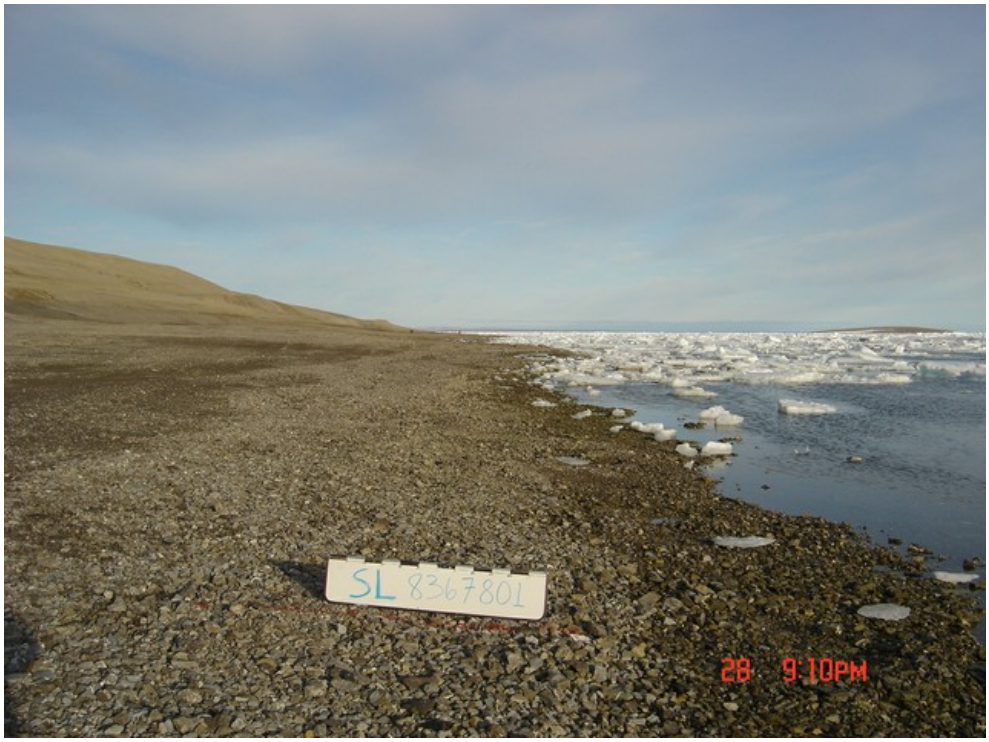
SL-8 North 8 367 600 view to east.

SL-8 North 8 367 600 view to south.

SL-7 North 8 367 700 view to east.

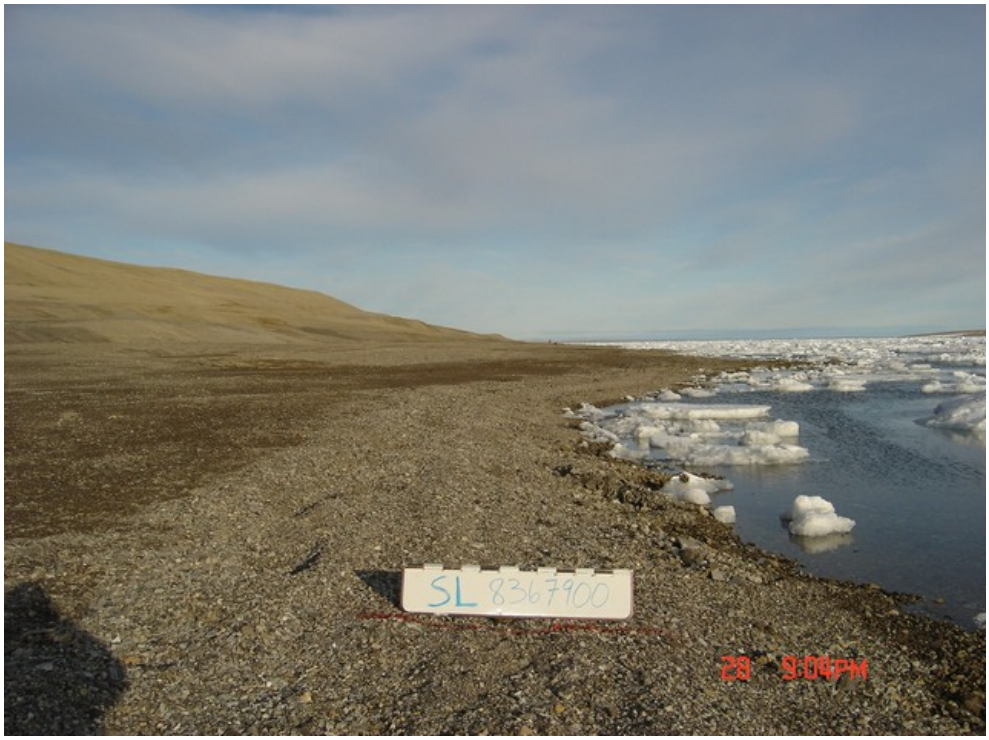
SL-7 North 8 367 700 view to south.

SL-6 North 8 367 800 view to east.



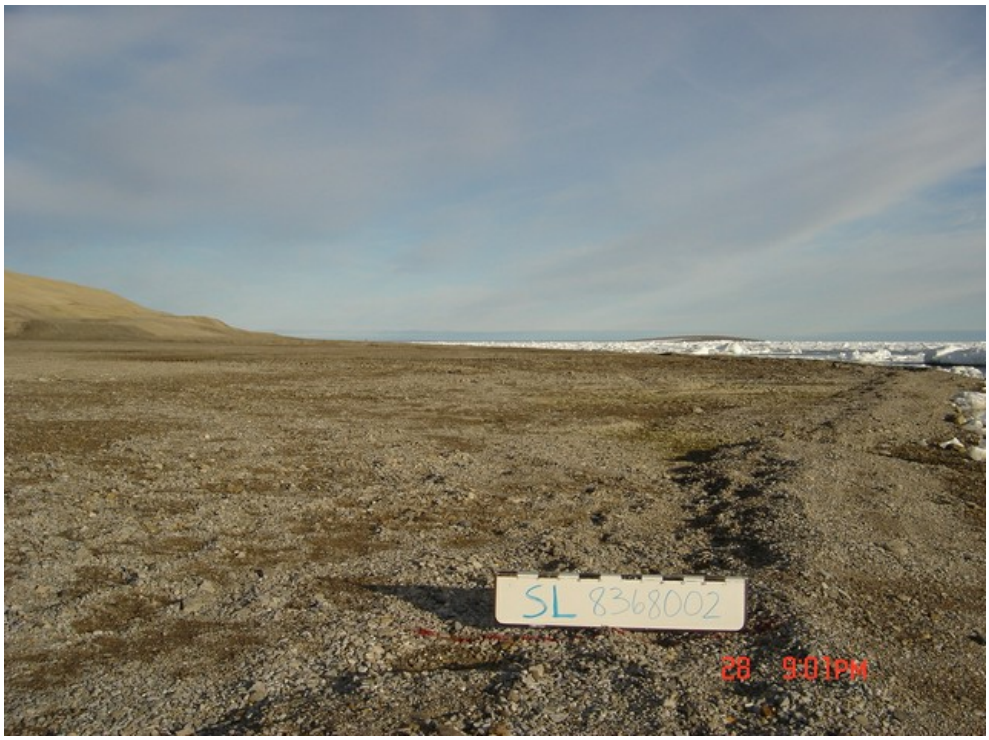
SL-6 North 8 367 800 view to south.

SL-5 North 8 367 900 view to east.



SL-5 North 8 367 900 view to south.

SL-4 North 8 368 000 view to east.



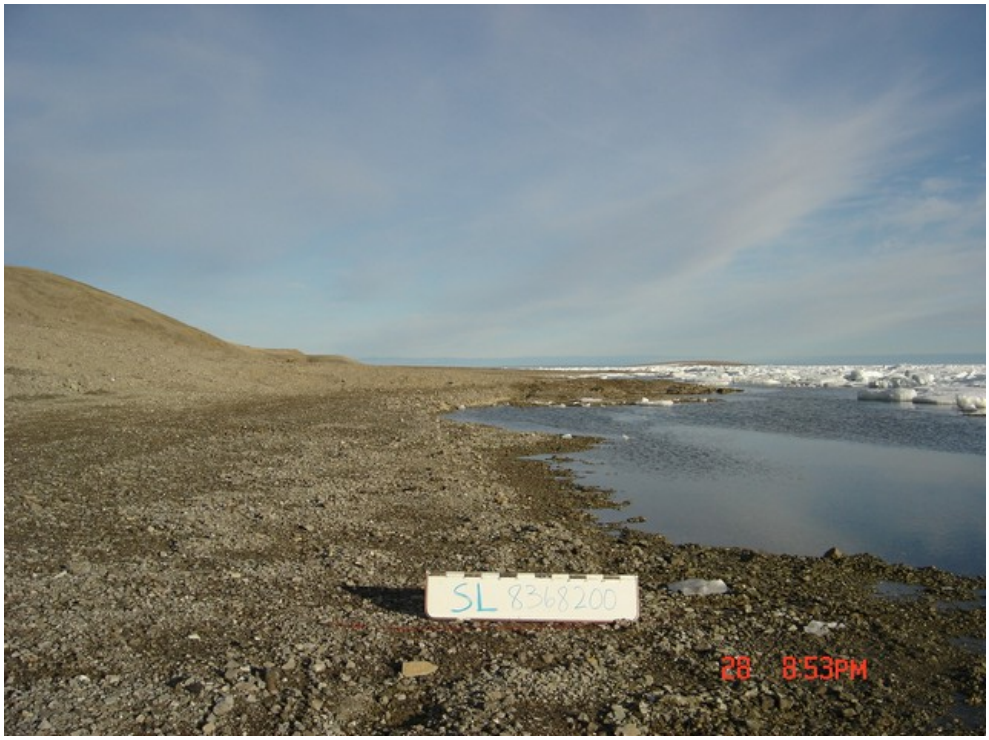
SL-4 North 8 368 000 view to south.

SL-4 North 8 368 000 view to south.

SL-3 North 8 368 100 view to east.

SL-3 North 8 368 100 view to south.

SL-2 North 8 368 200 view to east.



SL-2 North 8 368 200 view to south.

SL-1 North 8 368 300 view to south.

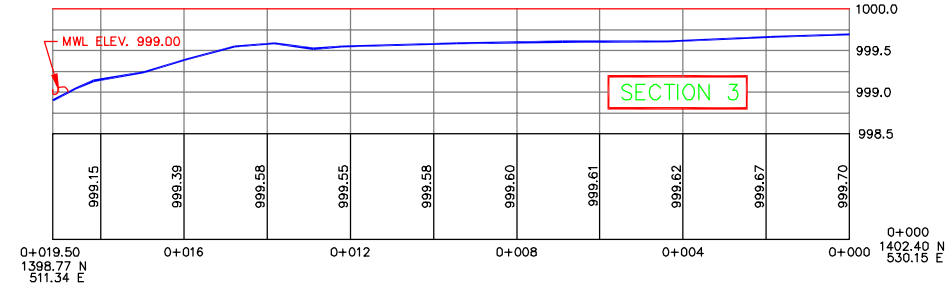
Surveyed Transects

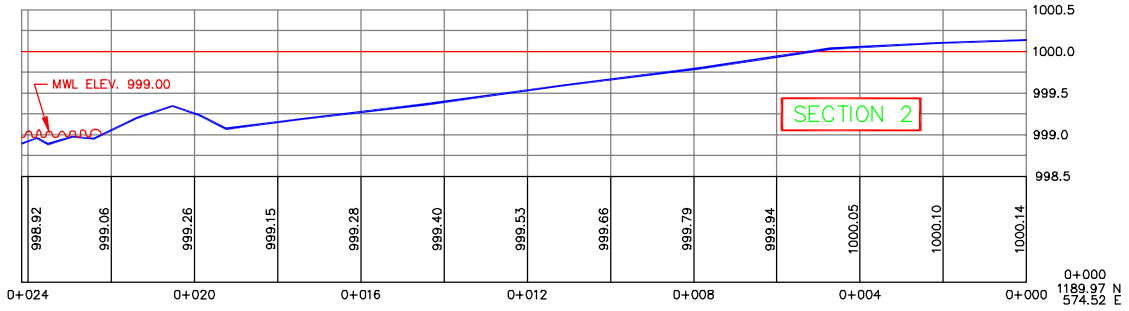
Presented in the drawing provided by Teck Cominco on the following page are the cross sections of the three transects surveyed. The transects ending at the ocean will either be extended or shortened from year to year depending on where the tide is at the time the survey is conducted. However, over a number of years, comparisons of these transects will give an indication of the changes to the foreshore topography.

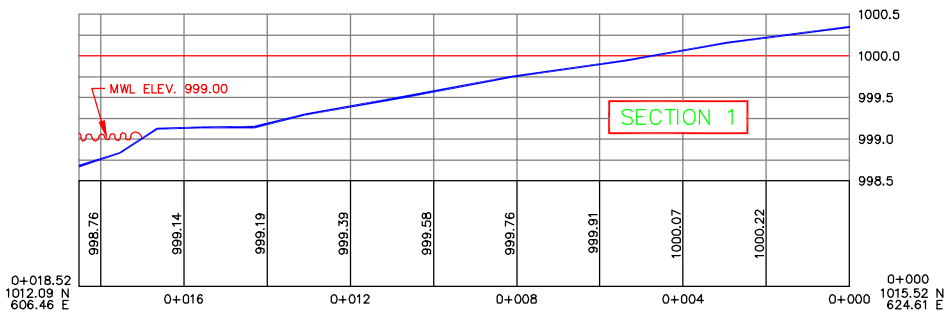
Section 1 is located at the point where the shoreline intersects UTM gridline N 8,367,500 and waypoint SL-9. The overall slope behind the shoreline is gently sloping at approximately 1 Vertical in 11 horizontal.

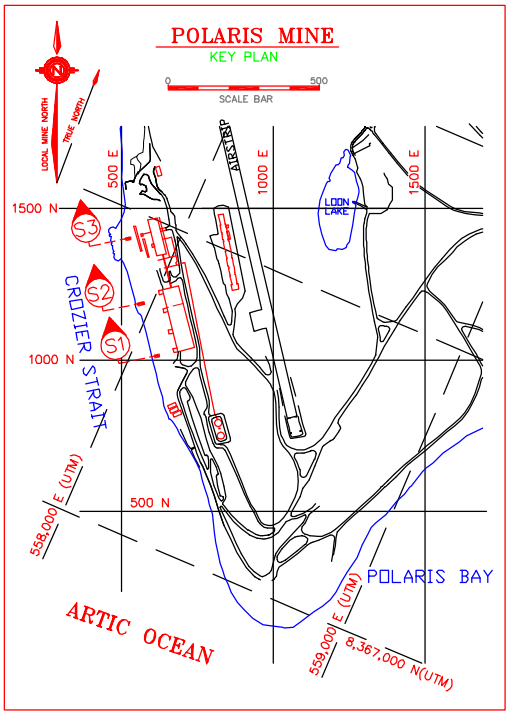
Section 2 is located at the point where the shoreline intersects UTM gridline N 8,367,750, between waypoints SL-6 and SL-7. The overall slope behind the shoreline is gently sloping at approximately 1 Vertical in 15 horizontal, and the slight undulation at the immediate shoreline is reflected in the photographs.

Section 3 is located at the point where the shoreline intersects UTM gridline N 8,367,900 and waypoint SL-5. The overall slope behind the shoreline is almost flat, with a gentle slope at the immediate shoreline, as shown in the photograph.









No.	REVISION	DATE	BY
5			
4			
3			
2			
1			

NOTE:
1. DATA COLLECTED JULY, 2005 BY TECK COMINCO REPRESENTATIVE.
2. SECTION CO-ORDINATES AND ELEVATIONS REFER TO LOCAL MINE DATUM.

PROJECT:
POLARIS MINE POST CLOSURE 2005 ANNUAL SITE INSPECTION

DRAWING:
MARINE FORESHORE SECTIONS

TM TECH SERVICES
CRANBROOK B.C.
(250)489-1855

DRAWN BY: T. MELNICK
5-337 SXS
DATE: DEC. 6/05
FIGURE No.
CLIENT: teckcominco
SCALE: 1:100 Horz. 1:50 Vert.
SHEET:

PM	2005	AREA 4	1 OF 1