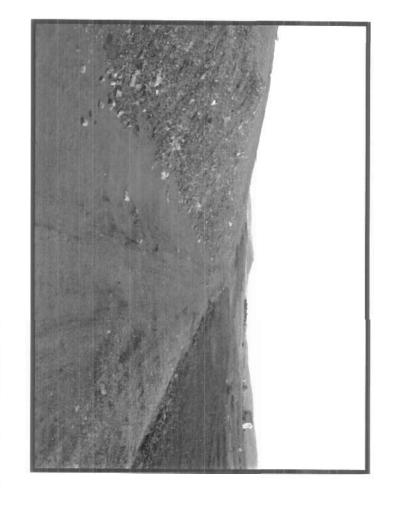
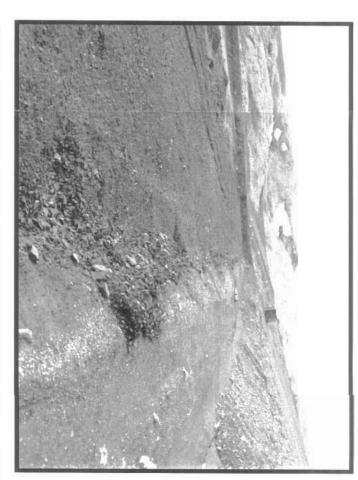


end of the dike looking north. Note frost mound features in the foreground. Photo 62 is taken at the toe of the West Twin Dike. The photo is taken from the south



the dike. Note that there are tailings exposed at the surface here blended in with shale. Photo 72 is taken at the toe of the West Twin Dike looking north taken on the north half of The tailings were likely deposited here by wind transporting them from the Test Cell.



of the dike in this area and have increased the elevation of the "toe" of the dike. probably mid-way down the 374 m bench. Additional tailings have been placed at the toe Photo 73 is taken along the toe of the dike looking towards the south. Note that t this is



Photo 92 is of the tailings beach in the Test Cell proximal to the toe of the West the toe of the West Twin Dike. Dike. The view is looking north. Note that the water line is approximately 50 m from Win

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# BGC AN APPLIED EARTH SCIENCES COMPANY Calgary Alberta **BGC Engineering Inc.** Phone: (403) 250-5185

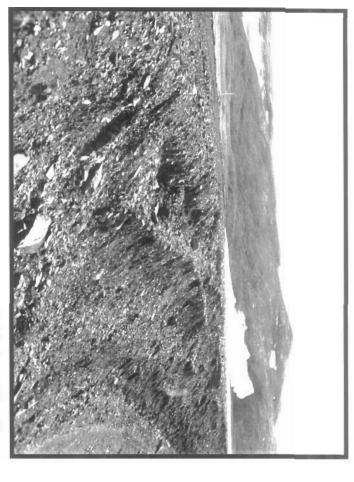
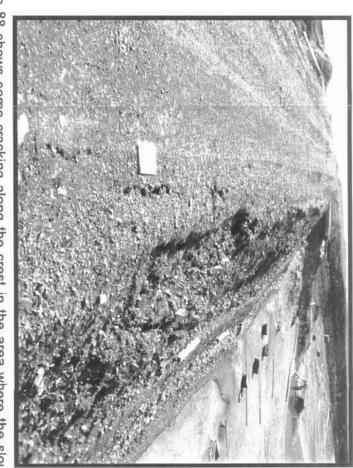
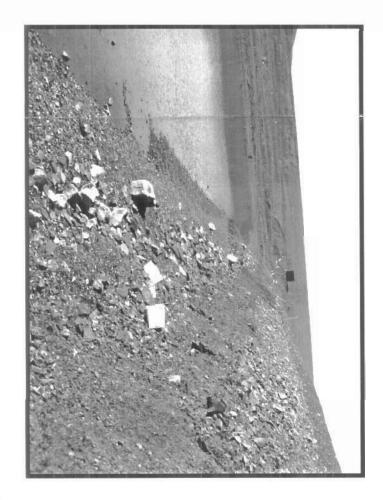


Photo 86 shows some surficial sloughing of the Test Cell side face of the dike.



occurring on the Test Cell side of the dike. Photo 88 shows some cracking along the crest in the area where the slough hing is



action when the reservoir is at a high water level. folder in the photo for scale. Note the surficial sloughing of the dike at this location that Photo 96 is of the toe of the Test Cell Dike taken looking towards the west. Note the file has occurred. The sloughing is possibly related to undercutting erosion from wave

Photo 100 shows the toe of the Test Cell Dike where the E/W arm and the N/S arm meet.

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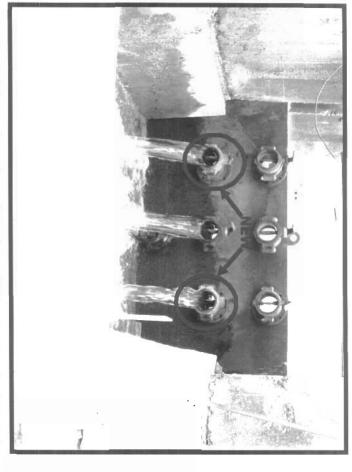


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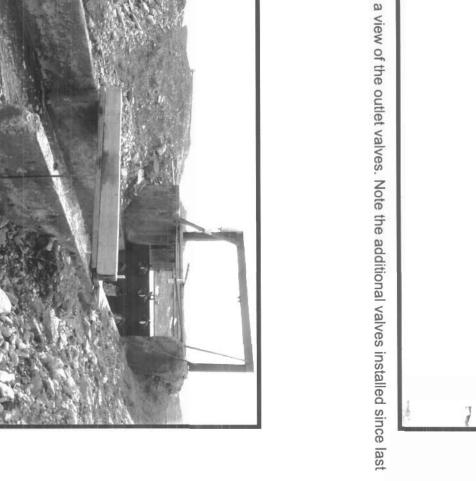
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# BGC AN APPLIED EARTH SCIENCES COMPANY **BGC** Engineering Inc. Calgary Alberta

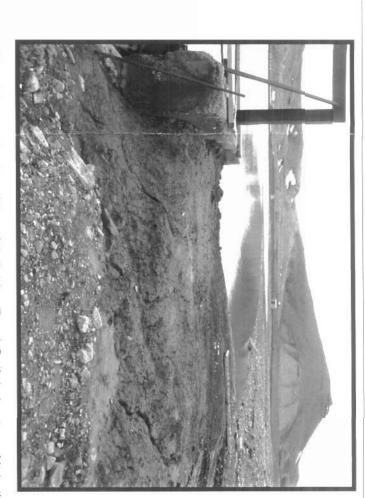
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year. Photo 8 is a view of the outlet valves. Note the additional valves installed since last



from the middle and bottom valves. Photo 116 is of the Polishing Pond Outlet structure. Note the flow is only occurring



erosion around the concrete observed last year has been repaired by placing additional marine silt and clay. Photo 118 is of the north side of the of Polishing Pond Outlet structure. Note the



Photo 124 is of the Polishing Pond Outlet area taken from a high point east of the

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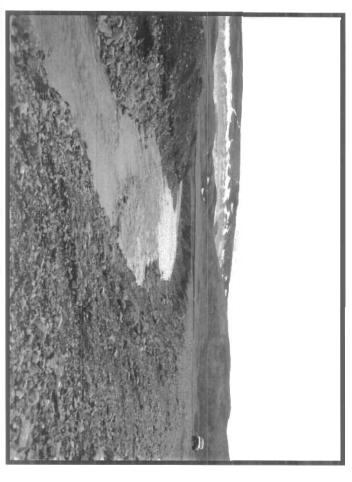
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# **BGC** Engineering Inc.



Photo 111 is taken from the south end of the Diversion Berm looking north.



hoto 115 shows the diversion area looking south.



undercutting by the stream. Photo 112 is taken where a bit of erosion of the bank has occurred due to

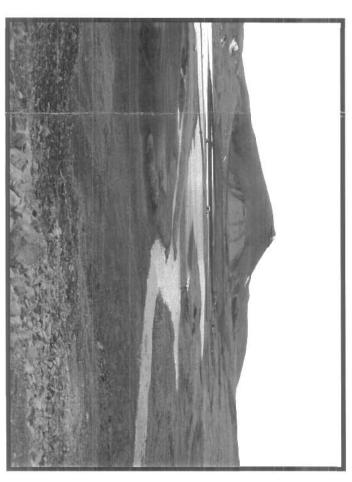


Photo 119 is of the Polishing Pond Outlet area taken from a high point east of the area.

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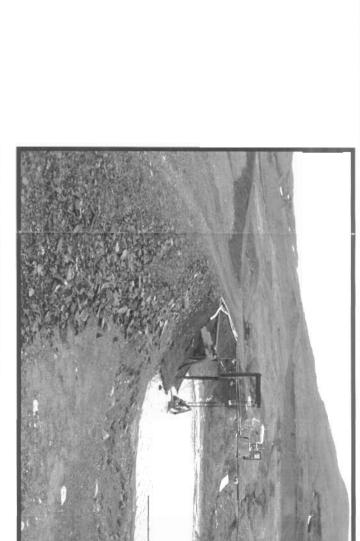
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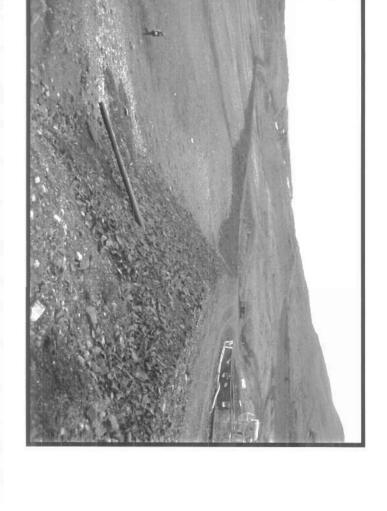


Photo 142 is an oblique aerial view of the treatment pond.

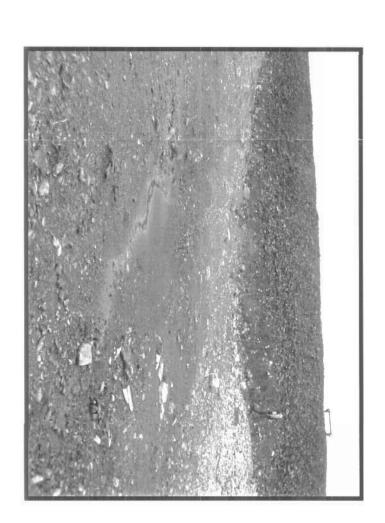


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looking south from the north end of the dike. Photo 143 is a view of the upstream face of the treatment pond dike. The view is



hoto 146 is a view of the downstream face of the dike from the north end of the dike.



portion of the treatment pond dike. Photo 148 is a view of a wet area approximately 10 m downstream of the centre

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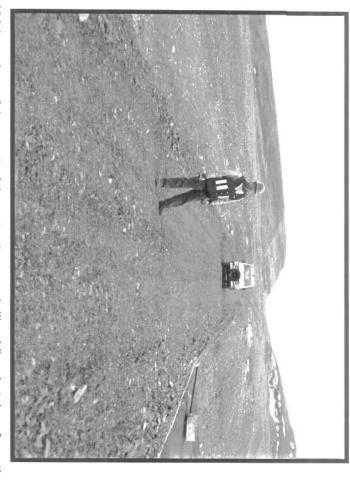
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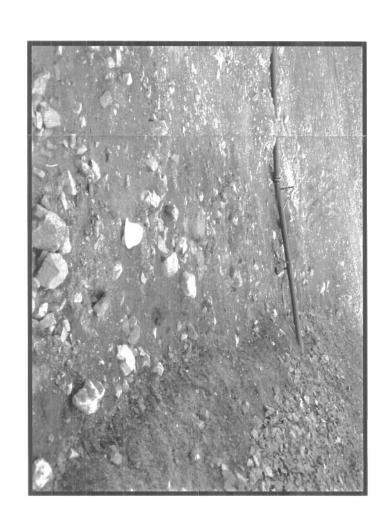
centre of the dike looking east. Photo 138 is a view of the crest of the retention pond dike. View is taken from the



nature of the liner. 2)hoto 136 is a view of the northwest corner of the treatment pond. Note the ruffled



Photo 131 is a view of the upstream toe of retention pond dike from crest of dike View is from east end of the dike looking west.



beneath the dike at this location. the wet area near the toe of the dike (by the hardhat). This may indicate seepage Photo 140 is a view of the downstream face of the dike at the centre of the dike. Note

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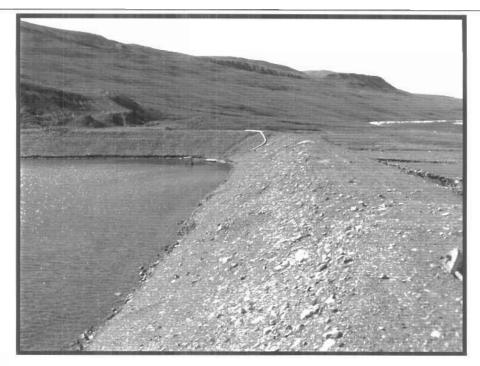


Photo 51 is taken along the north edge of the berm looking west. Note the water collected in the berm.



Photo 52 is taken looking towards the northwest corner of the containment berm. It is an area where the liner is exposed. As can be seen it has been repaired at some point in the past. The depth of water within the pond is approximately 50 cm.

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CLIENT:



## **BGC** Engineering Inc.

AN APPLIED EARTH SCIENCES COMPANY

Calgary, Alberta.

Phone: (403) 250-5185

PROJECT	ANNUAL INSPECTION OF WASTE
	CONTAINMENT DIKES

TITLE

MAIN TANK FARM SPILL CONTAINMENT BERM - PHOTOS

PROJECT No.	DWG. No.	REV.
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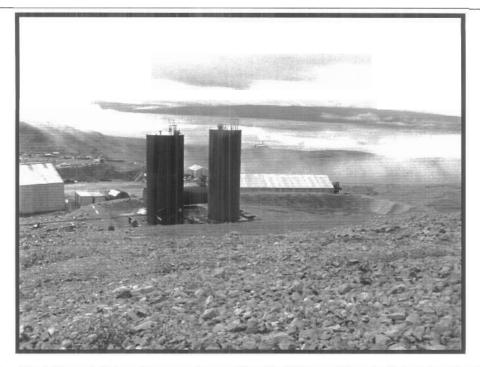


Photo 8 at the Day Tank Farm is taken from upslope of the Tank Farm. The photo is taken looking to the west.



Photo 10 is taken towards the north end of the Tank Farm in the water collection pit. Note that there is currently approximately 50 centimeters of water in the deepest spot collected in the bottom of this pit.

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CLIENT:



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AN APPLIED EARTH SCIENCES COMPANY

Calgary, Alberta.

Phone: (403) 250-5185

PROJECT	ANNUAL INSPECTION OF WASTE
	CONTAINMENT DIKES

TITLE

DAY TANK SPILL CONTAINMENT BERM - PHOTOS

PROJECT No.	DWG. No.	REV.
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Photo 14 taken at the Mill Dump Pond is an oblique aerial shot from the top of the slope near the mill.



Photo 18 is taken along the outside toe of the berm proximal to Twin Lakes Creek. The erosion of the toe of the berm does not appear to have increased since the 2003 inspection. The main erosion area near the west limit of the berm was repaired by adding rockfill to the berm at this location.

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PROJECT	ANNUAL INSPECTION OF WASTE
	CONTAINMENT DIKES

TITLE

MILL DUMP POND CONTAINMENT BERM - PHOTOS

PROJECT No.	DWG. No.	REV.			
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Photo 31 is of the shale and native ground material holding down the liner.



Photo 33 is of the outside face of the berm near the north west corner of the dump pond.

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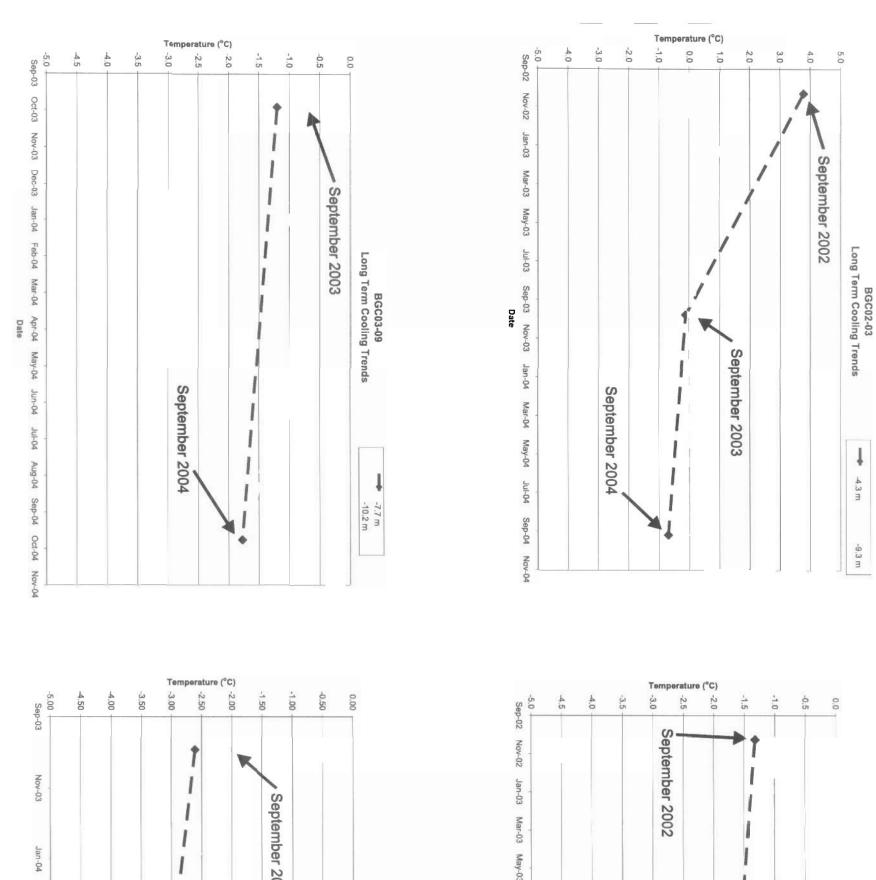
Phone: (403) 250-5185

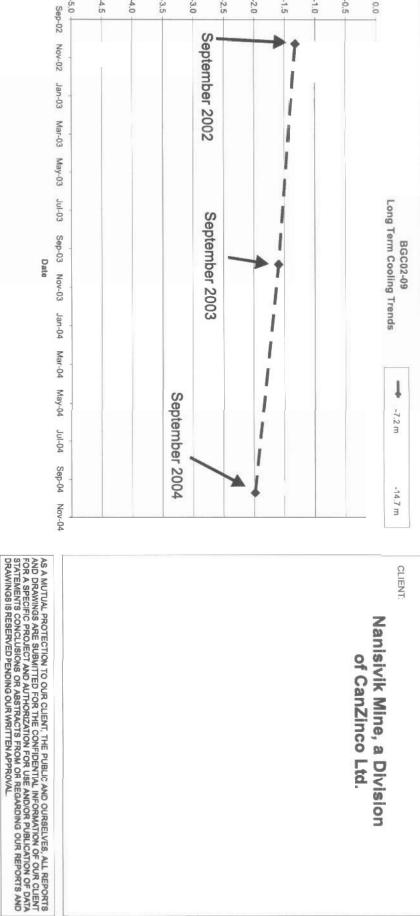
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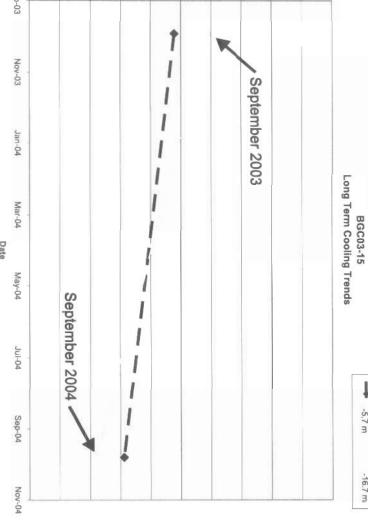
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Nanisivik Mine, a Division of CanZinco Ltd.



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Phone: (403) 250-5185

CanZinco Ltd.	, 2004 Geotechnical Inspection of Waste Containment Dikes	November 10, 2004
Nanisivik Mine	e, Nunavut	
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## BGC ENGINEERING

### AN APPLIED EARTH SCIENCES COMPANY

#1605 - 840 7th Avenue S.W., Calgary, Alberta, Canada. T2P 3G2 Phone (403) 250-5185 Fax (403) 250-5330

### PROJECT MEMORANDUM

To:

Nanisivik Mine, a Div. of CanZinco Ltd.

Fax No.:

Via email

Attention:

Mr. Murray Markle,

CC:

Site Manager

July 30, 2004

From: Subject: Mr. Geoff Claypool, P.Eng.

Date:

Summary of Site Observations and Commentary

No. of Pages (including this page): 4 Pages

Project No: 0255-009-06

Mr. Geoff Claypool, of BGC Engineering Inc. (BGC), inspected the various waste containment dikes and berms at Nanisivik Mine during the week between July 21 and July 28, 2004. The inspection had two objectives; one was to inspect the waste containment dikes for any new signs of degradation, the second was to inspect the measures taken to remediate the degradation observed during the 2003 inspection.

Inspection Visit relative to Waste Containment Dikes and Berms

Briefly, the inspection encountered no major issues and most of the comments provided herein are of a minor nature. The following memo provides a summary of the observations, along with recommended maintenance items and monitoring items for these structures.

### West Twin Lake Dike

- 1. A small transverse depression was observed on the 382 m bench. This depression should be graded over to prevent erosion from occurring at this location. The area should also be visually monitored to assess if settlement in the area is ongoing.
- 2. A few small mound features were observed on the 378 and 380 m benches near the midpoint of the dike near the access to the Test Cell Dike. It is unclear if the mounds are a result of grading operations or result from frost action on the dike. It is recommended that this area be visually monitored for increased growth of these mounds in height or number.
- 3. The crest should be graded to prevent the ponding of any water on the surface. This is especially relevant to areas of the crest near the decant pipes where minor undulations were observed.

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